UNIVERSITY OF PENNSYLVANIA

WEST PHILADELPHIA: A STUDY OF NATURAL SOCIAL AREAS

W. WALLACE WEAVER

A THESIS

IN SOCIOLOGY

PRESENTED TO THE FACULTY OF THE GRADUATE SCHOOL IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF DOCTOR OF PHILOSOPHY

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To My Mother
RACHEL BARTER WEAVER

ACKNOWLEDGMENTS

The persons who have assisted in the preparation of a monograph like the present one may well be divided into three groups, those who can impart enthusiasm for a hopeful path to new knowledge, those who animate the flagging steps of the pilgrim, and those who bear the burden of his reception at the shrine of learning.

In the first of these groups I shall list the mentor of my days as a graduate student, Professor Carl Kelsey, from whom I have secured the basic pattern of my conception of the community. This study has been conducted under his supervision, and it would be a source of keen disappointment to me if it should in any respect fall short of the standard which he expected. Mention should also be made of the fact that the contacts which led to the primary investigations in this field were secured for the writer by Doctor Donald R. Young.

Among those of the second group I wish to acknowledge particularly the suggestions and admonitions of one of my first teachers at the University of Pennsylvania, Professor James H. S. Bossard. Such familiarity as I have with the systematic aspects of human ecology I owe in large measure to a year of seminar work under the supervision of Professor James P. Lichtenberger. The ceaseless urgings and dialectic skill of my former comrade and colleague Doctor Willard W. Waller, of the Pennsylvania State College have had much to do with the selection of the subject and the shaping of the final manuscript.

For the onerous task of reading the manuscript, correcting inaccuracies, and clarifying the conclusions of the study the author is especially indebted to Professor Stuart A. Rice and Mr. Bernard J. Newman, Managing Director of the Philadelphia Housing Association.

Other persons who have been of special assistance at various times during the progress of the project are Professor E. W. Burgess of the University of Chicago, Doctor Walter Laidlaw of the City Census Committee of New York City, Mr. Thomas Shallcross, Mr. David I. Moore, Mr. Charles H. Clark, Mr. F. C. Harris, and Mr. C. F. Zeak.

It is hardly necessary to add that the writer assumes full responsibility for any errors which may be found in the report of the study as published.

W. Wallace Weaver
University of Pennsylvania
June 18, 1930

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INTRODUCTION

This study of natural social areas in West Philadelphia had its inception in a project which I began under the supervision of Mr. Howard Strong, former director of the Philadelphia Regional Planning Federation, during the summer of 1925. In his plans for a regional survey, Mr. Strong had given the study of population a position of primary importance, and during my free time I delved into the reports of the United States Bureau of the Census in an effort to trace out the distribution and growth of the population within a radius of about thirty miles from City Hall in Philadelphia.

During this time I also became familiar with the work of the City Census Committee of New York City, and the Local Community Council of Chicago. The usefulness of the so-called "sanitary districts" to the agencies doing social research in New York City, and the investigations carried out under the direction of Professor E. W. Burgess of the University of Chicago impressed me with the value of population statistics as a basis for sociological studies. I became convinced that in order to initiate an effective program of community research in Philadelphia we must first have specific materials for the minute factorization of the population.

The Census Bureau publishes detailed materials for each of the forty-eight wards of Philadelphia, but since some of these wards contain eighty thousand people the analytical value of such figures is very slight. However, the tabulations for the larger American cities in 1920 included a summary of most of the items given for wards also by census tracts, administrative sub-divisions of the larger political units. In Philadelphia the forty-eight wards were divided into 269 census tracts for which data were available on age, sex, nativity, race, nationality of the foreign-born, school attendance, illiteracy and home ownership. These tracts averaged nearly two hundred acres each, and contained a modal population of about eight thousand persons. They furnished a convenient basis for the analysis of population.

The cost of securing these figures for the entire city was beyond the means of a student, but by limiting the study to a single section of the city it was proposed to carry through a

demonstration project. Accordingly the six wards of Philadelphia west of the Schuylkill River, known locally as "West Philadelphia" were selected, and the writer spent the summer of 1928 transcribing the tract figures from the records of the Census Bureau in Washington. These figures have not been printed but are on file in the Department of Sociology of the University of Pennsylvania.

The preparation of the methodological and historical chapters has been carried out over a period of several years and has involved the assistance of many persons. Through the contacts established in this study I hope to extend the range and intensity of our knowledge of local communities in Philadelphia. If such knowledge shall reveal new angles of community organization or promote more congenial living the purpose of the study will have been served.

I

The Ecological Approach to the Study of Natural Social Areas

The conception of a human ecology has opened up a new avenue of approach to the study of the community. Whether it is a new concept or simply a new word in social science is still a matter of debate, but in its name studies of local areas have been undertaken which are adding measurably to our understanding of the urban community. As an idea its stimulation to the study of the structure of the community has begun to permeate the whole field of geographic investigation. No attempt to delineate natural social areas can now be complete without a discussion of the science of human ecology.

The attempt to develop a systematic human ecology appears to have been made only since about 1920. There were, of course, many studies prior to that date which were distinctly ecological in nature, but the efforts to schematize the methodology of this field are of very recent origin. Being of recent origin these efforts are necessarily tentative, possibly immature, but the ecological approach is set forth in these pages as clearly as possible at the present time, with the hope that critical examination may clarify some of the confusion which seems to exist as to the content and processes of the discipline.[1]

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[1] A brief résumé of the published materials on human ecology must grant priority to Park, Robert E. and Burgess, E. W., *Introduction to the Science of Sociology*, pp. 507–8, 559, University of Chicago Press, Chicago, 1921. A collection of articles by the same authors and R. D. McKenzie, published as *The City*, in 1926 contains largely ecological materials. Other books and articles containing treatments of human ecology include, House, Floyd N., *The Range of Social Theory*, Holt, 1929; Anderson, Nels and Lindeman, E. C., *Urban Sociology*; Mukerjee, R., *Regional Sociology*; Burgess, E. W., *The Urban Community*; McKenzie, R. D., *The Ecological Approach to the Study of the Human Community*; *Am. Jr. Sociology*, 30:287–301, November, 1924; Palmer, Vivien, *Field Studies in Sociology*, Chicago, 1929; Wirth, Louis, *The Ghetto*; Zorbaugh, Harvey, *The Gold Coast and the Slum*. Since 1925, all programs of the American Sociological Society have included a section on human ecology.

A formal definition of human ecology is rarely found in the literature of the subject, for a brief summarization of the meanings involved is at once difficult and hazardous. One courageous and fairly satisfactory attempt reveals that "human ecology concerns the process of spatial grouping of interacting human beings or of interrelated human institutions."[2]

A mere definition may have the effect of raising more questions than it answers. The above statement of the field of human ecology is inclusive, but it leaves one in doubt as to whether the discipline treats of a sub-social science of space and position, or the interaction of persons and institutions at the social level. A reconciliation of the two points of view may be seen in the following passage:

> "Human ecology, as sociologists conceive it, seeks to emphasize not so much geography as space. In society we not only live together, but at the same time we live apart, and human relations can always be reckoned, with more or less accuracy, in terms of distance. Insofar as social structure can be defined in terms of position, social changes may be described in terms of movement; and society exhibits, in one of its aspects, characters that can be measured and described in mathematical formulas."[3]

It has been suggested that all social processes might ultimately be reduced to mathematical formulas based upon position and space, but the idea of a system of human ecology so final and complete as to supercede other forms of sociology seems visionary to say the least.

The Antecedents of Human Ecology

There is no more promising method for revealing the true nature of human ecology than an examination of the sources from which it has come and the relations which it bears toward other branches of human knowledge. It goes without reiteration that no portion of our social science can be thought of as having been spontaneously or even independently created, but it

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[2] McKenzie, R. D., "The Scope of Human Ecology," (Abstract), *American Sociological Society, Proceedings*, 20:141, 1926.

[3] Park, R. E., "Sociology of Position," *American Sociological Society, Proceedings*, 20:2, 1926.

must rather be conceived as a product of new combinations or new aspects of previously derived modes of thought. That human ecology is a derivation from many sources is indicated from its simultaneous existence with and similarity to certain other concepts and techniques.

In the first place, the notion of a "human ecology" seems to have tread the beaten path of the biological analogy, over which so much that is sociological has been introduced during the infancy of the science. That the proponents of human ecology in this country have been aware of this antecedent is indicated in the literature cited below:

"Some thirty years ago Professor Eugenius Warming, of Copenhagen, published a little volume entitled *Plant Communities* (*Plantesamfund*). Warming's observations called attention to the fact that different species of plants tend to form permanent groups, which he calls communities. Plant communities, it turned out, exhibit a good many of the traits of living organisms. They come into existence gradually, pass through certain characteristic changes, and eventually are broken up and succeeded by other communities of a very different sort. These observations later become the point of departure for a series of investigations which have since become familiar under the title 'Ecology'."[4]

The biological analogy has its weaknesses and they have been subjected to searching criticism during the past forty years, but that there are many similar processes in the "social" life of plants or non-human animals and human beings has never been denied. The botanical pedigree of human ecology seems to be as sound as it is undeniable, and the conclusion that human ecology is a branch of the social science appears quite as logical as the admission of plant ecology to the realm of botany.

That the studies in human geography made by a number of scholars within the last fifty years have had much to do with the development of the ecological approach is obvious. While most of the studies were made on the basis of political territories, the notion of natural areas is implicit in their methods. Doctor

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[4] Park, R. E., "Sociology of Position," *American Sociological Society, Proceedings*, 20: p. 1, 1926.

Floyd House points out that "Indeed, Ratzel, Vidal la Blache and Brunhes had already been asserting that what they were studying was human ecology, some time before Park, McKenzie, and Mukerjee began to advertise the possibilities of human ecology to the sociologists of the United States."[5]

The human ecologists have been on guard against too close an identification of their work with that of the human geographers. That ecology is a geographical as well as a biological or social term cannot well be denied, and many human geographers have devoted considerable space to personality and social organization in their relation to the physical environment. Hence, Professor Park's contention that human ecology brings a new emphasis into the study of society is more suggestive than convincing.

"Ecology, insofar as it seeks to describe the actual distribution of plants and animals over the earth's surface, is in some very real sense a geographical science. Human ecology, as the sociologists would like to use the term, is, however, not identical with geography, nor even with human geography. It is not man but the community; not man's relation to the earth which he inhabits, but his relations to other men, that concerns us most."[6]

However, the human ecology of which Professor Park speaks appears to be a refinement of the geographic technique, and inseparable from it. To the more elementary geographical studies it unquestionably adds a number of new elements.

The concrete studies in the field of human ecology appear to have adopted many of the devices used in the social survey, zoning and city planning. Evil days have fallen upon the use of the term "social survey," but the contributions made to social and economic research under the older name have been incorporated in various types of studies during the past ten years. The original methods used by Professor Galpin in his rural studies of Wisconsin were cleverly designed to isolate the community and reveal its structure.[7] The efforts of zoning

[5] *Opus cit.*, p. 65.
[6] *Opus cit.*, pp. 1–2.
[7] See Galpin, C. J., "The Social Anatomy of an Agricultural Community," *Research Bulletin*, No. 34, May, 1915, University of Wisconsin, Agricultural Experiment Station.

commissions and planning federations are clearly directed toward some functional design which will facilitate the most advantageous utilization of space and the most workable adjustment of social classes. In the future, the theory and practical applications of human ecology should return many fold the ideas borrowed from the various classes of social surveyors.

As the work of the cultural anthropologists comes to fruition, the similarity between the methods of the ethnologist and human ecologist becomes constantly more evident. The concept of the culture area is directly in line with the study of "natural social areas." The perusal of a brilliant treatment of the culture-area as a research tool reveals its significance to the human ecologist.

"If one admits, as all scientifically minded persons must, that the classification of cultural data is prerequisite to valid factorization, two questions immediately present themselves: What is to be the unit of investigation? and, What should be the basic principle of classification? Presumptive answers to these questions are quite worthless. Only by an empirical study of the artifacts, the symbols, and the traditional procedures, which constitute objectively the cultures of various peoples, can the unit of investigation and the principle of classification be determined. The culture-area is an empirical grouping of cultural data in which the unit of investigation and the principle of classification have been derived from direct observation of the facts and of their *temporal and spatial distributions.* It is therefore receiving more and more attention from sociologists who are less interested in the chauvanistic defense of some sociological system than in a truly scientific analysis of collective human behavior . . . In brief, the culture-area is a classification of coexistential cultural data according to their objective and psychological resemblances and in terms of their regional distributions. It represents an attempt to reduce the chaotic details of primitive social behavior to the level of human comprehension, to provide that ordered body of knowledge without which scientific factorization and generalization are impossible."[8]

As compared with the contributions of the anthropologists those of the ecologists are still comparatively slight, but the adoption of the method for studies of modern communities proceeds at a rapid pace. A summary of recent progress in the study of the community emphasizes this fact.

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[8] Smith, Russell Gordon, "The Concept of the Culture-Area," *Jr. of Soc. Forces*, 9:421, March, 1929.

"The year (1928) saw the almost complete capture of community studies by the cultural approach. Mrs. Bessie Bloom Wessel revealed in papers the method of the investigations conducted in connection with the project called the 'Study of Ethnic Factors in Community Life' in which the community area has been the regional and social unit adopted for a number of investigations. To quote her: 'This approach follows inevitably from the growing realization that sociological studies are depending primarily upon techniques and methodologies borrowed from the fields of social psychology and cultural anthropology . . . We are concerned particularly with the concept of the cultural area and with the techniques for analyzing the existing or interrelation of cultural traits within the area . . . to the end that the survey itself and the community program may have fuller meaning . . . Empirical and analytical techniques employed by the ethnologists in the study of cultural areas can be carried off bodily to the study of the modern community'."[9]

The incorporation of certain ideas better worked out by the students of culture than by any other persons has helped to round out our thinking on human ecology.

The similarity between the theoretical aspects of human ecology and a new system of psychology, the Gestalt psychology, has not escaped students in America. The notion of the region as a "closed system of forces," with particular factors operating and particular patterns being formed is suggestive of a psychology of "constellations" and "configurations." Such a recognition of the essential nature of ecological studies is implicit in the following passage.

"Within the limits of every natural area the distribution of population tends to assume definite and typical patterns. Every local group exhibits more or less definite constellations of the individual units that compose it. The form which this constellation takes, the position, in other words, of every individual in the community with reference to every other, so far as it can be described in general terms, constitutes what Durkheim and his school call the morphological aspect of society."[10]

Not only is there a resemblance to Durkheim's scheme of social morphology, but also to the system of psychology proposed by certain German scholars of recent years.[11]

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[9] Bowman, Leroy E., "Group and Community Organization," *Am. Jr. Soc.*, 34:1088, May, 1929.
[10] Park, *opus cit.*, pp. 1–2.
[11] *Psychologies of 1925*, Clarke University Press, 1926.

A final element of human ecology which must not be neglected is that drawn from the field of demography. Its dependence upon criteria drawn from this source is attested by the following résumé.

"Natural areas are the habitats of natural groups. Every typical urban area is likely to contain a characteristic selection of the population of the community as a whole. In great cities the divergence in manners, in standards of living, and in general outlook on life in different urban areas is often astonishing. The difference in *sex and age groups*, perhaps the most significant indexes of social life, are strikingly divergent for different natural areas. There are regions in the city in which there are almost no children, areas occupied by the residential hotels, for example. There are regions where the number of children is relatively very high: in the slums, in the middle-class residential suburbs, to which the newly married usually graduate from their first honeymoon apartments in the city. There are other areas occupied almost wholly by young unmarried people, boy and girl bachelors. There are regions where people almost never vote, except at national elections; regions where the divorce rate is higher than it is for any state in the union, and other regions in the same city where there are almost no divorces. There are areas infested by boy gangs and the athletic and political clubs into which the members of these gangs or the gangs themselves frequently graduate. There are regions in which the suicide rate is excessive; regions in which there is, as recorded by statistics, an excessive amount of juvenile delinquency, and other regions in which there is almost none."[12]

Surely the very processes of life and death are of primary importance in the selection of social types and the construction of social patterns. In almost as fundamental sense as human ecology is a geographic science, it is also demographic.

Doubtless there are other elements in the proposed science of human ecology which have not been suggested here. The antecedents enumerated are not all at the same level philosophically, and their influence varies with the conviction of the scholar propounding the system to be followed. Unfortunately the methodology of human ecology is still in a nebulous state, but where studies are made in its name, they certainly have included elements from the biological origins, geographic data, cultural

[12] Park, *opus cit.*, pp. 8–9.

anthropology, the social survey, Gestalt psychology and demography.

The Processes of Human Ecology

Systematic treatments of human ecology are few in number and lacking in specificity. The most satisfactory effort made so far to schematize the materials of this field is that of Professor McKenzie. His treatise defines the materials of human ecology, proceeds to the description of certain indexes of movement, and enumerates trends or tendencies observed in the creation of natural areas.

The materials of human ecology are summarized in inclusive, but not very specific language.

"Ecological factors may be classified under four general heads: (1) geographical, which includes climatic topographic, and resource conditions; (2) economic, which comprises a wide range and variety of phenomena such as the nature and organization of local industries, occupational distribution, and standard of living of the population; (3) cultural and technical, which include, in addition to the prevailing condition of the arts, the moral aptitudes and taboos that are effective in the distribution of population and services; (4) political and administrative measures, such as tariff, taxation, immigration laws, and rules governing public utilities."[13]

A conception of change in ecological position is essential to any theoretical basis for the assembling of natural groups or the definition of natural areas. Without some means of measuring such modifications of the relationships of interacting personalities and institutions there could be no science of human ecology. Professor McKenzie proposes two such measures—mobility and fluidity.

Ecological mobility is not to be confused with the term "social mobility" as commonly used, but covers only the modifications of ecological position involving changes in places of residence or of employment. Changes of occupation or status, until they

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[13] McKenzie, R. D., "The Scope of Human Ecology," *Am. Sociological Society, Proceedings*, 20:145, 1926. Burgess, E. W.. and Park, R. E. *The, City*, p. 147.

bring about changes in residence or place of employment are not significant under such a classification. Neither is the traveling in which an individual engages, moving about from place to place, until it brings about changes of residence and employment.

To cover another type of change in position, such as that seen in the movements of an individual going to work, to visit a friend, to shop or to see a show in a downtown theater the term fluidity is used. However, these are not changes of ecological position. They may be important from the standpoint of social organization, but not from the standpoint of ecological processes.[14]

A convenient point at which to begin our examination of the cycle of ecological processes is with the phenomenon of *concentration*. This is a demographic process, which involves the tendency of people to settle in a given locality, and brings about an increase in the density of population. This process is not without the obverse tendency toward *dispersion*, but it is concentration which leads to another significant ecological process.

Where a regional specialization of economic activities is found it is given the name *centralization*. Examples of this tendency may be seen where there are areas devoted to banks, brokerage firms and trust companies creating a sort of "financial district," or where an intensive development of retail facilities has formed a "shopping district." Such a regional differentiation of labor is a basis for the determination of natural areas. Some times the migration of one of these specialized areas may be observed. In Philadelphia, in the course of about ten years the decentralization of the financial district about Third and Chestnut Streets has taken place, with a subsequent reorganization about Broad and Walnut Streets.

Somewhat similar to centralization is the process of *segregation* which takes place as the density of an area increases. The term segregation has been so commonly associated with the legal or customary separation of races that its use to designate

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[14] A thorough examination of the concept of mobility is included in a forthcoming publication by Howard P. Becker, of the University of Pennsylvania.

the natural process of regional selection may be confusing. The ecological use of the term is described in the following manner.

"One of the incidents of the growth of the community is the social selection and segregation of the population, and the creation, on the one hand, of natural social groups, and on the other, of natural social areas. We have become aware of this process of segregation in the case of the immigrants, and especially in the case of the so-called historical races, peoples who, whether immigrants or not are distinguished by racial marks. The Chinatowns, the Little Sicilies, and the other so-called 'ghettos' with which students of urban life are familiar are special types of a more general species of natural area which the conditions and tendencies of city life inevitably produce . . . The physical or ecological organization of the community, in the long run, responds to and reflects the occupational and the cultural. Social selection and segregation, which create the natural groups, determine at the same time the natural areas of the city."[15]

When or where one natural area impinges upon another we have a process or state of *invasion*. This may involve the intrusion of one demographic group into a dissimilar group, or the expansion of an economic area beyond its former limits, into the territory of an area of different type. When a wholesale or warehouse district expands into an area used formerly for residential purposes we see the process of invasion operating. The causes which most frequently bring about this process are enumerated briefly by Professor McKenzie.

"The conditions which initiate invasions are legion. The following are some of the more important: (1) changes in forms and routes of transportation; (2) obsolescence resulting from physical deterioration or from changes in use or fashion; (3) the erection of important private or public structures, buildings, bridges, institutions which have attractive or repellent significance; (4) the introduction of new types of industry, or even a change in the organization of existing industries; (5) changes in the economic base which make for redistribution of income thus necessitating change of residence; (6) real estate promotion creating sudden demands for special location sites, etc."[16]

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[15] Park, *opus cit.*, pp. 6–7.

[16] McKenzie, "The Ecological Approach to the Study of the Human Community," *Am. Jr. Soc.*, 30:298, November, 1924.

If a sequence of invasions by different economic uses is observed in a fixed territory, the process of *succession* may be said to have occurred. A portion of West Philadelphia which has been used at various times for farms, residences, manufacturing and transportation may be said to have experienced this process of succession. A complete change of population may be taken as the best index to this phenomenon of succession. Where the successions show a cyclical tendency or a fixed regularity they may be peculiarly significant for the scientific planning or zoning of a city.

This tentative summary of the processes of human ecology may be incomplete, but it serves to illustrate the way in which natural areas are fo med. The organization of a community at any time is due to these processes and represents an equilibrium of interacting personalities and institutions. In conclusion, McKenzie's statement concerning the formation of natural areas may be cited.

"The general effect of the continuous processes of invasions and accommodations is to give to the developed community well-defined areas, each having its own peculiar selective and cultural characteristics. Such units of communal life may be termed 'natural areas' or formations to use the term of the plant ecologist. In any case, these areas of selection and function may comprise many subformations or associations which become part of the organic structure of the district or of the community as a whole."[17]

These general statements with respect to the formation and structure of the community prepare the way for a specific study of the organization of the urban community.

The Ecological Pattern of the Urban Community

In recent years, studies of the growth of the city have resulted in the formulation of what approaches a "universal pattern." The most popularly accepted version of this pattern is the one presented by Professor E. W. Burgess at the meeting of the American Sociological Society in 1923.[18] A brief summary of

[17] *Ibid.*, p. 300.

[18] "An Introduction to a Research Project," *Am. Soc. Society Proceedings*, 18:85–89, 1924.

this conception of the growth of the city is set forth in a later article.

"It is only recently that sociologists have begun to study the city from the standpoint of its growth. The main processes in urban development are now being defined and analyzed. The most evident process, looking at community growth ecologically, is that of radial expansion from the center. The center of every city, or the point of dominance in urban growth, is the downtown business section; in Chicago, the loop. As business and light manufacturing expand into the residential district surrounding it, there appears a zone in transition, the so-called slum of every English and American city. The skilled worker and his family depart from this area as it deteriorates, and build up the zone of workingmen's homes, not too far away, of course, from the factories in which he works. The professional and clerical groups employed in the downtown offices live still further out, while those who can afford it, and who prize suburban life escape to the commuter's zone."[19]

It is not to be supposed that any student will expect to find a city divided symmetrically into concentric zones as they are enumerated above, but roughly, one may expect to find some such general scheme in almost every city. Sometimes the pattern may be vitiated by the fact that the community under examination is made up of two or more former centers or business districts. In still other cases the expansion of a suburb or "satellite" city may proceed to such a point as to divide the activities between two or more centers. It is notably true, even in such cases, that around these business centers one sees again in miniature the zones described in the larger urban community. This is quite true in Philadelphia, where Kensington was an industrial district fairly distinct from the old city of Philadelphia before it was incorporated into the new city.

The Concept of the Natural Area

The pattern of concentric circles proposed in the preceding section offers a basis for initiating the analysis of urban communities, but it does not furnish a territorial unit suitable for

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[19] Burgess, E. W., "The Determination of Gradients in the Growth of the City," *Am. Soc'l. Society, Proceedings*, 21:178, 1927.

tabulating statistical data. In order to meet this need an attempt has been made to identify smaller areas which are homogeneous with respect to their own attributes, and yet significantly different from adjoining districts. This has given rise to the concept of the natural area, a territorial unit small enough to permit a detailed analysis of social or economic data, and dissimilar enough from surrounding units to warrant separate treatment.

The attempt to designate such areas necessitates two orders of criteria, the first of which involves the determination of attributes in which the proposed district is homogeneous and the second of which calls for the delineation of boundaries which separate portions of the community having disparate traits. These natural boundaries must be inherent in the organization of the community, or they will be purely arbitrary, and therefore of no peculiar merit in statistical analysis. They should be stable enough to permit the comparison of data for successive years or decades, and populous enough to furnish a reliable base for the calculation of rates and indexes.

It is the concensus of opinion among investigators that few cities have any such territorial unit of tabulation for statistical data at the present time. The city ward is commonly too large to permit a detailed analysis of social and economic characteristics of the territory, too unstable to insure the comparability of data over a long period of time, and often completely lacking in homogeneity. Divisions of wards are usually subject to at least the second and third of these criticisms. Any other subdivisions of the communities are likely to be of limited usefulness and without official sanction for the collection of extensive data.

It is not strange that under such circumstances one of the objects of deepest concern to students of the urban community is the demarcation of some primary territorial unit which will serve as a basis for compiling data from different fields. The possibility that such an integral factor exists and is discoverable offers one of the most hopeful avenues to the scientific study of the city. Any investigation which reveals the existence of such areas and the methods by which they can be isolated will perform a valuable service for the social sciences.

II

Introduction to the Project

The preceding chapter has revealed the need of social science for a primary territorial unit which will lend itself to quantitative studies of the city. The present chapter attempts to describe a project in which a portion of a large city has been subjected to scrutiny in an effort to discover a natural basis for its subdivision into elementary components.

The Area Selected for Study

The City of Philadelphia is commonly divided into four major areas: (1) the Central City, (2) South Philadelphia, (3) North Philadelphia, and (4) West Philadelphia. It is highly desirable that a search for natural areas should cover the entire city, but in the absence of resources for such an investigation West Philadelphia was selected as the most suitable for the study contemplated.

The reasons for selecting West Philadelphia in preference to any one of the other areas are numerous. The most obvious feature is its isolation from the remainder of the city by the Schuylkill River (see map), which relieves the student of any question concerning its proper boundaries in relation to the other divisions, and gives it a geographic unity highly desirable for an investigation of this kind. Despite this geographic unity, it presents a variety of topographical features, economic uses, and ethnic composition as complete as any sector of the city. It has had a historic development which illustrates every stage of growth from exploration to urban congestion, and represents every zone in the assumed concentric arrangement of the city from the central business district to the commuters' suburbs. The problem of securing a sample representative of the city was correspondingly simplified by the choice of West Philadelphia.[1]

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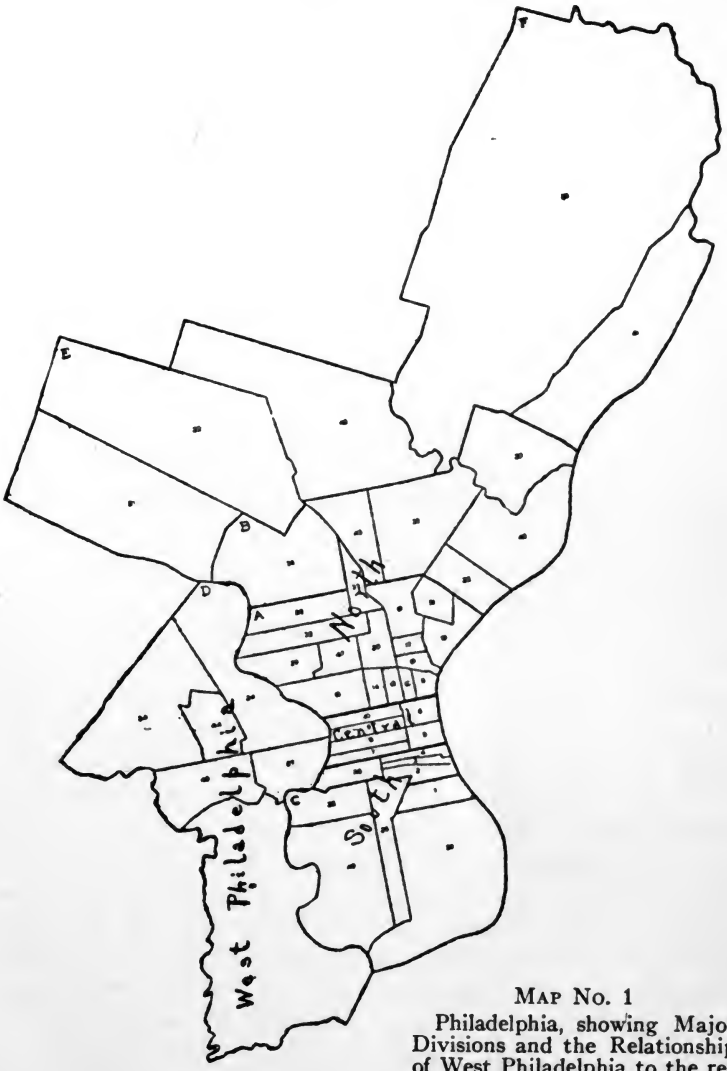
[1] West Philadelphia contains approximately twenty-one square miles of territory in which there lived in 1920, nearly 360,000 people. The area includes six of the forty-eight wards of Philadelphia, namely, the Twenty-fourth, Twenty-seventh, Thirty-fourth, Fortieth, Forty-fourth and Forty-sixth.



MAP NO. 1
Philadelphia, showing Major Divisions and the Relationship of West Philadelphia to the remainder of the City.

Criteria Applied to the Study of West Philadelphia

The limitation of resources available for this study imposed upon the investigator the problem of selecting themost significant and most accessible data in the search for natural sub-divisions of the territory under examination. The exclusion of certain valuable criteria is to be regretted, but the materials gathered included data on the geographic features, history, economic development and population of the area. From these data an effort was made to dissect out homogeneous areas and to trace boundaries inherent in the topography or economic development of West Philadelphia.

The geographic data gathered are concerned primarily with the topography, climate, plant life and animal life of the region. The factors encouraging settlement in particular localities are given special consideration.

The historical treatment is designed to give depth to a perspective of West Philadelphia as it exists today. Emphasis is laid upon the stages in the economic development of the district, the progressive sub-division of the original grants or estates, the growth of villages and the advancing line of truly urban extension. By the analysis of historical data the investigator hoped to reconstruct the past of West Philadelphia, step by step, and to acquaint himself with the factors most fundamental to its present status. Special attention is given to transportation in this effort to look behind the city plan of today.

The economic data cited deal mostly with present modifications of the topographical features and the uses of land, looking toward the differentiation of districts for various purposes as a key to their factorization.

The most satisfactory data secured dealt with the population, its age, sex, race, nativity, country of birth and home ownership. The availability of official statistics made possible a concrete tangible description of the population in at least three respects, for comparatively small census tracts. Supporting statistics, from earlier decades, of the trends of the traits examined were incomplete and unsatisfactory.

The admission that the foregoing examination is incomplete should be reiterated at this point, but it may also be contended

that the criteria applied are intensive and varied enough to reveal any general scheme of natural areas inherent in the structure of the community. The use of still other forms of data is contemplated in supplementary studies.

Methods and Materials Employed

The present study appears to be the first of its kind undertaken in West Philadelphia. There have been some efforts to divide the section into districts suitable for specific administrative units such as school districts, the Bell Telephone Company of Pennsylvania has formed "market areas" in which there is an attempt to distinguish roughly the economic level of the population, and the "Zoning Commission" of the city of Philadelphia worked out a tentative plan for districting construction, but none of these was general or inclusive. Moreover, the areas described were too large to offer a convenient unit for analyzing social data, or they did not correspond with the political units which are necessarily the basis for tabulating the population data gathered by the United States Bureau of the Census.

During the course of this study a movement has been on foot in Philadelphia to re-organize the census tracts, the territorial units used as a basis for the primary tabulations of the Census Bureau. Through the cooperation of a number of interested persons and agencies, a new set of tracts believed to represent sub-division of the city along more natural lines than any previously devised, has been presented to and adopted by the United States Bureau of the Census. The adaptability of these new tracts can be determined only after the reports of the Fifteenth Census have been examined. In the meantime the study of natural areas must proceed as a generalized study apart from the desire to serve any specific purpose.

From the preliminary survey of the area to the preparation of the final report one of the most necessary elements of study was map work. Through the examination of recent maps it was possible to delimit and describe the area selected for study, while the use of older maps permitted a more specific reconstruction of historical changes than any data available from

printed sources.[2] Outline maps furnished a convenient means of recording observed data, and for displaying summaries of certain findings. In fact, the use of maps was an essential part of almost every portion of the project.

The investigator considered personal familiarity with all parts of West Philadelphia an intangible but highly desirable prerequisite for an attempt to designate natural boundaries. For this purpose a series of excursions covering long distances were undertaken afoot, to supplement the general acquaintance with the region already possessed. Where there was doubt or conflict concerning some point, this method was efficacious, if somewhat costly in time and energy. In the course of these trips an effort was made to question people and observe such habits of play or work as could be readily seen.

The printed sources are quite numerous but few of them were compiled from the viewpoint of the local community. The older histories of Philadelphia do not include the part of Philadelphia County west of the Schuylkill River, and later ones seldom make specific statements concerning the extent and growth of the villages, industries or transportation. There are documents, newspaper files and personal collections which are of great interest, but since the present study is not basically historical, secondary sources were consulted for the narrative of early development.[3]

Interviews with old residents, local historians, and business men familiar with the recent development of specific areas were secured to supplement the printed sources. Secretaries of neighborhood clubs, improvement associations, and chambers of

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[2] The exceptionally fine collection of maps and atlases in the Free Library of Philadelphia afforded excellent materials for studies of this character.

[3] Among the sources most frequently cited are Scharf and Westcott, *History of Philadelphia 1609–1884*, 3 v., Philadelphia. Everts and Company, 1884, the single most comprehensive résumé of the history of the region; Vieira, Martha Lafitte, *West Philadelphia Illustrated*, (prepared under the direction of and copyrighted by Mr. Charles H. Clarke), Avil Printing Company, 1903, an intimate account; and *Watson's Annals*, a three volume summary of reminiscences concerning the old city. Scores of old books and pamphlets were examined but very few of them revealed facts not cited by works mentioned above.

commerce were particularly helpful in this respect. Much of the material secured by this method is at the level of anecdotes but almost every person interviewed had some contribution to make. A considerable amount of disagreement between reports necessitated careful checking of the facts, but the suggestions offered were helpful, and almost every man interviewed knew several others who could supply additional information concerning certain areas or events.

The demographic data came almost entirely from the United States Bureau of the Census. It was necessary to spend some time in Washington copying the unpublished figures of the Bureau for census tracts. The classes of material secured included figures on age, sex, race, nationality, nativity, home ownership and tenure. Additional figures of school attendance, illiteracy and citizenship of the foreign-born were transcribed but not used in this study. These figures are most helpful in arriving at conclusions concerning the characteristics of any neighborhood.

The synthesis of findings from all of these methods is the ultimate aim of this project. If a comparison of areas determined by these different methods reveals a significant degree of correspondence and an essential agreement with respect to boundaries, it will suggest the existence of natural areas. In the absence of such similarity we must seek the criteria for determining natural areas in some other way.

III

Geographical Features of West Philadelphia

West Philadelphia is one of the major sub-divisions of the county and city of Philadelphia, including all of the area west of the Schuylkill River. Its boundary line on the northwest is City Line Avenue, which runs in a northeasterly direction from its junction with Cobb's Creek to the Schuylkill River, south along the Schuylkill River to its confluence with the Delaware River, along the Delaware River to Hog Island, northwest to the Back Channel, to Bow Creek, along Bow Creek to Darby Creek, along Darby Creek to Delta Avenue, along Delta Avenue to Eightieth Street, on Eightieth Street to Cobb's Creek, and along Cobb's Creek to the point where it is crossed by City Line Avenue, at the point of beginning.

The geographical location of West Philadelphia as shown on the maps of the United States Geological Survey is between the parallels 39° 52′ and 40° 1′ North latitude and 75° 11′ and 75° 15′ west from Greenwich.

Topography

Most of West Philadelphia is level or gently rolling, with an altitude varying from sea level in the southern and eastern portions to a maximum of a little over two hundred feet among the hills of the northern portion. The southern portion of the area is an inland peninsula or "hook" bounded on three sides by streams, much like the site of the central city of Philadelphia. This lower portion is an alluvial deposit, and was at one time the delta of the Schuylkill River. At the time of the earliest explorations the lower end of West Philadelphia was a group of islands, separated by broad, fairly deep tidal streams or estuaries. Hog Island and Mud Island were only marshy strips of sand in the Delaware River. As late as 1777 British men o' war were able to navigate the channel west of Mud Island to assist in the reduction of Fort Mifflin.

The most important of the inland streams was Mingo or

Minquas (literally Iroquois) Creek,[1] which flowed from a point on Darby Creek near Eighty-seventh Street to a point on the Schuylkill River a short distance above the Penrose Ferry bridge. A similar stream branched off from Mingo Creek at a point northeast of Elmwood and flowed southeast to the Delaware River just above Mud Island. It was known earlier as Kingsessing Creek and is now called Eagle Creek. Still another stream flowed southwest from the same point and was called Church Creek, because the earliest Swedish settlers used it to reach the church on Tinicum Island, below Bow Creek. All of these streams were washed by the tides, which come up Darby and Cobb's Creeks as far as Woodland Avenue in Paschallville and on the Schuylkill River to Fairmount Dam.

It is difficult for the modern observer to picture this part of the city as it existed at the time of the earliest explorations, three hundred years ago. The recent alluvial deposits, new sewers and drainage projects and artificial filling have reduced these streams in places to such insignificant proportions that it is hard to believe that they were once formidable barriers to land traffic. In some places it is now difficult to trace their courses, while the islands they once separated are now joined into one firm fast mainland.

If a line were drawn from the junction of Darby and Cobb's Creeks northeast to Lyons Avenue and Island Road, from that point northeast to the Reading Railroad at Passyunk Avenue, along the Reading Railroad to Fifty-eighth Street and from that point east to the Schuylkill River, we should find that south and east of this line there are only one or two points in the Fortieth Ward which rise as much as twenty feet above sea level. The remainder is low, level and at many points swampy. Much of it has never been wooded, but is covered every year by rank-growing weeds and grass. Most of it is very fertile

[1] Called Iroquois Creek because the Susquehannocks, an Iroquois tribe from the west used it as a route of travel across the present territory of the Fortieth Ward in their overland trip from the Susquehanna River to the Schuylkill River. It was used prior to white settlement as an avenue of attack against certain southern tribes, and later as a means of transporting freight to and from the trading posts along the Delaware and Schuylkill Rivers.

and has at one time or another been cultivated. The higher ground has been settled and the town of Elmwood is located west of Church Creek below Island Road.

North of the line described in the previous paragraph one finds the first of a series of irregular, terrace-like elevations by means of which the lowlands grade into highlands. This shelf runs from a point below Paschallville to the elevation above Bartram Park and below Gray's Ferry Avenue. The land to the north is gently undulating, and was formerly well drained by short swift streams which flowed through picturesque ravines.

Two more of these shelf-like elevations are seen farther north in West Philadelphia. The first may be followed by scattering knolls and ridges from Cobbs Creek Park on the line of Race Street east to the hills on the banks of the Schuylkill opposite Fairmount, an elevation on the east side of the river just above Spring Garden Street. The other is a more definite and continuous series of ridges extending from Morris Park in Overbrook along the highlands of Overbrook, Wynnefield, George's Hill, Belmont and Mount Prospect. In places this ridge attains an elevation of two hundred and twenty feet. These upland areas were more healthful than the lowlands to the south, but not so fertile.

The most important stream west of the Schuylkill was Cobb's Creek, and its continuation as Darby Creek after the confluence of the two streams. It was not used for navigation to any great extent, but was valuable for mill sites. In our day Cobb's Creek is much reduced in size and regrettably polluted. It is spared pollution from the east bank by an intercepting sewer and the city has set aside most of both banks as far south as Woodland Avenue for a park, but so far Cobb's Creek has not been restored to its early clearness and beauty.

Mill Creek once rose in Montgomery County, entered Philadelphia through Overbrook, was joined by George's Run in Hestonville, flowed southeast across Market Street near Forty-sixth Street, across Clark's Park through a beautiful ravine, and emptied into the Schuylkill near Forty-second Street at the southwest corner of Woodlands Cemetery. Eighty years ago a number of mills were located along its course, but it is

now a huge sewer, in some places as much as thirty feet below the level of the street.

There were a number of other small streams which were sometimes troublesome during rainy weather. Sandy Creek, a little stream which flowed across the campus of the University of Pennsylvania was noted for quicksands which made fording hazardous. It is now marked by a sewer which empties into the Schuylkill above South Street.

The Schuylkill River is deep and navigable as far up as Market Street, where it is about thirty-five feet deep. Ocean-going vessels come up as far as Walnut Street, but find the river too narrow for easy maneuvers above Point Breeze. It has been an important factor in inland transportation, bringing coal, grain and produce to Philadelphia from counties to the north in the days before railroads secured the traffic. Wharves or docks have been available along the river for over a hundred years and a considerable amount of lumber, stone, gravel and sand are still brought up the river in barges drawn by tugs, while wastes from the city are put in barges and towed down to the dumping grounds near the river in the Fortieth Ward. Ocean-going vessels also bring great quantities of crude oil to Point Breeze.

The Schuylkill River has been an important source of water for the city since 1812, and Fairmount Park was formed partly as a means of preventing pollution. This measure has been only partially successful and in recent years the filling and pollution of the river has become a serious problem.

The topography of West Philadelphia has been undergoing a steady transformation, and during the last hundred years, an increasingly rapid one. Hills have been levelled off, ravines filled, streams converted into sewers, forests cut away and swamps brought up to grade. At the present time the lowlands are being steadily filled and in a few decades the marshes of the Fortieth Ward will likely be only a matter of history. Large scale operations will ultimately change the face of almost all of the unsettled areas, and we shall be able to see only in Fairmount Park the geographic features of primeval West Philadelphia.

Climate

Philadelphia is noted for a mild but extremely variable climate. In describing it William Penn aptly commented that the weather was "constant only in its inconstancy." The range of temperatures is not great and the winters are usually mild, but the heat and humidity of the summer months are oppressive. The mean temperature for January is 13.6° F., while that for July is 76.0° F. Temperatures of 100° F. for the summer months are not uncommon. The mean annual rainfall is 41.6 inches.[2]

The mild winters probably facilitated the settlement of Philadelphia, and encouraged industrial activity throughout almost the entire year. On the other hand, the long hot summers fostered huge swarms of mosquitoes, which were responsible for the early plagues of malaria and yellow fever. Moreover, the heavy rains did much damage, and at times made travel difficult. In certain places travel was so slow that seven miles a day was the standard distance for freight wagons. Pennsylvania was fortunate in having a plentiful supply of stone available for building turnpikes, but that was an expensive process and could be undertaken only for the main highways.

Vegetation

The more important facts with respect to plant life in West Philadelphia are related to the topography. The lowlands were not wooded, were covered with a luxuriant growth of grass and weeds which could be used to graze livestock, and were ready for the plow without the preliminary task of clearing. Consequently the earliest settlers took up the meadowlands of the southern islands. They secured building materials from the nearby highlands, and became prosperous on the crops from the fertile alluvial soil.

In the northern portions of the area, great forests of oak, hickory, poplar, spruce, elm and chestnut offered a great deal of resistance to settlement and road-building, but also afforded a ready supply of building materials.

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[2] *International Encyclopedia*, Volume 18, p. 469, Second Edition, Dodd Mead & Co., New York, 1916.

There were certain food-producing plants which grew wild in these areas, and others which were cultivated by the Indians, but it should be pointed out that the chief sources of income in Pennsylvania agriculture have been of European origin. Indian corn and tobacco are important exceptions, but the fruits, grains, vegetables and fibrous plants have been brought largely from the Old World.

Animal Life

Fur, fish and meat from the great storehouses of America were among the earliest resources of the New World to be exploited. Pennsylvania was first settled by fur traders, and although later colonists turned to agriculture, furs were an important source of income until the animals producing them were exterminated or driven off. The schools of shad in the Delaware and Schuylkill were valuable sources of food, and the deer, bear, rabbits, squirrels and certain other animals furnished meat and hides. Wild fowl supplied food and feathers in abundance. Of course these same animals preyed upon crops planted by the settlers, but they seem to have receded before the line of settlement so rapidly that they were not serious scourges.

Other Natural Resorces

West Philadelphia did not have any great mineral resources, but there was stone to be had for building, and valuable minerals such as coal, iron and oil were within a reasonable distance. There was some waterpower, and wood was a cheap form of fuel in early days, but the factors which seem to best account for the growth and commercial importance of West Philadelphia are associated with the natural and man-made advantages which Philadelphia enjoyed—and still enjoys—in facilities for transportation. These have brought raw materials to the city and carried manufactured goods away at a cheap rate, encouraging industry and massing people in the favored area.

IV

Local Communities and the Historical Tradition

The student of natural areas must guard against too much emphasis upon the fascinating lore of an area which has been the scene of white settlements for three hundred years, but he cannot ignore the rôle played by traditions in the determination of local allegiance. Settlers had been in the lower end of West Philadelphia forty years before William Penn sailed up the Delaware River, and the names of early residents still mark the sites of Pennsylvania's beginning. The account of this development, after 1609, falls conveniently into three periods, the first of which is that from 1609 to 1789, during which exploration and settlement made Pennsylvania the foremost colony of America and developed West Philadelphia for farms, homes and estates. During the Early National Period, 1789–1854 West Philadelphia became a suburban section of villages and summer homes. With the consolidation of the county and city of Philadelphia in 1854, West Philadelphia became a political unit within the larger urban community. Following this general outline we may trace the progressive integration and differentiation of the communities now constituting West Philadelphia.

The Indians

It would be unfortunate to pass the aboriginal population of southeastern Pennsylvania without some mention. Their influence upon local community development was insignificant, but they have left a tradition and a few landmarks of note.

The Indians who occupied the site of Philadelphia applied to themselves the name "Lenni Lenape," a rhythmical phrase indicating primacy of origin and honor of ancestry. They were a branch of the greater group to which the Europeans applied the generic term "Delaware," and of Algonkin cultural affiliation. Their mythology relates a western origin, and migration to the east in the course of which they conquered

other tribes, possibly the "mound-builders." Prior to the coming of white settlers they appear to have experienced a political decline, and to have become tributary to the aggressive Iroquois of the North. Aside from their military and political inferiority they appear to have been the cultural equals of their neighbors, but they lived in constant dread of the northern tribes and of the powerful Susquehannocks (also called "Minquas" or "Mingoes," a local name for all Iroquois) who lived in the Susquehanna Valley. The latter tribe was frequently at war with Algonkin tribes and even resisted successfully the attacks of its highly organized kinsman who were federated into the "Six Nations." Ultimately the Susquehannocks were crushed by a combination of whiskey, smallpox, venereal disease, and the hostility of white and Indian foes, but their contributions to the fur trade constituted a very important factor in the earliest settlements along the Schuylkill and Delaware Rivers. The Minquas Trail, which ended at a point below modern Paschallville, was a line of transportation which brought the furs of the interior to the trading post of Jonas Nilsson,[1] and Mingo Creek (see p. 28) was named for the Susquehannocks who used it to complete their trip to the Schuylkill River.

The Indians of the Delaware Valley were almost uniformly peaceable and friendly. There are a few accounts of reprisals against white aggressions, especially in Dutch territory, but the policy adopted by William Penn had been firmly established by the Swedes before the Quakers came to America. It is unfortunate, therefore, that no happier account of the experiences of this aboriginal group can be written. It appears that they became a pauperized and dwindling remnant, exploited because of their simplicity, decimated by the white man's vices and diseases.[2] After pathetic experiences in various parts of Pennsylvania they migrated to the valley of the Wabash River, where their identity as a tribe was ultimately lost. Their history in Pennsylvania, and their cultural traits are matters of great local interest, but they cannot be given great space in a study of modern communities.

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[1] See Paxson, *Where Pennsylvania History Began*, pp. 160–172.

[2] See Macleod, W. C., *The American Indian Frontier*. Also Scharf, T. and Westcott, T., *History of Philadelphia, 1609–1884*, Vol. 1, pp. 30–52.

Early Exploration and Settlement. 1609–1789

The chronicles of early America describe the Delaware or "South" River substantially as it exists today, a broad deep river, with treacherous shoals or sandbars, merging into a wide bay. Henry Hudson, upon information gained from Captain John Smith, undertook to explore the river as early as 1609, but abandoned the effort after an unfortunate experience on one of the uncharted sand bars and set sail for the "North" or Hudson River.

This reverse was only temporary. The known value of the fur trade with the Indians and the desire of the Dutch to establish their power in America induced successive expeditions from Holland and New Amsterdam. Forts were built to command the Delaware and Schuylkill Rivers, claims to the region were published, and strenuous efforts were made to exclude other settlers. The failure of the Dutch to establish firmly their claims to the Lower Delaware Valley is due partly to European politics but more especially to the refusal of their representatives to adapt themselves to the new country. Most of the Dutch colonists were traders and adventurers who sought from the New World a fortune which would give them comfort and independence in Holland. They resorted to the familiar process of exploitation which tradesmen so often adopt toward a new country, antagonizing the Indians and skimming the virgin wealth of the wilderness without regard to the future of their traffic. They made little effort to settle or till the soil, build homes or start villages. Perhaps this explains their failure to hold an initial advantage against their adversaries on the Delaware, the Swedes and English.

The great Swedish ruler, Gustavus Adolphus, sought to establish Swedish power in America and to found a colony which would become a refuge for oppressed Protestants. He chartered a Swedish trading company as early as 1626, but his untimely death in 1632 left the project in the hands of his ministers. An expedition was sent out in 1638, and established a colony near the present site of Wilmington, Delaware, but Swedish plans for a "Protestant Empire" in America made

little progress until 1643, when Governor Johan Printz was sent out to take charge of the colony. Printz was a man of uncertain temper and harsh manner, but he possessed the personal force and administrative capacity to direct the affairs of "New Sweden." Until his recall about 1653, the colony grew steadily in territory, wealth and numbers. In order to bolster up the tenuous claim of Sweden to the territory appropriated he purchased land from the Indians, constructed forts at strategic points, and kept the Delaware River under strict surveillance. He diverted most of the fur trade from the Dutch, negotiated an advantageous truce with fierce old Peter Stuyvesant, the Dutch governor at New Amsterdam, and ruled his colonies with a fearless rigor. During his tenure of office the Swedes moved up the Delaware River from Wilmington, founded the little town of Upland, which has become the modern Chester, Pennsylvania, established the seat of government on Tinicum Island, and settled colonists in Kingsessing, as well as Wicaco, Passyunk and Moyamensing on the present site of South Philadelphia.

The Swedish settlers manifested patience and industry which augured well for the future of the colony. They showed courage but seldom antagonized the Indians as the Dutch did. They did not cut off the forests and drive out the game like the later English and Scotch-Irish settlers, but located on the grassy lowlands along the rivers and resorted to artificial drainage and cultivation to utilize the prodigious fertility of the alluvial soil. Cattle were imported to graze over the marshes and fruit trees were planted on the better drained land. Substantial homes of logs and stone gave the colony an atmosphere of permanence. In 1646 a grist mill was built on Cobb's Creek just above the present Woodland Avenue,[3] and people for miles around brought their grain there to be ground. A small town which grew up about the mill has been in existence for about two hundred and eighty years. The site of the old mill, probably the first industrial establishment in Pennsylvania, is permanently marked by the holes drilled in the bed-rock of the creek to set the posts of the mill.

[3] See Paxson, H. D., *Where Pennsylvania History Began*, pp. 122–135. See also p. 66.

New Sweden came to an abrupt end in 1655. After Governor Printz was recalled, John Rising was sent out to rule New Sweden. He expelled the Dutch from Fort Casimir, on the site of New Castle, Delaware, and by so doing, broke the truce Printz had maintained. Governor Stuyvesant was thoroughly aroused, descended upon the Swedish garrison with an overwhelming force, and ultimately gained control of all the territory in the Delaware Valley. So Swedish power in America, after an existence of seventeen years was rudely ended, and the settlers passed under the rule of the Dutch. The change of masters appears to have created little disturbance, and the shuttling of the region between the Dutch and English seems to have been uneventful so far as West Philadelphia was concerned until 1680, when William Penn became owner of all Pennsylvania.

Under Penn's reorganization of Pennsylvania, West Philadelphia was divided into two townships of Philadelphia County, Kingsessing, which included approximately the area of the present day Fortieth Ward, and Blockley, which covered the remainder. Until 1784 Philadelphia County also included much of what is now Montgomery County. The population of Kingsessing was largely Swedish, and to this day descendants of the old Swedish families may be found there, while to the north much of the land of Blockley township was developed by Welsh and English Quakers.

Shortly after acquiring Pennsylvania, William Penn began the policy of administration which has made him famous as a statesman of foresight and a real estate dealer of great native shrewdness. His vast tract of wilderness might have been a burden if he had not been so fortunate as to have at hand a clientele of moderate means, splendid cultural background and common religious affiliation. Penn put the land in their hands as rapidly and generously as possible, retaining the title for himself, but securing the tenure of the grantee. One of the most famous of these deals was the sale of the "Welsh Tract," of forty thousand acres in the lower end of what is now Mont-

gomery County. This grant did not include Blockley Township, but it has had much to do with the development of West Philadelphia and the entire region to the northwest. The "Main Line" communities can be traced back to this grant, and many of the better known families of Philadelphia are of Welsh extraction.

A review of the grants during this period reveals the beginning of much that is distinctive in West Philadelphia. From the time of Penn's purchase up until about 1800 there was no sizeable center of population in the district, but only farms and landed estates. The identification of some of these estates is possible because of the records from colonial days. One of the best known of all was a grant which Penn made to his physician and personal friend, Doctor Thomas Wynne, son of a Welsh nobleman.[4] Five thousand acres of this tract lay in Blockley Township between what is now Fifty-fourth Street and the Schuylkill River, and at various times since has been the site of many beautiful estates, Belmont District, Fairmount Park, and present day Wynnefield. In the old Wynne homestead on Fifty-fourth Street (Old Lancaster Road), near City Line Avenue, seven generations of Wynnes were born. A part of this tract which was purchased by the George family included George's Hill, which was given to the city for Fairmount Park by Rebecca and Jessie George in 1868.[5]

Another portion became the home of Judge William Peters the Tory, and Richard Peters, his son, an ardent patriot. Their mansion was known as Belmont and ultimately gave its name to the entire area about it. Another famous estate in this area is Chamounix, the homestead of the Johnson family.

Just south of the Wynne grant William Warner secured a grant of fifteen hundred acres which reached down as far as Kingsessing and west some distance in Blockley Township. The first house built west of the Schuylkill River (by English settlers) is supposed to have been erected on this tract by William Warner. Out of this area were later carved the estates

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[4] Vieira, M. Laffitte, *West Philadelphia Illustrated*, pp. 91–93.
[5] *Ibid.*, p. 141.

of "Sweetbrier," owned by Samuel Breck; "Powelton," the home of the Powell family; "Lansdowne," built by John Penn and occupied later by William Bingham; "Solitude," the hermit-like residence of John Penn, nephew of Governor John Penn, which now stands in the Zoological Garden; and "Woodlands," the famous estate of the Hamilton family.

Further west was the grant to Thomas Paschall, which included most of the territory now covered by Paschallville. William Bedward (according to a tax list for 1693 which is in possession of the Pennsylvania Historical Society) owned the land where Overbrook is now located, and to John Rhoads belonged the site of the village of Haddington. At the same time considerable tracts were held by Thomas Duckett, William Powell, George Wilcox and others whose names are familiar to the early history of Blockley township.

Some of these names and estates have become landmarks of history. It would be a bootless task to enumerate all of those who played important parts in the early history of West Philadelphia, but the foregoing discussion presents a graphic picture of the earliest pattern of social and economic organization west of the Schuylkill. As the eighteenth century wore on Blockley Township increased rapidly in population, while Kingsessing Township grew more slowly. The aristocratic composition of the population of Blockley and the commonplace nature of the agricultural population in Kingsessing stand in rather marked contrast. Ultimately there was considerable fusion, but Blockley Township was the favored site, and because of its nearness to the city of Philadelphia eventually became the center of population, wealth and influence.

Toward the end of the colonial period a steady increase in population in Pennsylvania led to a progressive sub-division of the land, and the introduction of new roads or means of transportation. To serve travelers on these highways a system of taverns grew up at strategic points along the way. These taverns were important, not only as stations for the wagon trains and stage-coaches but as neighborhood centers and nucleii for villages which had begun to spring up during the latter part of the eighteenth century. The tavern was not

only an inn and saloon, but frequently postoffice, store, market and news center. Men from nearby farms gathered there in the long winter evenings, drank beer or cheap whiskey, smoked, and discussed the problems of the universe much as the members of a club might today. The tavern keeper was frequently a man of means, the postmaster, notary, local politician, banker and middleman. He kept in touch with the outside world and relayed the happenings to his patrons. In view of this fact it is not surprising to learn that houses sprung up about the tavern and a village eventually appeared.[6]

Some of the better known of these taverns were the Blue Bell, erected in 1766 and enlarged in 1811, located in the old town of Kingsessing, later Paschallville, on the north side of Woodland Avenue at Seventy-third Street; "Whiteside's" on Haverford Road in Haddington; "Cross Keys" on the site of the moving picture theater of that name on Market Street near Sixtieth; "Green's" at Fortieth Street and Lancaster Avenue; and "Sans Souci," formerly the country seat of the Say family, on the high ground at the west end of the Gray's Ferry bridge. In the earlier days the travel of freight wagons, especially in winter, was very slow and even through the sparsely settled areas taverns were located every seven miles. The part of these taverns in determining the location of settlements should not be overlooked.

The Early National Period. 1789–1854

The sixty-five years which elapsed between the inauguration of the first president of the United States and the act of the state legislature of Pennsylvania which provided for the consolidation of all the townships, boroughs, districts and cities of Philadelphia County into a single great city were years of feverish national activity. As the period drew toward a close hundreds of thousands of Irish and German immigrants flocked to the new country annually, new industries were established, internal improvements were undertaken on an unheralded scale,

[6] Vieira, M. L., *Opus cit.*, pp. 19–27, 83.

and the favorably located seaboard cities rapidly outstripped their commercial rivals.

Philadelphia, hampered by its inland location and political anarchy lost its commercial supremacy to New York during this period, but as the center of a region of immense resources, made great strides in economic development. New roads were cut through the forests, stone turnpikes were built to neighboring cities, long narrow canal boats brought the coal, grain and produce of the up-state counties down the Schuylkill, steamboats came up the Delaware, permanent bridges were thrown across the turbulent streams, and railroads stretched farther and farther away, tapping new sources of raw materials.

As Philadelphia grew north, west and south, a steadily increasing number of people and industries sought locations across the Schuylkill River. In the course of this period West Philadelphia steadily changed from a farming section to a truly suburban district, dotted by villages and summer homes. The population of Blockley Township near the bridges across the Schuylkill increased rapidly, the most important centers being located near the Market Street Bridge. A summary of population growth for the period is included in the table below. A more intensive study of the growth of population is reserved for later treatment.

TABLE I

GROWTH OF POPULATION FOR WEST PHILADELPHIA, 1790–1850

YEAR	PHILADELPHIA COUNTY	PHILADELPHIA CITY	BLOCKLEY TOWNSHIP	WEST PHILA. BORO.	KINGSESSING TOWNSHIP
1790.....	54,388	28,522	883	....	542
1800.....	81,009	41,220	1,091		634
1810.....	111,210	53,722	1,618		903
1820.....	135,637	63,802	2,655		1,188
1830.....	188,797	80,458	3,401		1,068
1840.....	258,037	93,665	6,214		1,339
1850.....	408,962	121,376	5,916	5,571	1,778

Some of these villages grew up spontaneously about the ubiquitous taverns, and some were laid out with care and

foresight to articulate with the possible expansion of Philadelphia. The inner zone of villages which has since been built up so solidly as to become practically a single community included Hamiltonville, Mantua, Powelton, Hestonville and Belmont. An outer zone which had developed comparatively little prior to consolidation with Philadelphia included Paschallville, Maylandville and Haddington, but the treatment of these is reserved for a later period.

Hamiltonville

The most important of these early villages of West Philadelphia was Hamiltonville, which at its greatest expansion covered the portion of West Philadelphia from Thirty-second Street to about Forty-first Street and from Market Street south to the line of what is now Woodland Avenue. The area south of this line was occupied by the grounds of the Philadelphia Almshouse and Woodlands Cemetery. East of Thirty-second Street the land was low and built up only irregularly. The original plan of the village included no streets beyond what is now Fortieth Street to the west.

The history of Hamiltonville is most interesting. It was laid out by William Hamilton, master of the Woodlands estate which once embraced six hundred acres south of Market Street and east of Mill Creek, roughly the area of the present day Twenty-seventh Ward.[7] The remnant of this estate may now be seen in Woodlands Cemetery, which includes about eighty-six acres.[8]

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[7] For a connected story of the Woodlands estate see Westcott, Thompson, *Historic Mansions and Buildings of Philadelphia*, pp. 423–427, 1895. The manor house of the estate may still be seen on a graceful eminence in the Woodlands Cemetery, commanding a fine view of the Schuylkill River.

[8] Woodlands Estate.—"The estate of the Woodlands, Andrew Hamilton the first left in 1741 to his son Andrew. The property covered 300 acres enriched with grand old trees, many of which lend their shade (to) and adorn the Woodlands Cemetery. Andrew Hamilton, second, added to the number of acres and erected a mansion and called it 'The Woodlands.' He laid out the portion of West Philadelphia called Hamilton Village, the boundaries of which are extinguished in the city of Philadelphia. To his son William he bequeathed his property of 356 acres in 1747. William Hamilton never married. He was one of the earliest patrons of art and collectors of pictures in this country. He cultivated the art of ornamental gardening. The old

The plans for Hamilton Village were first made by the second Andrew Hamilton, but it remained for his son to carry them into execution. Pressed by debts which his extravagant manner of living in New York occasioned, he placed a good share of the land which he had inherited upon the market and laid the basis for the present community. Fortunately the streets were planned to articulate with those of Philadelphia, and they remain to this day along the lines originally designed. These streets were named for members of the Hamilton family, but after the consolidation the names were changed.

It would be difficult to say whether piety or pecuniary acumen dictated William Hamilton's policy, but in his development of the village he set aside a generous lot for each of the several branches of the Christian church, with the provision that if any church failed to erect a building within twenty years the land should revert to his heirs. Partly because of this provision Hamilton Village became and remains a center of churches, some of which are located on the lots donated by William Hamilton. Among these are St. Mary's Protestant Episcopal Church and the Walnut Street Presbyterian Church.[9]

That education was not neglected in the village is indicated by the fact that Hamilton Academy, a two-story building, stood on the south side of Chestnut Street near Fortieth Street as early as 1800. There was also a small Quaker school house at the corner of Thirty-third and Ludlow Streets at the same time.

While the village made steady progress and maintained a high class of residents, a traveler about 1840 remarks that it is still quite small.

" 'A handsome village of West Philadelphia, situated about one mile west of the Market Street Bridge,' notes this description. It is on the road to West Chester. Its plan is regular, and its streets, most of which are prolonga-

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mansion in the midst of Woodlands Cemetery was built about the time of the Revolution, and is finer than the first dwelling. William Hamilton was at first in favor of the revolutionary cause, but was afterwards suspected of being a Tory. He went to New York in 1783 and becoming financially embarrassed through extravagance, sold Hamilton Village in lots."—Vieira, *opus cit.*, p. 73.

[9] *Ibid.*, pp. 38–73.

tions of those in the city, are wide and well regulated. The buildings, about eighty in number, generally stand apart from each other, leaving garden spaces between them. Taken together, Hamilton is probably the prettiest village in the neighborhood of Philadelphia. The dwellings are occupied principally by families who reside in the city during the winter season, or merchants and others, who reside here and transact business in the city."[10]

Much more could be written about Hamiltonville, its churches, schools, and men of affairs, but this must suffice for a glimpse of its early development. It is now so nearly submerged by urban development that little more than a tradition remains, but it once played a primary rôle in the affairs of West Philadelphia.

Mantua Village

North of Market Street several small villages appeared during the first half of the nineteenth century. The most important of these was Mantuaville, the name of which is of obscure derivation. A sentence devoted to its history by Miss Vieira reveals the fact that it was laid out by one William Britton,[11] but the date is not revealed. Some accounts limit Mantuaville to a comparatively small area northeast of Lancaster Pike, above Spring Garden Street and south of Westminster Avenue. Others would give it practically all of the area included in the present Twenty-fourth Ward below the Pennsylvania Railroad tracks. Within the latter area we must distinguish "Greenville," which lay snugly in the triangle bounded by Market Street, Powelton Avenue and Lancaster Pike, and "Powelton," a later village of some note, the hub of which was the old mansion of the Powell family near Thirty-second and Race Streets. Politically, Mantua, the Third Ward of West Philadelphia, did not include any of the area below Lancaster Avenue. Concerning the accepted boundaries of this ward prior to the time of consolidation (about 1845) we read the following note.

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[10] Quoted from Jackson, Joseph, *America's Most Historic Highway, Market Street, Philadelphia*, John Wanamaker, Philadelphia, 1926, p. 332.

[11] A map circularized by the Colonial Trust Company of Philadelphia and dated 1776 locates a tract of land belonging to William Britton in the portion of the Twenty-fourth Ward just below the Zoological Gardens, stretching west from the Schuylkill River.

"The borough of West Philadelphia, under its charter, was governed by a burgess and a number of commissioners, and at the time spoken of above, the late C. C. Pierson was burgess. It was divided into three wards, of which Mantua was the Third Ward. Mantuaville, or properly speaking the Third Ward of West Philadelphia, commenced at the northwest corner of the old Market Street Bridge (burned a number of years since—1875–), continued along the north side of Market Street to its junction with Lancaster Pike (now avenue), thence along Lancaster Pike to Westminster Avenue, thence northerly to the Schuylkill River and along the river to the place of beginning. At this time Mantua was a sparsely settled village, there being but seven or eight roads opened for travel or occupancy. Haverford Road (now avenue) was the main artery of the village. On the north the opened or partly opened streets were Story, Elm and Sycamore (now Mt. Vernon and Wallace Streets and Fairmount Avenue, respectively.) All beyond was a common, until the Pennsylvania Railroad was reached; on the south were Bridge (now Spring Garden), Hamilton and Baring Streets and Powelton Avenue, these being but dirt roads with no sidewalks except on Bridge Street. There were no paved streets in the entire ward. On the east the only opened streets were Bridgewater Street (now Thirty-first Street) and Butcher's Lane (now Thirty-fifth Street), so-called from the fact that the fine mansion or country house of the late Thomas Tyson Butcher was located on it; from that to Lancaster Pike on the west there was no cross street, the next being called Cedar Lane, afterwards called Till Street (now Fortieth). It was a small lane or road almost impassable during the winter or in the rainy weather on account of the depth of the mud. This, however, was not in the bounds of Mantua proper, but on the edge, so to speak. It was, when conditions permitted, the most used thoroughfare between the village and Market Street, or as it was frequently called, West Chester Road. About this time Hare Powel had purchased from the Baring Estate, held by the English family of that name, a large tract of ground covering the space between what is now Thirty-second Street and the river front. He erected a fine mansion, with a very imposing front adorned with massive columns of gray stone. The lawn in front extended from the house down to the water, and many large forest trees dotted the grounds in all directions. Mr. Powel owned fine bred horses and cattle of various kinds, which added interest to the estate. The Powelton Mansion was in the old days a place of note. It was the great resort of fashion and the scene of not a few celebrations and grand festivities. . . ."[12]

For practical purposes we can treat all of the area now em-

[12] Vieira, M. L., *opus cit.*, pp. 171–731.

braced in the Twenty-fourth Ward below the line of Girard Avenue as belonging to the Mantua Village.

Early deeds in this area indicate that it was at one time owned largely by the Baring family of Great Britain. It was developed at a rather early date and the traffic which followed Haverford and Lancaster Roads created a demand for taverns. Miss Vieira has traced several of these taverns, some of which were identified with the extensive traffic in livestock which came in over the highways to the north and west.

"Ludwig's Hotel and drove yard was celebrated in its day for its extensive accommodations for stockmen. It was favorably located at the junction of two highways (Haverford and Lancaster Roads) leading from the rich cattle country to the most important bridges for reaching the city. . . .

"On the site of the old hotel (burned in 1896) now stands the modern building of the West Philadelphia Title and Trust Company. . . .

"Where the new Pennsylvania R. R. Station has been built on Market Street (at Thirty-second Street) there stood in 1850 a large country tavern or inn. It was the starting point of the huge Conestoga wagons then, and for many years after, the means for transportation of large quantities of freight to and from interior countries. . . .

"Market Street west of the Schuylkill was formerly called "Conestoga Road" and in its course nearly due west, it extended to the county line at Sixty-third Street.

". . . At the corner of Thirty-fifth Street and Lancaster Avenue stood another old tavern which was still in existence in the late seventies. At the intersection of Lancaster Pike and Haverford Avenue there was the 'Drove Yard Tavern,' kept by John R. Green; another quite as large stood diagonally opposite, and its site is now occupied by the imposing building of the West Philadelphia Title and Trust Company. The 'Green Tavern' is still (1903) standing and in use. An immense cattle yard then covered all the space between what is now Baring Street and the present Fairmount Avenue from north to south, and to about what is now Thirty-seventh Street on the east and to Lancaster Avenue on the west. There were no buildings of any kind on either Baring or Hamilton Streets in 1850.

"On Bridge (Spring Garden) Street beginning at the river, or wire bridge, which crossed the Schuylkill, there was a large inn or tavern called the 'Fish House' kept by Richard Harding. It was renowned for its 'catfish suppers.' Further west, at about Thirty-fourth Street, was a fine mansion and grounds taking up a whole block. This was at one time occupied as a military academy,

and also used by the Presbyterian church before they built the church at the corner of Thirty-fifth and Spring Garden Streets, now used by the Lutheran congregation. This body was the parent of the present Northminster Church . . . "On the grounds now occupied by the Mantua Baptist Church (Fortieth Street and Fairmount Avenue) a dairy farm once stood. It was called the Bull Farm. It is an interesting fact that most of the old titles to real estate in Mantua show that the Honorable Elizabeth Baring, of England, was the original grantee of this large tract of ground."[13]

The center of commercial development in Mantua seems to have been at the junction of Haverford Avenue, Lancaster Avenue, and Fortieth Street, still a commercial and shopping center of some importance. Powelton Avenue, laid out by and named for the Powell family was the base street of the area, and gave to this section its curious system of oblique streets. However, Powelton Avenue seems to have been primarily a road from the Upper Ferry to the West Chester Pike (Market Street) at Forty-third Street, and never an important business street.

The Powelton village was unique among the settlements north of Market Street for the class of residences and settlers. There is to this day an area of pretentious homes with beautiful broad lawns, old trees and spacious gardens above Race Street as far west as Thirty-eighth Street on Powelton Avenue and as far north as Spring Garden Street. This area was in many respects the equal of Hamilton Village in its day. The encroachments of business and light manufacturing have pushed back the line of desirable residences in the past two decades from the site of the old Powelton Mansion near Thirty-second Street, and many of the old houses are now without tenants.

There appear to have been persons named Powell in this district as early as 1693, but the Powelton Estate proper is described in the following passage.[14]

"Of old West Philadelphia properties the famous Powelton estate deserves more than a passing notice. Samuel Powel had purchased the estate in 1775

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[13] Vieira, M. L., *opus cit.*, pp. 109, 171, 173.
[14] Vieira, M. L., *op. cit.*, p. 105.

from Thomas Willing. It then contained eighty acres of fastland and sixteen of marsh northwest of the west end of Market Street Bridge, where the lodge house stood . . . The estate passed into the hands of the Pennsylvania Railroad in 1852 and was bought from them in 1860 by E. Spencer Miller, whose wife was Anna Emlen Hare. 'Powelton' was situated on Thirty-second Street above Race until 1883 . . . Powelton Avenue is named after the Powel family."

In 1883 a real estate firm removed the old mansion and started building the houses which may now be seen along Thirty-first and Thirty-second Streets.

The history of Greenville is quite obscure. The same appears on several atlases about the middle of the nineteenth century and continues up until about 1890. It appears to have been of spontaneous development, the streets were narrow and irregular, and it has for many years been a resort of a dense negro population. Along Market Street it was formerly marked by a number of stables for horses, of which "Connolley's Horse Bazaar" is a well known survival. There is still the atmosphere of the equestrian about the locality, but in place of blooded racers, riding academies and race tracks it is now a resort for draft horses broken-down nags and wagon yards. A number of harness and leather stores are also to be found on the north side of Market Street between Thirty-seventh and Fortieth Streets.

An early traveler remarks upon the distinction between Hamilton Village and the motley array of houses north of Market Street. The latter unquestionably refers to Greenville, which stretched along the old pike from Thirty-second Street to Forty-second Street. It appears to have remained always an area of cheap housing.

Another portion of Mantuaville which gained considerable fame during the last half of the nineteenth century was a "volunteer" settlement which sprung up on the little eminence south of Girard Avenue and west of the Zoological Garden and was known as "Laniganville" or "Corktown." It was made up partly of squatters, who erected flimsy shacks without any pretense of securing title to the land, and a few who owned or rented homes of a curious "bandbox" construction. The

first settler was Pat Lanigan, and his neighbors were largely peasant Irish of a clannish and disorderly tradition. The settlement maintained a form of independent existence as late as about 1890 with an unofficial government consisting of a mayor, aldermen and police force. The mayor was usually permitted to serve for the period of good and neighborly behavior, but if he became officious and attempted to enforce the law he was likely to be promptly ousted. In case of serious brawls, in which men were occasionally killed, the city police were called in, but since several houses were "speakeasies," and a number of the inhabitants were criminals, the populace favored a régimé of laissez faire.

Ultimately the railroad development west of the Zoological Garden swept away much of Laniganville, and on Poplar and Wyalusing Streets, rows of modern houses are now occupied by persons largely of Jewish extraction.[15]

Belmont District

Belmont district, a short-lived corporation formed just before the consolidation of Philadelphia included a large portion of Blockley Township west of Sixty-third Street and north of a line following Westminster Avenue from a point near Thirty-fourth Street to its junction with Haverford Avenue and along Haverford Avenue to Sixty-third Street. The exact boundaries of the district can hardly be determined at this time, but a map of the date of formation will make it possible to trace the approximate line described below.

"A new district was added to the many already in existence in Philadelphia County by act of April 14, 1853. It embraced ground north of West Philadelphia, and began on the northern boundary of the latter at Sweet Brier Creek, on the west side of the Schuylkill. Running by the courses of the creek to the point where it crossed the center of Westminster Avenue, the line was continued along the center of the latter to the middle of the Haverford plank-road; along the same northwest to Fountain Road; along the latter, by ground of John Miller and Jacob P. Jones, to a dividing-line between the latter and George Prentice; west to Merion Road; north along the road

[15] Vieira, *op. cit.*, pp. 123–125.

to the lands of Lewis Jones and William P. Walters; then to The Virginia Road and by other lines not of private property to the Schuylkill River. The title was to be 'the commissioners and inhabitants of the District of Belmont.' There were to be nine commissioners, to be divided at the first election into classes for one, two, and three years. This district had scarcely gotten into working order before the consolidation law was passed, which put an end to its powers."[16]

This means that most of Overbrook, all of Hestonville, Wynnefield, and West Fairmount Park, and part of the old Egglesfield section were included in the district. The name was taken from the Peters mansion which may be seen in Fairmount Park today.

The consolidation and the formation of Fairmount Park have precluded the development for commercial purposes, of the most beautiful building sites in West Philadelphia, but it has also preserved the choicest scenery in the area for the enjoyment of posterity. The development of Wynnefield and Overbrook has been reserved for a later section. The history of Hestonville, such as can be secured, is given below. Egglesfield has been incorporated largely into Fairmount Park, and does not exist except by tradition. There is a small area about Parkside and Belmont Avenues, mostly north of the tracks of the Pennsylvania Railroad which is still sometimes called "Belmont" or "Parkside," but it is hardly a genuine relic of old Belmont District.

Hestonville

Hestonville was a small village which lay about Fifty-second Street and Lancaster Avenue at least as early as 1825. It received its name from Edward Heston, a colonel in the Revolutionary War and a charter member of the "fighting Quakers." He owned about one hundred acres on the site of the village, and in 1800 built a simple, substantial mansion on the land now occupied by the tracks of the Pennsylvania Railroad.

Near Hestonville was the little village of Monroeville, centered near Forty-eighth Street and Lancaster Avenue. At that point

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[16] Scharf and Westcott, *op. cit.*, I:707.

there still stands a huge yellow frame building which at one time served as a tavern and has since become a home for aged women.

Although Hestonville has been registered on the atlases for over a century little specific information concerning its origin can be obtained. There were at one time or another several taverns located here and the number of homes built along Lancaster Pike increased steadily during the Nineteenth Century. Mill Creek flowed through the village, and on its lower course was erected a mill which may still be seen at Forty-sixth and Market Streets. There were brickyards northwest of the village, and a broad dreary expanse between Wynnefield and the Pennsylvania Railroad tracks is still left without a house.

A considerable portion of what was once Hestonville was taken over for the yards of the Pennsylvania Railroad about about 1890. The land, including the old Heston mansion, was sold for three hundred dollars per acre, the houses were demolished, and many landmarks lost. Many of the old houses still stand along Lancaster Avenue east of Fifty-second Street and are inhabited largely by Italians. George's Institute, a little museum and library on Fifty-second Street below Lancaster Ave. is now a branch of the Free Library of Philadelphia.

The District of West Philadelphia

A summary of the development of local communities in West Philadelphia may be completed by a study of the settlement which first received the name formally. In the history of the area we may also observe the gradual integration of the built-up sections west of the bridge across the Schuylkill River at High or Market Street. The discussion here may clear up any confusion in the use and meaning of the name at various times.

"West Philadelphia was originally a very small section of Blockley Township. In 1840 it was regarded as insignificant, and, containing few inhabitants and fewer buildings, it was mainly confined to a little district around the western end of the Market Street bridge. It was bounded by the villages of Hamilton, Greenville, Powelton and a part of Mantua. On the other hand,

Hamiltonville was the choicest part of this section of the county, and Powelton, whose name is taken from the Powel family who had a magnificent estate just north of Market Street at Thirty-second, was then a new and promising village."[17]

The formal organization or incorporation of the borough of West Philadelphia came February 17, 1844. The boundaries of West Philadelphia, like those of Belmont, are understandable only in the light of knowledge of the roads and farms of that day, but the most complete account available is reproduced below.

". . . The boundaries (of West Philadelphia) commenced at the intersection line of Hamilton Village and Darby Road; thence along the northwest curb-line of that road to Chestnut Street; along the curb on the north side of that street to the Schuylkill; along the Schuylkill to the north line of property of the city of Philadelphia on Washington, or Market Street; thence on the north line of the said property to the western termination of that property; thence south by the west line of that property to the north side of Hugh McIlvane's property; thence west along the said north line to McIlvane's western boundary; thence south along the west line of his property to the south side of Lancaster turnpike road; thence along the south side of the said road to the eastwardly line of the late Creans' estate; south by the same to the south side of Green Street; along the south side of that street to the west side of Cedar Lane; along the latter to the east side of Rose's estate; thence south along the same to the westerly line of Hamilton village, and along the same to the intersection of Darby Road, the place of beginning. It would puzzle a surveyor to lay out these lines at the present day. The usual method of laying out districts by recognized street or ward boundaries was laid aside for the benefit of special private estates mentioned in the act. This legislation had been rendered necessary by a former illegal proceeding. The borough of West Philadelphia had been created by order of the Court of Quarter Sessions in 1840. The authority to do this was contested by certain citizens, and the proceeding was finally decided by the Supreme Court to be illegal. The Act of Assembly chartering the borough was intended to do away with the mischief caused by the former error, and to provide for the debts of the late borough. The first commissioners of the borough appointed under the act were Henry Leech, H. G. Freeman, Jacob Brown, Richard McIlvane, James Hanna and James Twaddell."[18]

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[17] Jackson, Joseph, *America's Most Historic Highway*, p. 332.
[18] Scharf and Westcott, *op. cit.*, Vol. I, p. 676.

In 1851 the borough was re-incorporated as a "district" with practically the same boundaries, the ones which it had when the consolidation of the county in 1854 abolished all district lines. The villages of Hamilton, Powelton, Mantua and Greenville were included, but a system of three wards, of which Mantua was the third, provided for the preservation of a certain amount of local independence.

The "Digest of Ordinances" issued by the Commissioners of West Philadelphia in 1852 contains an optimistic summary of the virtues of the district.

"As a place of residence, it may safely be said that no other location in the vicinity of Philadelphia offers superior attractions. The ground in general is elevated, and remarkably healthy; the streets are wide and many of them bordered with rows of handsome shade trees; and a large portion of the district has been covered with costly and highly ornamental dwellings. New streets are being opened, graded and paved; footwalks have been laid and gas introduced, and arrangements will soon be made for an ample supply of water. Omnibus lines have been established, which run constantly, day and evening, thus enabling its residents to transact business in the City of Philadelphia and adjoining districts without inconvenience. A number of wealthy and influential citizens now reside in the District, and there is every indication that the tide of population will flow into it with unexampled rapidity.

"Provision by law has been made for the erection of two additional bridges over the Schuylkill, and these will provide facility and convenience to the great amount of travel and intercommunication which the present avenues are inadequate to accommodate."[19]

This indicates the progress which had been made in the urbanization of the area west of the Schuylkill before the consolidation act of 1854. At that time West Philadelphia contained four political units—the townships of Kingsessing and Blockley, and the districts of Belmont and West Philadelphia. The village of Paschallville in Kingsessing had been established but it had not yet reached sizeable proportions, so Kingsessing Township was without a truly urban area.

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[19] Jackson, *op. cit.*, p. 334.

The Metropolitan Period. 1854–1930.

The history of Philadelphia as a truly metropolitan city dates from 1854, when, by special act of the state assembly, the city, boroughs, districts and townships of Philadelphia were consolidated into a single municipal unit. The old political boundaries were scrambled, and from the confusion there emerged twenty-four new wards for a population of approximately a half-million scattered over a territory of 129 square miles. The townships and districts of West Philadelphia were combined into the Twenty-fourth Ward, which, in 1860, contained a population of 23,738 persons. Since 1854, West Philadelphia has been an important part of the City of Philadelphia.

A few years after the execution of the "Consolidation Act" the Twenty-fourth Ward was divided at Market Street, and the southern portion was created into the Twenty-seventh Ward. Later the Fortieth Ward, approximating roughly the area of old Kingsessing Township was split off, and in 1908, the remainder of the Twenty-seventh Ward was divided on the line of Forty-fifth Street to create the Forty-sixth Ward. In much the same fashion, the Twenty-fourth Ward was first divided at Belmont Avenue, and Forty-fourth Street, to form the Thirty-fourth Ward, and shortly after 1900, the Forty-fourth Ward was split off from the Thirty-fourth along the line of Fifty-fourth Street. There are, therefore, six wards in West Philadelphia at the present time, five of which were fashioned chiefly from the territory which once lay in Blockley Township.

TABLE II

GROWTH OF POPULATION FOR WEST PHILADELPHIA BY WARDS
1850–1920

YEAR	PHILADELPHIA COUNTY AND CITY	WEST PHILADELPHIA	WARD 24	WARD 27	WARD 34	WARD 40	WARD 44	WARD 46
1860	565,529	23,738	23,738					
1870	674,022	44,317	24,932	19,385				
1880	847,170	69,404	46,071	23,333				
1890	1,046,964	99,182	42,556	32,905	23,721			
1900	1,293,697	148,548	53,200	32,204	43,706	19,438		
1910	1,549,008	247,918	54,370	24,255	49,575	41,820	39,449	38,459
1920	1,893,779	359,601	60,408	24,290	72,326	78,900	45,467	78,210

A glance at Table II will reveal that the growth of population for West Philadelphia since 1860 has been consistent and rapid, but not phenomenal.

Rather than reaching sensational proportions the growth of population appears to have been sound and constant. A review of the seventy-six years which have elapsed since the "Consolidation Act" was put in force indicates that the accretions of population have followed the general plan of radial expansion described by Professor Burgess,[20] with accompanying incorporations of villages and population centers at the periphery of the built-up zone.

In 1860, the bulk of the population of Philadelphia west of the Schuylkill was concentrated in the former district of West Philadelphia in a semi-circular zone about the end of Market Street bridge. There were a few scattered villages and a farming population outside this well-populated area. If the growth of population has maintained its pace since 1920, the total for 1930 should approach 500,000 persons, a number just about equal to that of the entire county and city at the time of consolidation. The analysis of this population may be reserved until a later chapter, but it is interesting to note in passing that in 1920 the Fortieth Ward, roughly the area of the former Kingsessing township, contained 78,900 persons, slightly more than one-fifth of the total 359,601, while the Blockley area contained 280,701. Such a cursory examination suggests that the greater areas of unoccupied land are to be found in the southern portion of the territory under observation.

If the early national period was an era of rapid development, it is dwarfed by comparison with the activity of the metropolitan period. In these seventy-six years West Philadelphia has become the most popular residential section of the city. Tens of thousands of closely packed row houses have grown up on thousands of acres of land which was green with trees and grass in 1854. Open fields between villages have vanished and giant apartment houses with room for hundreds of families have appeared. The omnibus lines of which the district boasted in

[20] See Chapter I of this study, p. 20.

1852 have been supplanted first by horse-drawn or cable trolleys and later by electrically driven street cars, elevated trains and suburban railways. A series of bridges across the Schuylkill has made traffic with the central portion of the city simpler, while the introduction of the telephone has made possible instant communication. The extent of these developments as compared with those of an earlier period suggests the probable magnitude of future improvements in the region.

Another feature of the radial expansion of the city is registered in the invasion of West Philadelphia by the central business district—an event of very recent date. For many years after considerable business activity had reached the east bank of the Schuylkill it was halted by the water barrier and by an uncouth district along the western shore. The stockyards, slaughterhouses and stone, brick, gravel, sand, steel, lumber and coal dealers have offered heavy resistance to the forces of expansion. During the past decade the accumulated energies of the central business district have thrown a salient across the river, with its apex near the old center of population at the western approach to the Market Street bridge. The vortex of this activity is the new terminal of the Pennsylvania Railroad to be completed in 1932, at Thirtieth and Filbert Streets. In advance of it have come the new office building at Thirty-second and Market Streets, a huge freight warehouse at Thirty-second and Walnut, and numerous readjustments of service. The new postoffice for the city is to be located near Thirtieth and Market Streets, the municipal convention hall is under construction at Thirty-fourth and Pine Streets, while the city plan calls for new boulevards along both banks of the Schuylkill, new bridges, and new subways to alleviate the congestion of a steadily increasing traffic.

There is consequently just beyond the point of penetration a steadily widening zone of deterioration. Recent figures compiled by Mr. Bernard J. Newman of the Philadelphia Housing Association show a large number of demolitions in Wards 24 and 27, in which the new development is taking place. The University of Pennsylvania and the Philadelphia General Hospital (successor to the Blockley Almshouse) have adjusted their programs to

the city and therefore hold their own, but the residences, east of Thirty-fourth Street and south of Powelton Avenue are being rapidly squeezed out by more profitable ventures. The aristocratic Powelton of fifty years ago is in process of dissolution; while just beyond the point of the salient the negroes have been massing for twenty years, and are now taking advantage of every concession by white inhabitants. While all this has been taking place, the new generation which is growing up has forgotten that there was ever a Mantua, a Hamiltonville, a Greenville or a Hestonville.[21]

Fairmount Park

The creation of West Fairmount Park has been one of the most important factors in the growth of West Philadelphia. Much of what was once the District of Belmont is now West Fairmount Park, an area of something like fifteen hundred acres. It was in Fairmount Park that the Centennial Exposition, the most colorful event in the history of West Philadelphia, was held in 1876.

At the time of the consolidation of the county the area now covered by the park was used largely for agricultural purposes. Elegant mansions decorated the summits of the ridges, and green fields stretched away to the north and west. The city plan called for numerous streets, some of which were already cut through the section, while two railroads had built lines across the Belmont territory. Since much of the city water was drawn from the Schuylkill some anxiety arose as to how the river might be kept clean. Subsequently it was determined that as much land as was obtainable on either side of the stream should be purchased by the city and withheld from development to assure the water from any danger of pollution. In pursuance of this

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[21] An interesting feature of recent development is the new shopping, residential and transportation center at Sixty-ninth and Market Streets in Upper Darby Township of Delaware County. This community is a real part of West Philadelphia, set off only by political boundaries, and representing the steady westward progress of the city along the line of Market Street. Ultimately all of the intervening space except Cobb's Creek Park will be built up.

policy the Lansdowne Estate,[22] one of the largest and most beautiful of all, was purchased. Subsequently the old Peters Estate, "Belmont," the manor house of which is still to be seen, was added on the north, while "Solitude," the home of John Penn, nephew of Governor John Penn was added on the south, and used later for the Zoological Garden. Ultimately additional tracts were added until the Park now stretches from the tracks of the main line of the Pennsylvania Railroad north to City Line Avenue on the Schuylkill River.

One of the most notable of these acquisitions was the land which includes George's Hill, the commanding eminence which begins at Parkside Avenue near Fifty-second Street and stretches away to the northeast. From this hill on a clear day one can see almost the entire city lying in a valley to the south and east, bordered by the distant fields of New Jersey. There is perhaps no other view of the entire city which is quite so impressive. This tract, eighty-three acres in all, was presented to the city by Rebecca and Jessie George in 1868. They were descendants of a family which had lived in West Philadelphia since about 1708, and being without heirs they deeded the land to the city, in return for which they received an insignificant annuity for a few years. Jessie George was eighty-three years of age when the grant was made, but he survived his sister four years and died in 1873.

The influence of the Centennial Exposition of 1876 is suggested by the fact that between 1870 and 1880 the population of the Twenty-fourth Ward, in which it was held, nearly doubled, while that of the Twenty-seventh Ward, south of Market Street made only a normal gain. This may be due in part to the trend of population in the areas at the time, but the development of transportation and the fact of acquainting many people with the beauties and resources of West Philadelphia must

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[22] Lansdowne Mansion was built by Governor John Penn and named for the home of a friend of his in England. It was later owned by the Bingham family. The mansion itself was destroyed by fire July 4, 1854, and only the land was purchased by the city.

have had the effect of inducing visitors or temporary residents to locate permanently.[23]

The importance of withholding such a large area of exceedingly valuable and potentially useful land from commercial development has not been sufficiently emphasized. While it is heresy to speak against the Park, the question naturally arises as to whether the city at large has profited most from a beautiful resort or whether the central location and splendid topographical features of this area might not have made it an elite residence section. There is also some question as to whether the Park offers the same recreational opportunities that one-half or one-fourth the same area divided into properly located small parks and playgrounds might offer. Small parks could never offer the same primeval beauty, the vast expanses of grass, or protection for the river, but they might contribute more to the well-being of hundreds of thousands of persons seeking recreation, and West Fairmount Park might very reasonably become the site of a modern "garden city." Modern transportation has become so cheap and rapid that those who wish to view scenery may see far grander sights within a few miles of Philadelphia than are offered by any portion of Fairmount Park except possibly the Wissahickon section.

Viewed from the angle of natural and rational growth, West Philadelphia has been seriously hampered by the artificial barrier of Fairmount Park. Beautiful as it is, the park is not bordered by pretentious or high class residences. Parkside Avenue is inhabited by a lower middle class population below Wynnefield, and such building ventures as have attempted better housing have been unprofitable. The explanation appears to lie in the absence of transportation facilities, but provision for such facilities cannot well be provided for the population now to be served. The "dead hand" might reach out to prevent any readjustment in this section, but it will be interesting to see what modern statesmanship can do to bring a large area of centrally located property into more intensive use.

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[23] For a history of the Centennial Exposition see Scharf and Westcott, *op. cit.*, Vol. 1, pp. 842–847.

Development of New Communities

The process of radial expansion has carried the urban development of Philadelphia over political boundaries to the west but at the same time a constant process of concentration and specialization has been taking place within the city. In West Philadelphia the most apparent aspect of this development has been the progressive incorporation of new partially built-up villages or communities into that steadily advancing line of construction—the furthest extension of the "row house" zone. To that area within the arc of a circle with its center at Market Street on the Schuylkill River and its radius roughly the distance to Girard Avenue or Gray's Ferry Avenue (which was West Philadelphia District in 1854) have been added a series of communities which are steadily losing their separate identity, if not their peculiar characteristics, in the steady march of the city.

Beyond this solid wall of construction there are at present only three considerable independent communities, Overbrook, Wynnefield and Elmwood. These may still be fairly definitely defined and separately described. In the years since 1854, at least three distinct trends in the evolution and annexation of new communities have been observed.

The first of these movements was confined almost entirely to what is now the Fortieth Ward and involves the history of Maylandville, Kingsessing (not Kingsessing Township, but a portion of it which still bears the name), Paschallville and Elmwood. It contains areas which have been settled since 1646, and others on which grow the same grasses and weeds through which the aboriginal people pushed their footpaths. It contains the greatest open spaces in West Philadelphia and some of the most densely populated areas. It has some of the most forlorn slums and some of the most beautiful homes in the city. Within it one may find indescribably filthy streams and swamps, emitting nauseous odors and breeding swarms of mosquitoes, but he will also find a delightful park. Side by side are to be found houses said to have been inhabited by early Swedish residents and buildings of the newest architecture. By way of summary the ward may be characterized as pre-

dominantly an area of workingmen's homes, with an industrial zone along the Schuylkill River, a sizeable commercial development about Woodland Avenue, and some limited sections of high class dwellings in the northwestern portion.

A second trend of development includes the settlement west of old Hamilton Village and chiefly south of Market Street. The identity of these communities is not very clear. The term "West End" was at one time fittingly applied to all of the territory, and one part may still be given that name. The Fifty-second Street shopping center is included in this trend, but the status of the area about it with respect to community affiliation is rather vague. The southwest portion of this area contains the old village of Angora which is now included in the Sherwood section. Most of the land west of Forty-fifth Street had been settled since about 1700, but the urban development has come mostly since 1900, much of it since 1907, when the elevated railroad on Market Street added the inducement of rapid transportation to the other residential resources. The area is almost purely residential, with a middle and upper middle class population. There are several shopping centers and the chief apartment house district of Philadelphia is in this territory.

The final trend of settlement takes the observer into the Thirty-fourth Ward, along the lines of Haverford and Lancaster Avenues. Hestonville, already discussed as a portion of the old Belmont District, was formerly the outpost of the urban line of development. Haddington, which was formerly a village centered on Haverford Road (Avenue) at Sixty-fifth Street occupies the southern portion of the ward. Overbrook is distributed around Sixty-third Street and Lancaster Avenue, while Wynnefield has grown up on both sides of the "Old Lancaster Road" (now Fifty-fourth Street), which ran north from Hestonville through the Wynne grant and the "Welsh Tract." A development along Parkside and Columbia Avenues north of the Pennsylvania Railroad tracks can be properly designated as a part of Hestonville, although it is ethnically related to Wynnefield. The Haddington-Overbrook-Wynnefield territory is almost exclusively residential, but whereas Haddington is largely an

area of workingmen's homes and lower middle-class development Overbrook and Wynnefield are most elite districts, with few homes which would rate below those of the middle class.

Another naturally defined community which is ethnically rela ted t Wynnefield is in the Twenty-fourth Ward south of Fairmount Park and north of Parrish Street. This neighborhood covers part of what was once "Laniganville" in Mantua, but in its recent history it has been referred to as the "Parkside" or "Belmont" community.

With the foregoing picture of the present status of development in West Philadelphia, a brief history of each community is undertaken here to clarify the background of our further study of natural areas.

Maylandville

A word may be said here concerning Maylandville, an interstitial community southwest of Woodlands Cemetery. It was originally a mill village located on Mill Creek, the stream which emptied into the Schuylkill River at Forty-second Street. About the middle of the nineteenth century a dam was built across the stream above Woodland Avenue, and two mills were operated, one of which was a paper mill. A considerable settlement grew up, several solidly built stone houses were erected and at least one church was dedicated. Information concerning the exact limits of the village and its history since about 1850 appears to be very scarce. One old resident states that he lived in Maylandville as a boy, and that Mill Creek, the southern boundary of the village, separated it from Kingsessing. However if the houses were southeast of Woodland Avenue and northeas, of Mill Creek, there must have been very few of them. It seemst likely that he remembers Mill Creek as the boundary between Blockley and Kingsessing townships.

However that may be, one of the most miserable and unsightly areas of all West Philadelphia lies west of the railroad tracks along the Schuylkill River below Woodlands Cemetery. It is located along Woodland Avenue and to the south as far as Forty-sixth Street. In this neighborhood the population is composed largely of negroes or very poor white families.

The houses may have been substantially built but they are in a sad state of disrepair, the streets are narrow and ill-paved, the sidewalks hardly worthy of the name. Several industrial establishments, the chief of which is the Breyer's Ice Cream Plant, are located in the area. There are a shopping center, several restaurants and a Negro Baptist Church along Woodland Avenue. Across Woodland Avenue are the College of Pharmacy, Clark Park, and the prosperous homes of Forty-fifth Street, but no picture of words can adequately describe the squalor to the southeast.

Kingsessing

The name Kingsessing or Kingsesse was applied by the Indians to a creek in the lower end of West Philadelphia, was extended by the Swedes to the land between the Schuylkill River and Darby Creek above Mingo Creek, and became fixed in local history when William Penn applied it to the township of Philadelphia county which contained approximately the same area as the present day Fortieth Ward. Since the consolidation of Philadelphia in 1854 the meaning of the term in popular usage has gradually shifted until it refers more commonly to the densely settled area below Baltimore Avenue, southeast of Sherwood and northeast of Paschallville. As nearly as such boundaries can be determined, those of Kingsessing begin on Cobb's Creek at Cemetery Lane, run along Cobb's Creek to Florence Avenue, on Florence Avenue to Fiftieth Street, on Fiftieth Street to Baltimore Avenue, on Baltimore Avenue to Forty-fifth Street, on Forty-fifth Street to Kingsessing Avenue, along the boundary line between the Fortieth and Twenty-seventh Wards to the Schuylkill River at Gray's Ferry, along the Schuylkill to Sixtieth Street, on Sixtieth Street to Brill's car factory, along the eastern and southern border of Brill's to Cemetery Lane at the southwest corner of Brill's, and along Cemetery Lane to Cobb's Creek at the point of beginning. Included within these boundaries are Mount Moriah Cemetery, Bartram Park, and the old grounds of the Belmont Cricket Club, which have now been converted into a city recreation center for Kingsessing.

The early settlement on the site of Paschallville was called "Mondal" and later Kingsessing, but the land of present day Kingsessing was probably used mostly for farms until it was. invaded by the urban movement from the north and west. In early days it was reached by Gray's Ferry Road from the east and along Darby road from the southwest and northeast. There has been a ferry or bridge at or near the site of Gray's Ferry Avenue ever since 1695, and a certain amount of commercial activity on both sides of the river.

Probably the most famous of the early residents in this area was John Bartram, the American botanist, who planted upon the land which has now become Bartram Park one of the most notable collections of native and exotic plants ever assembled. Ultimately the thirty-six acres of "Bartram's Gardens" became city property and the homestead has been preserved for posterity as nearly as possible like the famous planter left it at his death in 1777.

The Kingsessing community contains chiefly the homes of workingmen, clerks and a lower middle class population. There are few houses east of Eastwick Avenue, but several industrial establishments of considerable size. A large gypsum plant is located on the Schuylkill in the southeast corner of the area and the G. W. Smith Woodworking Company has a large plant below Gray's Ferry Avenue, along the Schuylkill. The city has an incinerator and machinery sheds just above Bartram Park on Gray's Avenue, and there are extensive railroad yards below the bridge at Gray's Ferry Avenue.

There is another considerable industrial district along Woodland Avenue, and centered about Forty-ninth Street on Woodland is a sizeable shopping district. The largest of the industrial plants is Brill's Car Works, a huge establishment reaching from Woodland Avenue to the Pennsylvania Railroad tracks between Fifty-eighth and Sixty-second Streets. A number of lumber and woodworking companies, coal yards and garages are located along Woodland Avenue. A large car barn of the Philadelphia Rapid Transit Company is located at Forty-ninth Street, and near it are freight and passenger stations of the Pennsylvania Railroad.

Paschallville

The old village of Paschallville has been almost swallowed up by the recent expansion of the city along Woodland Avenue, but where an old name loses its precise meaning it is sometimes applied loosely to a much wider area. Whereas fairly distinct and acceptable boundaries mark off Paschallville from Eastwick and Clearview, the line of demarkation from Kingsessing district is less definite. The boundaries which would do least violence to local traditions would start from Woodland Avenue on Cobb's Creek, follow Cobb's Creek to Cemetery Lane, go east on Cemetery Lane to the corner of the Brill Car Works at Sixty-second Street and Woodland Avenue, skirt the south side of Brill's to the Pennsylvania Railroad, follow the railroad along the east side of Brill's to Sixtieth Street, and run on the line of Sixtieth Street east to the Schuylkill River. From that point the boundary proceeds down the Schuylkill to Pennypacker Avenue, on Pennsylvania Avenue and Seventy-fourth Street to Buist Avenue, southwest on Buist to Seventy-fifth Street, on that street to Elmwood Avenue, along Elmwood to Cobb's Creek and along the creek to the place of starting at Woodland Avenue. This includes considerable territory that has not been historically associated with Paschallville, but as the area develops it is being built as an extension of the settlement along Woodland, Paschall, Gray's and Elmwood Avenues. Many of the people who live in this area are employed in Paschallville proper and identify themselves with it.

Long before Paschallville was laid out a settlement had been established within the present limits of the area. Probably about 1646 (some place the date as early as 1643) Governor Printz, virtually ruler of New Sweden, had a grist mill built on the Karakung (Cobb's Creek) in "Kingsesse." Holes were bored in the solid rock bed of the stream to set the wooden posts of the mill.[24] In subsequent years a little settlement grew

[24] Eventually the old mill rotted down or was washed away and the site almost forgotten until 1910, when Colonel Henry D. Paxson removed the debris from the stone and again revealed the holes which identified the location. During the Sesqui-Centennial Exposition an old Norse Mill of the type originally built on the site was erected as a historical memorial to the founders of Pennsylvania industries. See Paxson, H. D., *Where Pennsylvania History Began*, pp. 120–131.

up about the mill and was called "Mondal," literally, the "place by the mill." Even after the coming of the English this mill continued to be a popular one and farmers built roads leading to Mondal from several different points. The village itself appears to have prospered and the chronicles report that in 1681, the last session of the Court of Upland while the Duke of York ruled Pennsylvania, was held at "the towne in Kingsesse," probably meaning Mondal.

With the growth of Darby, just across Cobb's Creek, the development on the Kingsessing side appears to have been overshadowed for many years, but several substantial families, including the Paschalls, Yocums, Rambos, Stilles and Lloyds, lived there. St. James Church was built in 1763 for Swedish Lutherans, but was later taken over by the Episcopal denomination. In 1766 the Blue Bell Tavern was built at Seventy-third Street and Woodland Avenue, where it still stands in Cobb's Creek Park. Darby Road (now Woodland Avenue) connected the settlement with Philadelphia and another ran north to Merion.

This area was a scene of excitement and activity in the autumn of 1777, when Washington was defeated at the Brandywine and evacuated Philadelphia, many persons leaving their homes in terror and others pledging allegiance to Great Britain.

Paschallville as a town does not appear on the map until 1810. In that year Doctor Henry Paschall laid out a village with streets parallel or at right angles to Darby Road, thus giving to the modern Fortieth Ward its system of streets. There is no record to indicate that Paschallville was ever given an independent political status, but it appears to have prospered and grown steadily since its founding. In the recent history of West Philadelphia it has become an industrial center of considerable importance. The Fels soap works, a nationally known company, has a large plant along the west side of Island Road from Woodland Avenue as far south as the Pennsylvania Railroad tracks, covering all of the space back to Cobb's Creek. The huge plant of the General Electric Company covers the equivalent of nearly six city blocks between Sixty-seventh and Seventieth Streets, south of the railroad and north of Elmwood

Avenue. Numerous smaller establishments have grown up about these two, which are the economic foundation of the community.

Recent developments have made possible the expansion of Paschallville in several directions. Accepting the shopping district along Woodland Avenue as the axis of the community we may find just outside this zone the old deteriorating section which is now inhabited by negroes and poor families, constituting very definite slum territory. There are many ancient houses, some of which seem hardly fit for habitation. Southwest, southeast and north new developments of small neat row houses are springing up. To the north they are replacing fairly substantial old dwellings, but to the southwest and southeast open lands, in some places farm lands, are being taken over for residences. Along Cobb's Creek Park and on Chester Avenue below Mount Moriah Cemetery some very fine homes have been built, some of them on a high bluff which overlooks Cobb's Creek and a part of Delaware County.

At one time the Clearview portion of Greater Eastwick was identified with Paschallville, and there is reason to believe that the expansion to the southwest will proceed so rapidly that the neighborhood west of Lyons Avenue will ultimately be built up as a part of Paschallville rather than as an extension of Elmwood. There is still space to the north to house more workers, and a number will doubtless cross over into Delaware County, but the real future of Paschallville seems to lie in a progressive expansion toward the southeast, and ultimate participation in the industrial development of the west bank of the Schuylkill River.

The populous area southwest of Sixtieth Street and southeast of the Philadelphia, Baltimore and Washington Branch of the Pennsylvania Railroad is perhaps deserving of separate treatment. It is sometimes referred to as a part of Kingsessing and sometimes as a part of Paschallville. It is a comparatively new section of workingmen's homes, similar in many respects to those of Elmwood Avenue in Paschallville.

Greater Eastwick

In recent years all of that portion of the Fortieth Ward which

lies south of a line following Elmwood Avenue from Cobb's Creek Park to Island Road, along Island Road to Seventy-fourth Street and thence to Pennypacker Avenue and along that highway to the Schuylkill River has been referred to collectively as Greater Eastwick. From the only high ground in the territory, located just below Elmwood Avenue, the visitor can get a bird's-eye view of the broad alluvial plain stretching east to the Schuylkill and Delaware Rivers, and south to Bow Creek. Island Road cuts diagonally across the area from Paschallville to Hog Island, and almost at right angles to Island Road, Penrose Ferry Road stretches from Ninety-second Street on Darby Creek to the Penrose Ferry Bridge which is located a little above Girard Point. Route 37 of the Philadelphia Rapid Transit Company switches from Woodland Avenue to Island Road at Paschallville and turns south on Eastwick Avenue, which it follows to Bow Creek on its way to Chester.

Through Elmwood proper runs a trolley line of the Philadelphia Railways Company, known locally as the "bat line." From Hog Island it follows Tinicum Island Road to Penrose Ferry Road, across Penrose Ferry Bridge to Penrose Avenue, Moyamensing Avenue, to Third and Jackson Streets. Other transportation facilities in this area include the Chester Branch of the Reading Railroad and the Sixtieth Street Branch of the Pennsylvania Railroad.

There are a number of sub-divisions within this area but they are not clearly defined. West of Lyons Avenue below Seventy-seventh Street is an irregularly shaped area known popularly as Clearview. It was formerly considered a part of Paschallville, but is now fairly distinct from that settlement. It shares most of the social and economic characteristics of Elmwood, having a large proportion of negroes in the population and a number of flimsy, temporary houses.

East of Lyons Avenue is a sparsely settled area as far over as Essington Avenue. Beyond Essington Avenue there are only scattered houses and truck patches in a wide expanse of swamp and wilderness. The Hog Island Branch of the Pennsylvania Railroad crosses this section east of and parallel to Essington Avenue on a high embankment from which the surrounding

country may be surveyed. North of Mingo Creek and east of this railroad the low area is being used by the city as a dumping ground and steadily filled in to the level prescribed in the city plan. East of this embankment, above Seventy-fourth Street the Standard Oil Company is now putting up works similar to those of the "Atlantic" and "Gulf" Refining companies across the Schuylkill River.

The lower and wider end of the peninsula is a most historic area. It was settled nearly three hundred years ago and since that time it has been the site of farms, homes, battles, forts and industries of unusual interest. As late as two hundred years ago it was made up of islands separated by wide lagoons or creeks. During the nineteenth century the "Lazaretto" or pest house was located here. Historic Fort Mifflin which stubbornly resisted the advance of the British up the Delaware River in 1777 is located on Mud Island which is now joined completely to the mainland. A road from Fort Mifflin now joins Penrose Ferry Road at the Schuylkill River. From this junction another road runs to Hog Island, the scene of such feverish activity during the World War.

Hog Island was originally a dismal swamp but because of its location on the Delaware it was adjudged to be strategically favorable for a shipyard. The Government of the United States spent an unknown amount putting it in condition, building roads, railroads, factory sheds, runways and finally—ships. Loose administration was charged, scandal was circulated concerning the reputed extravagance and the whole country spoke jestingly of the "pork barrel on Hog Island."

Manifestly those were days of prosperity for Elmwood. The huge plants which rose like magic from the mud of Hog Island called for workers and workers must have homes. The Federal government built a number of houses above Passyunk Avenue which were sold to individual purchasers at the end of the War, and many new buildings sprung up in Elmwood. The subsequent decline in activity at Hog Island has left Elmwood a poor and spiritless community, with many evidences of reduced circumstances. The proposal to convert Hog Island into a municipal airport, railroad terminal and seaport would

revive activity in this quarter and doubtless facilitate more rapid development of the open land.

The village of Elmwood proper appears to have been the product of a real estate development of that name about 1880. It included the land between Eighty-fifth and Ninety-second Streets from Tinicum Island Road to Essington Avenue. A few years later a second development directly north of Eighty-fifth Street was opened and the two taken together form the nucleii of the community. When Route 37 was placed on Eastwick Avenue houses and stores grew up there until it suggests a very long squalid village main street. Island Road appears to have never been developed commercially.

The population of this area is quite heterogeneous. A large proportion are negroes and recently there has been a steady increase in the number of Jews. Some of them live in houses which are mere frame shells covered with tar paper. There are, of course, many brick houses of fairly substantial construction, but one also sees many buildings in a very dilapidated state. Along the creeks floods sometimes fill the cellars and lower floors with water and in the summer countless mosquitoes breed in the marshes. Aside from a few modern factory buildings, about the only suggestion of a metropolitan community one gets in Elmwood is the size and structure of the school buildings, of which there are several in the neighborhood. There is no system of sewers and only surface drainage. The streets are lighted chiefly by gas lamps and such paving as is done is cheap and temporary. Some of the principal streets have no sidewalks and paths cut across vacant lots in typical village fashion. The yards, gardens, barns and friendly dogs complete a picture of life beyond the immediate influence of urban development.

A great many years ago Suffolk Park was a noted resort for sporting men of Philadelphia. A race track, hotel and other amusements were located on an eminence just northeast of Elmwood. There are still some evidences of the prosperity of those days when gentlemen came to the resort to spend their money.

Another object of interest is Schreutzen Park, at the corner of Eighty-third Street and Tinicum Island Road. It appears to be

a road house with all of the accompanying privileges and immunities. It reveals an old mansion in a setting of beautiful trees and an inviting entrance.

The future of Greater Eastwick almost certainly turns on the prospective industrial development of the west bank of he Schuylkill. The oil and gas works now make the east bank a scene of teeming activity. The development of the west bank has progressed slowly below Bartram Park, probably because of the difficulty of bringing the land up to grade. Transportation facilities must also be more adequately developed for both freight and passengers. In the past Eastwick has lost at least three large and promising industrial projects which might have been expected to locate there, but which ultimately went to Essington and Chester. When the normal program of city expansion and improvement shall have brought industries, paved streets, row houses, sewers and wealth to Eastwick, it will likely become another South Philadelphia. It should form an important link in that chain of industrial establishments from Point Breeze to Chester which is steadily making Delaware County a suburb of Philadelphia. One of the most critical problems of city planning in Philadelphia is in the lower end of the Fortieth Ward, and it is very fortunate that an active local group, the Greater Eastwick Improvement Association, is seeking to carry forward a sound program of development.

Fifty-second and Market Streets

The development about the crossing of Fifty-second and Market Streets is a "section" rather than a community. It has only a brief history. It contains many diverse elements and there is practically no common tradition to unify the portions of the area at diagonally opposite extremes. For purposes of convenience there seems to be a geographic justification for lumping these areas together, but the illusion of a community can hardly be maintained.

The boundaries tentatively chosen for this area are, therefore, likely to do violence to local tradition instead of serving it. The most satisfactory outline secured begins at the corner of Fifty-third Street and Baltimore Avenue, runs north on Fifty-

third Street to Cedar Avenue, west on Cedar Avenue to Fifty-sixth Street, north on Fifty-sixth Street to Market Street, east on Market Street to Fifty-fourth Street, north on Fifty-fourth Street to Westminster Avenue, east on Westminster Avenue to the ward line at Belmont Avenue and along the ward line south on Belmont Avenue and Forty-fourth Street to Haverford Road, along Haverford Road to Forty-sixth Street, on Forty-sixth Street to Market Street, on Market Street to Forty-fifth Street, along Forty-fifth Street to Baltimore Avenue and on Baltimore Avenue to Fifty-third Street at the point of beginning.[25] This includes part of the grounds of the Pennsylvania Hospital for the Insane, a large area north of Market Street which is being slowly vacated in favor of a suburban site at Newtown Square in Delaware County. Ultimately it will be made available for commercial development. It also contains a shopping center along Baltimore Avenue centered on Fifty-second Street, which is hardly continuous with the Market Street center.

Historically, the data concerning this area are quite scanty. As late as 1890 Fifty-second Street was a country road with a cobble stone surface. The land on each side of it had been divided into lots and houses were springing up. The atlases of the period show a village located just below Market Street and wide undeveloped areas to the east in the estates of Eli Kirk Price and Anthony J. Drexel. "Gypsy Wood" stood on the site of the present Black Oak Park. The "Good Intent" woolen mill was located on Market Street at Farragut Terrace where Mill Creek flowed. The building is still standing and is in the use of the gas company.

Much of the more recent development of the business center on Market Street has been due to the enterprise of William Freihofer. The H. W. Quick Real Estate Company has also

[25] I should prefer to use Haverford Avenue, at least east of Fifty-second Street, as the northern boundary of this district. The densely settled area between Haverford and Westminster Avenues is traditionally more closely identified with Lancaster Avenue and old Hestonville than with Market Street, but I am told by Mr. C. F. Zeak, Secretary of the West Philadelphia Chamber of Commerce that it is economically the territory of the Market Street business center.

been a very important factor in building up the area. The years since 1910 have seen a particularly intensive growth, until the Fifty-second and Market Streets development is unquestionably the most important of the satellite business centers in West Philadelphia. The concentration of crosstown trolley traffic on Fifty-second Street, the Market Street Elevated and trolley routes connecting this section with the central business district have given it a commanding position with respect to passenger transportation. The development in this locality appears to have supplanted the business center at Fifty-second Street and Lancaster Avenue, and there is no rival in prospect closer than the new shopping district and transportation center in Delaware County at Sixty-ninth Street.

One of the most significant building operations in West Philadelphia is the apartment house construction centered about Forty-seventh and Pine Streets on the estates of Anthony J. Drexel and Eli Kirk Price mentioned above. Up to the present time no other apartment house development in the city quite matches this one. Most of the houses are located above Osage Avenue and below Walnut Street, between Forty-fifth and Fiftieth Streets. Important extensions of this area include an exclusive array of buildings along Spruce Street as far west as Forty-third Street, and one of the largest apartments of all is at Forty-third and Locust Streets. Older types of apartment houses of very substantial construction are to be found along Chestnut and Walnut Streets east of Forty-eighth Street, and a large number of two-family houses have been constructed on the streets between Locust and Ludlow from Forty-sixth west to Fifty-sixth Street.

There are also a number of converted apartments and rooming houses in this territory, especially in the eastern portion, which is beginning to show some of the effects of invasion by the central district, east of Fortieth Street. The area of three-story, semi-detached houses in the southeastern portion of the tract seems to hold its own, but along Baltimore Avenue a great many have been converted into apartments. Forces now at work in this territory will ultimately bring about a clearer definition in the specialization of the use of land.

Sherwood-Angora District[26]

Sherwood and Angora are names applied loosely to the portion of West Philadelphia about the intersection of Fifty-eighth Street and Baltimore Avenue. It is definitely bounded on the west by Cobb's Creek and the park of the same name, but the boundaries on the north, east and south are much less definite. The area to the north has never been more specifically designated than as "West End," a term formerly applied to all of the Forty-sixth Ward west of Fifty-second Street. To the southeast lies Kingsessing, a district similar to Sherwood in some portions and vastly different in others. A line which would include all of the territory in the earlier villages of Sherwood and Angora, as well as most of what is now commonly designated by either or both of the names would be drawn from the Cobb's Creek Parkway along Cedar Avenue to Fifty-third Street, along the line of Fifty-third Street to Florence Avenue, along Florence Avenue to the Parkway and north along the Parkway to Cedar Avenue at the point of beginning. There is no clear line of demarcation at Florence Avenue, and much the same type of housing and population is to be observed as far southeast as Chester Avenue, but in the days before the urban development of the section, the most convenient boundary would have been placed in the zone between these two avenues.

The earliest settlers in the valley of Cobb's Creek were Swedes, but about 1682 William Cobb, a henchman of William Penn, purchased the interest of the Swedes in the section about their mill at Mondal and changed the name of the creek (originally called by the Indians the Karakung) from Mill Creek to Cobb's Creek. The first recorded settler on the present site of Sherwood was James Coultas (also spelled Coultis), first sheriff of Philadelphia County and an officer in the militia, who moved to a point near Fifty-eighth Street and Florence Avenue in 1741 and built a beautiful colonial mansion which was given the name

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[26] The following information on Sherwood and Angora was obtained largely from Mr. David I. Moore, 5858 Willows Avenue.

Whitby Hall.[27] Coultas operated the Middle Ferry across the Schuylkill River for many years and a friend of his, George Gray, was in charge of the "Lower Ferry," later known as "Gray's Ferry." The road which led from Woodland Avenue near 55th Street northwest through fields and forests to Whitby Hall, was named Gray's Lane after George Gray, and Gray's Avenue in the Fortieth Ward was named for the same man. As the chief highway to the Sherwood district in early days Gray's Lane has assumed a very important rôle in the formation of the community. From Whitby Hall it followed the present line of Fifty-eighth Street to Baltimore Avenue (Lyons Pike or Chadd's Ford Road) and ran northwest by an irregular route, crossing Marshall Road near Sixtieth Street and terminating at Market Street (then West Chester Pike) near Fifty-ninth Street.

James Coutlas built a saw mill on Cobb's Creek opposite Thomas Avenue[28] shortly after acquiring the land and later erected a grist mill on the northeast corner of Florence Avenue and the Cobb's Creek Parkway (formerly Fifty-ninth Street). This old grist mill was a large stone building and after it was abandoned as a mill was converted into a tenement house for employees of the Palmer family, whose mansion was located about a hundred yards farther east. A few years ago it was demolished but a trace of the old mill-race may be seen in Cobb's Creek Park, opposite Willow Avenue.

Early in the nineteenth century David Snyder built the "Snyder Shovel and Spade Works" which still stand near Cobb's Creek just below Baltimore Avenue. The products of this mill were hauled to Philadelphia in a wagon drawn by four oxen and sold at a premium because of the reputation of the manufacturer for skill and integrity. The Snyder home was built in 1827 and stood until about 1926, when it was torn down to make way for new developments.

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[27] An addition to Whitby Hall was made in 1811 and for one hundred years it was noted as one of the finest examples of colonial architecture in America. In 1924 it was taken down and re-erected in Haverford where it now stands. During the closing months of 1929 Thole House, another historic colonial mansion in Sherwood was demolished.

[28] This mill may be seen on the Scull and Heap map of 1750.

The name Angora was first applied to a development around Sixtieth Street and Baltimore Avenue. The land in this section was originally owned by David Snyder. At the southwest corner of Fifty-eighth Street and Baltimore Avenue stood an old toll house which was erected in 1850.[29] This toll house was later moved to the northeast corner, at the edge of what was afterwards known as Sherwood Forest. The building was ultimately purchased by the Sherwood Field Club, and when the forest was sold, they located it in Cobb's Creek Park opposite Thomas Avenue. There it stood until torn down by order of the Park Commission in 1922. On the northwest corner of the same intersection was a blacksmith shop which will be kept alive in the memory of Philadelphians because it was the place where the hero of Doctor S. Wier Mitchell's book, "Hugh Wynne", is supposed to have stopped to have his horse shod.

In 1863, two brothers, Robert and George Callaghan, purchased the land about this site and built two large woolen mills. In order to house the employees for these mills a number of brick houses were built around the mills, mostly south of Baltimore Avenue. To this little mill village the Callaghans gave the name Angora, after the town of Angora, Turkey, from which the long-haired goats of that name are reputed to have come.

In 1864 the Callaghan mansion was built in the center of the block south of Baltimore Avenue between Fifty-eighth and Fifty-ninth Streets, near where the old Baltimore Pike toll-gate had stood. This fine brown stone mansion was torn down in 1913. To supply their mills and the village, the Callaghans installed a pump at a spring near the old Snyder shovel works which pumped water to a reservoir located near what is now Fifty-ninth Street and Cedarhurst Avenue. This village appears to have been the chief development in the locality until about 1900. In that year the brick mill, the larger of the two, was burned,

[29] The Lyons Pike, on the present line of Baltimore is reputed to have failed partly because of a law forbidding the collection of toll from funeral processions. A large cemetery just across Cobb's Creek occasioned so many of such processions that ultimately the Pike wore out and the company went into bankruptcy. Doubtless there were other factors, but the anecdote is one worthy of remark.

and some time later the firm failed. The other mill stood on the south side of Baltimore Avenue. It was used by various manufacturing concerns until a few years ago when it was demolished to make way for other buildings. A number of the brick dwellings erected by the Callaghans in Angora still remain. They are twin-houses of very simple but substantial construction with generous space for gardens and yards. They have now deteriorated and are inhabited by those of very moderate means.

About 1900 "Harrison and Frazier" started a development of very fine houses on Fifty-seventh and Fifty-eighth Streets south of the Philadelphia and West Chester Branch of the Pennsylvania Railroad, reaching south as far as Broomall Avenue. The builders saw the danger of allowing the name of a mill village to be applied to their development, so instead of advertising it as Angora they called it Sherwood. Unfortunately the undertaking did not prosper, and as late as 1910 Sherwood was still a small village scattered about Fifty-eighth Street and Thomas Avenue. There were open fields about it, and off to the east, near what is now Fifty-fourth Street and Willows Avenue, was a tract of virgin timber. The Aronomink Golf Club had links between Fifty-fifth and Fifty-eighth Streets, east of Ameaseka Creek, which was later called Thomas' Run. This stream has been diverted into sewers, but one mark of its course may be seen where Fifty-fifth Street passes under the tracks of the Pennsylvania Railroad.

About 1905 the magnificent forest, north of Baltimore Avenue, an object of great local pride, passed into the hands of "Harrison and Frazier" real estate operators. The company generously offered the land on which these trees stood to the city for a park, at the same price it had paid, and on very liberal terms of payment. The Mayor and Councils at first considered the offer favorably, but later reversed their position, and the opportunity to preserve for posterity this wonderful park was lost forever. Shortly afterward the indignant residents of the locality saw these trees of Sherwood Forest cut down and dragged away to the mill by great ox teams, to prepare the way for row after row of new brick houses. The development has proceeded until there is hardly a vacant block in Sherwood.

As an outpost of another day we find the Hoffman Mansion erected in 1790 standing alone in the block at the northwest corner of Sixtieth Street and Cobb's Creek Parkway. This building faces the southeast, having been built facing a lane running northeast from Cobb's Creek at Baltimore Avenue before Sixtieth Street was cut through. Then there is a large block running back from the Parkway between Thomas and Whitby Avenues which was saved from the Palmer estate to become the Baptist Orphanage. Directly east of Fifty-eighth Street between Baltimore Avenue and the railroad is a block of land devoted to an Episcopal Church and Home. The block between Fifty-fifth and Fifty-sixth Streets bounded by Christian Street on the south and Webster Street on the north is now the Sherwood Recreation Center.

The Pennsylvania Railroad Station at Fifty-eighth Street was formerly called Gray's Lane Station, by agreement with the man who formerly owned the land on which it stands, but was afterwards changed to Angora. About 1915 the Sherwood Improvement Association asked the railroad company to rename the station Sherwood. This request was not granted on account of another station in the state already having that name.

The plans for the Parkway had been in the books of the city government since 1901, but it was largely through the efforts of the Sherwood Improvement Association of which Mr. David I. Moore has been the guiding spirit since 1913 that the project was carried into action. The Parkway was constructed from Baltimore Avenue to Florence Avenue by 1916, and completed as far as Woodland Avenue in 1923.

The Sherwood of today is essentially a section of middle and upper class homes, with practically no areas of really bad housing. The principal streets are Baltimore Avenue, Fifty-eighth Street south of Baltimore Avenue and Sixtieth Street above that avenue. All of these streets have double-tracked trolley lines. The first two are on the sites of old roads, and all have a certain amount of commercial development, but no great concentration of business houses. There are no large factories in the area, and the tracks of the Pennsylvania Railroad are electrified so that there is little smoke nuisance. Large

efficiency apartments are now making their appearance and a number of converted apartments are to be seen in some parts, but the fact that many of the houses have only two stories will likely discourage widespread sub-division. There is nothing to indicate any significant change in the character of the community in the near future.

West End

North of Sherwood, beginning at Cedar Avenue, stretching north to Market Street, and including all of that territory from Fifty-sixth Street to Cobb's Creek is an area with no generally accepted local name except "West End." It was at one time heavily wooded, but was cleared and developed for agricultural purposes during the early nineteenth century. A map published in 1855[30] shows that the Hamilton Land Company owned an irregularly shaped block of land near Fifty-seventh and Pine Streets. Marshall Road cut across the area from the southwest, while Gray's Lane ran north and south roughly on the line of what is now Sixtieth Street.

There were farm houses and scattered settlements through this area from the early days, but the event which made it the site of a teeming population was the opening of the elevated railway on Market Street in 1907. The majority of the houses west of Fifty-sixth Street have been built since that time, the Forty-sixth Ward was created in 1908, and the population doubled between 1910 and 1920. Market Street has become a business street from Fifty-seventh Street to Sixty-third Street, and a thriving shopping center has grown up along Sixtieth Street from Market Street south to Cedar Avenue. The impression one gets is that Haddington and West End are ultimately to be welded together about the business center with its point of greatest intensity near Sixtieth and Market Streets.

Since it is new, most of the housing in West End is modern and comfortable. A veneer of upper middle class homes follows Cobb's Creek Parkway from Chestnut Street south and con-

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[30] Barnes, R. L., New Map of the Consolidated City of Philadelphia, 1855. From the Library of the University of Pennsylvania.

tinues into Sherwood through the finest residential section of West Philadelphia, excepting Overbrook. Back from the business streets row houses of two stories and six rooms are the rule. They are closely packed in side streets and alleys, but they boast porches in most quarters and little sycamore trees relieve the monotony of brick and concrete. The larger houses have little patches of grass in front and some have tiny gardens at the back. A number of two-family houses were built along Ludlow, Chestnut, Sansom, Walnut, Locust and Spruce Streets east of Fifty-sixth Street about 1915, but they are apparently not popular. A number of efficiency apartment houses have also been erected in this section, but there is no marked concentration of them. The largest of these is the "Walnut Plaza" at Walnut Street and Cobb's Creek Parkway (Sixth-third Street), a huge building opened in 1928.

There are very few negroes in Went End. As a matter of fact the property owners have taken definite steps to exclude any who might have wished to settle there. About 1900 the residents near Sixtieth and Spruce Streets took a belligerent stand against any negro intruder. If one moved in he was met by threats of violence, the windows of his house were broken out by stones, and the property rendered unfit for habitation. Realtors took the hint and rented no houses to negroes, while the negroes themselves, if they needed any indications of the presence of their bitterest enemies, the Irish, sensed the fact that the neighborhood was not hospitable and stayed away.[31] Recently the vigilance of the residents has relaxed and a few negroes have settled in the area, but they are likely shielded by more tolerant forerunners, the Jews.

West End has a sizeable Jewish population but it is not in the nature of a colony. The center of concentration is around Fifty-seventh and Pine Streets, but there are few evidences of the Ghetto here. It is true that there are Yiddish signs and Kosher markets but the residents are comparatively prosperous and the children are of distinctly American training. One sees little of the squalor to be found about Fortieth and Ogden

[31] Related by William Sturges, Bennett Hall.

Streets, while the proportion of foreign-born Jews is steadily declining. Another interesting feature of this community is that it corresponds roughly to the distribution of the heaviest Armenian population anywhere in the city of Philadelphia.[32] However, the population of West End is basically native, with a rather thoroughly Americanized infusion of Irish stock. The Jews are the only foreign-born group of significant numbers.

Haddington

As long ago as 1847 a small village about "Whiteside's Tavern," near what is now Sixty-fifth Street and Haverford Avenue appeared on the map as "Haddington." The origin of the name is not clear, but it may have been applied much earlier than 1847. Records and old maps tell the reader that John Rhoads first settled on the land where Haddington is now to be found, and as late as 1903 part of the territory in the Haddington community was still in the hands of the Rhoads family.[33] However, it is the subsequent history of Haddington that interests us most. In the later decades of the nineteenth century the old village was steadily swallowed up by the westward movement of the city, and the center of activity shifted from Haverford Road to Market Street, the old West Chester Pike.

The section which now bears the name of Haddington is bounded on the south by Market Street from Fifty-fourth Street to Sixty-third Street, on the southwest and west by Cobb's Creek Park and Sixty-ninth Street, on the north by Haverford Avenue as far as Sixty-third Street, and beyond that point by Lansdowne Avenue to Fifty-fourth Street, the eastern boundary. There is some disagreement over the boundary between Overbrook and Haddington east of Sixty-third Street. Some choose Master Street but Lansdowne Avenue appears to be a more acceptable line. The extension of Haddington east as far as Fifty-fourth Street also offers some difficulties, for it

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[32] From maps of the location of Armenian families prepared under the direction of Miss Hersey of the International Institute, 645 North Fifteenth Street.
[33] Vieira, *op. cit.*, p. 15.

includes some territory which might be logically claimed for the settlements along Fifty-second Street at Market Street and Lancaster Avenue, but in the absence of any boundary of decisive importance the ward line serves many purposes more satisfactorily than any other division.

Haddington was linked with Hestonville and Mantua by a trolley line at an early date. This line was one of the most profitable in the city and for many years maintained an independence of mergers and combinations. The direct transportation may account for the fact that Haddington was settled up more rapidly than the lands south of Market Street.

A feature of Haddington which most old settlers will remember was the nondescript "Shantytown"[34] which once stood on the ground now occupied by the car barns of the Philadelphia Rapid Transit Company. This village had been built and inhabited largely by the Irish, but by about 1900 it had been largely turned over to the negroes. The settlement was an eye sore and the negroes were unwelcome, so that the ultimate fate of the entire block might have been predicted. One day while a high wind blew a fire broke out in one of the shacks. An alarm was sounded but in those days the fire engine must come from Forty-first Street and Haverford Avenue. The firemen came down Market Street and hailed a group of loafers from whom they inquired where the fire was to be found. Those young men expressed surprise and ignorance, but suggested a rather distant destination for fire-fighting apparatus. The engine was driven on Market to Sixtieth Street and back over a northern route to its shed without "discovering" a fire which could be seen from all parts of the neighborhood. All of the huts burned down, the negroes were forced to seek new homes and after a time the space was taken over by the transit company. However, a great many negroes still live in the eastern portion of Haddington, and their numbers steadily increase.

Haddington is now also the site of one of the two considerable

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[34] Related to the writer by Mr. Frank C. Harris, Secretary of the Haddington Business Men's League, 303 North 54th Street.

Italian communities in West Philadelphia. One of these is in Hestonville but the one in Haddington is far larger and more important. There is something exotic about this colony. The densest concentration is on and below Haverford Avenue west of Sixty-third Street, but it is continued east as far as Sixtieth Street and as far down as Arch Street. One hardly expects to see distinctly European communities in such an ideally located residence district, but the Italians are there by the thousands, and while an increasing proportion are American-born, the number of persons of foreign birth is at once apparent from the dress, language, neighborly gossip and street life.

From the standpoint of housing Haddington offers a variety of types and architectural stages. West of Sixty-third Street one may see huge vacant mansions of a hundred years ago, neat standardized row houses of recent construction and ingenious architecture, shabby shacks, rambling stone houses, two-family houses, old-fashioned apartment houses and all combinations of shops and dwellings. In most of them will be found a population of manual laborers, clerks, small shopkeepers, and a sprinkling of middle class residents. A good share of these people work down town and ride back and forth on the elevated railway. It is this same elevated railway which has reduced Haverford Avenue to a second-rate street, and shifted the center of traffic and business to Market Street.

Overbrook

The name "Overbrook" was formerly applied to a very extensive area north of Haverford Avenue and west of Fairmount Park. It was a territory very literally designated as "over-the-brook," referring probably to a small stream known as George's Run, which flowed across Hestonville and emptied into Mill Creek below Lancaster Avenue. Up until about 1900 most of this area was devoted to farms and landed estates, but since that date it has been rapidly built up, and has become quite populous. The boundaries of the area have also become somewhat more definite, and a number of subdivisions have developed. Even so, there is still much dispute and confusion as to the exact limits of the section, for there is a three-fold

classification of the communities. The "Overbrook Section" contains Wynnefield east of Fifty-seventh Street, "West Overbrook" west of Sixty-third Street, Overbrook proper, and the "Overbrook Farms" development within the larger community of Overbrook. Wynnefield should be treated separately, but separate discussions of "Overbrook Farms" and "West Overbrook" may be limited to a territorial definition.

Overbrook community is bounded by City Line Avenue from Cobb's Creek to Fifty-fourth Street along the northwest. The eastern and southern boundaries are variously defined but the most satisfactory one, and the one which conforms most closely to popular usage runs south from City Line Avenue at Fifty-fourth Street to Woodbine Avenue, on Woodbine to Fifty-seventh Street, on Fifty-seventh Street to Lancaster Avenue, along Lancaster Avenue to Fifty-fourth Street, on Fifty-fourth Street to Lansdowne Avenue, along Lansdowne Avenue to Sixty-third Street, on Sixty-third Street south to Haverford Avenue, on Haverford Avenue to Lansdowne Avenue, along Lansdowne Avenue to Cobb's Creek, and along Cobb's Creek to City Line Avenue at the point of beginning. Within this area "West Overbrook" occupies all of the territory west of Sixty-third Street. The "Overbrook Farms" district includes roughly the portion of Overbrook above Woodbine Avenue, east of Morris Park. West of Morris Park there are very few houses. These subdivisions, West Overbrook and Overbrook Farms, therefore, overlap to some degree in the definitions of their respective representatives.

Overbrook is the elite residence section of West Philadelphia, and one of the best in the city. It adjoins the exclusive Main Line communities and still shares many of their characteristics. In the triangle below Lebanon and Lancaster Avenues there are a great many row houses, but they are all rather new and quite substantial. In the northern portion of the community the houses are mostly mansions of the wealthier citizens of Philadelphia and many of them are surrounded by fine tracts of land. A number of efficiency apartments have sprung up on Lancaster Avenue and Sixty-third Street above Jefferson Street, and a small business center or shopping district

has located at the junction of these two streets. One feature of modern living in which Overbrook is unique among the communities of West Philadelphia is the system of central heat which relieves its inhabitants of the inconveniences and unpleasantness of many separate heating units, and at the same time considerably increases the usable space in the homes.

The history of Overbrook is brief and its urban development quite recent. William Bedward, a Quaker of Welsh extraction, was the first settler on the site, but the Georges, Wynnes, Jones and other families have played an important part in its development. Some houses have stood in this locality since about 1680, but most of them have been built since about 1910—a large number of the less expensive ones since 1920. There appears to be a steady tendency for the price and quality of homes to decline in the southern portion of the area, which merges almost imperceptibly into the northern part of Haddington. The history of the Overbrook institutions and organizations is too short and the development too young for a well-established tradition to grow up, but the materials are there, and the local color is being steadily added.

Wynnefield

Wynnefield, the anglicized form of "Wynnestay", the Welsh manor of the Wynne family, has grown up on the site of the grant which William Penn made to his physician, John Wynne (or Wynn), the son of a Welsh nobleman. It is centered along Fifty-fourth Street, the route of Old Lancaster Road, but the name is applied to a considerable territory north and east of the closely built-up section. Some citizens of this area confine Wynnefield to the territory south of Woodbine Avenue, and extend Overbrook to Fiftieth Street, while others designate the area above Woodbine east of Fifty-fourth Street as a part of "Bala." The portion of the Twenty-fourth Ward northwest of Fairmount Park should probably not be considered as part of Wynnefield. Aside from the Belmont Reservoir and Filters, Woodside Park and the Philadelphia Country Club it contains very little urban development. In fact, the land northeast of the line which follows Wynnefield Avenue from Parkside Avenue

west to Fiftieth Street, north on Fiftieth to Forty-ninth Street and along Forty-ninth to City Line Avenue, is occupied largely by charitable institutions. This includes Hayes Mechanics' Home, Christ Church Hospital, the Methodist Orphanage and Home for the Aged, the Edwin Forrest Home for Actors, the Philadelphia Home for Incurables and others. It is predominantly an institutional area, a rather unusual development. These institutions are not definitely a part of any of the communities in this area, but they are more closely identified with Wynnefield than any other, and as the population increases, the identification will likely become more complete.

After this review there seems to be some justification for making out the boundaries of Wynnefield in the following manner. Beginning at Fifty-fourth Street and City Line Avenue along the line of the latter to Belmont Avenue, along Belmont Avenue to Parkside Avenue, along Parkside Avenue to Columbia Avenue, along Columbia Avenue to Upland Way, along Upland Way to Fifty-seventh Street, along Fifty-seventh Street to Woodbine Avenue, along Woodbine Avenue to Fifty-fourth Street and along Fifty-fourth Street to City Line Avenue at the point of beginning. There may be some justification for cutting off Wynnefield at Woodbine Avenue, or even at Susquehanna Avenue, but ultimately there can be little question that the expansion of Wynnefield will make this northern section a part of that community. On the other hand, the open space northwest of Fifty-second Street along the Pennsylvania Railroad, southwest of Wynnefield is historically a part of Hestonville, and will likely remain a part of the Fifty-second Street and Lancaster Avenue community. It is low ground and will not likely be favored for high class residences.

Historically Wynnefield is of very recent development, most of it having been built since 1910, and much of it since 1920. Its growth and ethnic composition it owes in large measure to the suburban movement of the Jewish population of Philadelphia. It constitutes for Philadelphia the goal par excellence that Louis Wirth has so graphically described as "The Promised Land" in Chicago.[35] It is variously called by local jesters the "New Jeru-

[35] See, *The Ghetto*, University of Chicago Press, 1928.

salem" or "Kike's Peak." When the new bridge across the tracks of the Pennsylvania Railroad was built and opened (1926) it was used by so many Jewish students on their way to Overbrook High School that it was facetiously dubbed "The Passover." It is especially fitting that the children of Israel in Philadelphia should have wandered forty years in the city wilderness before they reached this promised land. Just one long generation separates this settlement from the Ghetto, for in one home the visitor will find a Yiddish-speaking mother and a college-bred daughter with a New England accent. Only a more detailed analysis can trace the source or previous residence of these "highlanders" but the population statistics suggest a steady westward trend along Girard and Parkside Avenues. The hypothesis that the "Parkside" and Wynnefield Jews came from the earlier concentration north of Market Street and those of "Strawberry Mansion" from South Philadelphia appears to be quite defensible. That there has been a steady westward movement along the line of Girard Avenue can be statistically demonstrated.

The Wynnefield community gives evidences of considerable wealth, but the housing is essentially middle class. Apartment houses are not in evidence and there are many row houses or semi-detached homes. Most of them are quite new, and still more are being added. While transportation facilities are only fairly adequate, the use of automobiles brings the commuters into the city quickly by a direct route. It appears likely that Wynnefield will continue to grow steadily or even rapidly.

Parkside-Belmont

Since 1910 an area around Fortieth Street and Girard Avenue has become increasingly a Jewish colony. This tract covers roughly the old village of Laniganville, a portion of what was once the District of Belmont. The boundary selected begins at the junction of Lancaster and Belmont Avenues, runs north on Belmont to Parkside Avenue, on Parkside to Girard Avenue, on Girard Avenue to Thirty-eighth Street, along Thirty-eighth Street and the line of its continuation across

the railroad yards to Parrish Street, along Parrish to Lancaster Avenue and along Lancaster to Belmont Avenue at the point of beginning. There are a number of houses along Parkside Avenue beyond Belmont Avenue which may be logically included in this area on ethnic grounds, but this link with Wynnefield is separated from the Parkside concentration by an industrial section west of Belmont Avenue. The settlement north of the Pennsylvania Railroad tracks is properly a part of old Hestonville but is distinctly Jewish and stands mid-way, culturally and economically, between the squalid little Ghetto near Fortieth and Ogden Streets and the elite Wynnefield. The movements of population which defined these areas will be treated in the chapter on population analysis.

MAP NO. 2
West Philadelphia, showing the better known Community Areas.

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Transportation in West Philadelphia

The structure of the urban community is in large measure dependent upon the avenues available for travel. Whether roads induce people to follow them or whether roads are built into the places where people live is a question which will concern only the academically inclined, but the very fact of the opening or existence of a route of travel is very significant for the student of human ecology. It is with this realization of the rôle played by transportation in the construction of the community that we undertake an historical analysis of the growth of the present system of facilities in West Philadelphia. In the course of this analysis we shall examine waterways, ferries, bridges, highways, street railways and railroads.

Waterways

The only navigable stream of any importance which touches West Philadelphia is the Schuylkill River. Mingo and Darby Creeks were used for Indian canoes and Swedish rowboats but as lines for commercial transportation they were unimportant. Some ambitious plans for canals were devised but few of them ever materialized. The most important project of all was that of the Schuylkill Navigation Company which was authorized by the state legislature in 1812, linked Philadelphia with Reading and the Lehigh Valley by the river and canals, and carried a flourishing traffic during the period from 1825 to about 1842. Eventually the opening of the Philadelphia and Reading Railroad deprived the waterway of much patronage, and it fell into disrepair. During the period of its prosperity wharves were built along the east side of the Schuylkill River, and the industrial development on the west side of the river is also due in some measure to the influence of the navigation company. Water and power rights along the Schuylkill were developed by the same company.

Bridges and Ferries[1]

The earliest settlers found the tasks of cutting passable roads through the dense forests, building bridges and grading hills almost insuperable for their simple implements and limited sources of power. Like the Indians they used the streams whenever it was possible to do so, and when an overland route was unavoidable the freight was loaded on pack horses which could follow a narrow trail. Very few roads were laid out before the coming of William Penn, and such as were constructed must have been of limited usefulness. The primary task was to secure water transportation and arrange for pack horses and men to get across the streams. The location of ferries and the construction of bridges were, therefore, essential to the preparation of extensive highways. The smaller streams could be forded at most seasons of the year, but the Schuylkill River was in some places forty feet deep and some substantial ferry was necessary to traffic.

No record of a regular ferry over the Schuylkill River before the coming of William Penn appears to be available. The Swedes must have had boats suitable for transporting freight, but they may have used ships when large or very heavy objects were to be moved. Soon after the coming of William Penn ferry boats were put into service, and travelers could cross the river at any one of three points. The first and most important was the "Middle Ferry" at Market Street, the "Upper Ferry" was near the present site of Spring Garden Street Bridge, while the "Lower Ferry" crossed at Gray's Ferry Avenue. At various other times there were ferries above the Upper Ferry and one on the lower course of the Schuylkill has been variously called the "Rope," "Lower" and "Penrose" ferry. It is sometimes

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[1] This account is a summary of several sources consulted by the writer. Among them the most helpful were Powers, Fred Perry, "The Historic Bridges of Philadelphia," from *Philadelphia History*, pp. 265–316, a collection of addresses given before the meetings of "City History Society of Philadelphia," and published by the Society in 1914; Vieira, M. L., *West Philadelphia Illustrated*, pp. 28–37; Scharf and Westcott, *History of Philadelphia, 1609–1884*, Volume 3, pp. 2139–2147; Jackson, E. N., *America's Most Historic Highway*, pp. 324–330.

confused with the Lower Ferry at Gray's Ferry Avenue, but is several miles farther down the river.

The passage of the Schuylkill River at Market Street has always been the most popular of the three. It was the first to be provided with a ferry and the first to secure a permanent bridge. The Lower Ferry was at times an important competitor but was not favored by such direct access from the city. Regarding the earliest ferry we read that:

> "One of the early acts of Penn as Proprietary while he was in the city on his first visit was to grant the 'Old Ferry' to Philip England. This was done about 1683, for in 1685 the complaints against the ferry keeper became so pronounced that he was ordered by the Provincial Council to expedite a sufficient boat . . ."[2]

During the Revolutionary War Washington's engineer, Israel Putnam, built a pontoon bridge across the Schuylkill, probably at the Lower Ferry, but it was moved about from time to time and appears to have been located at Market Street during part of the year 1777. After the end of the war the need for a bridge led to the construction of a series of "floating bridges," and ultimately to plans for a permanent bridge which was authorized in 1798, begun in 1800 and completed in 1805.

The "Permanent Bridge" was a remarkable engineering achievement for its day and in order to overcome the obstacles presented by the river, which is forty-one feet deep near the west bank, great efforts were put forth. The bridge, when completed, was 550 feet long and forty-two feet wide. It was built of wood and supported by two stone piers. It was remodelled in 1850 to carry the trains of the Pennsylvania Railroad, but in 1875 it was burned. It was replaced by a temporary bridge for the use of the railroad company, constructed in ninety hours, but the present Market Street bridge was not ready to take its place until 1893. The concentration of traffic on and near Market Street has made necessary a wide steel bridge for vehicular traffic, a separate span for the subway trains

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[2] Jackson, *op. cit.*, p. 326.

and trolleys, and a new bridge of steel, concrete and stone to replace the structure used at present by the railroad. When the plans have been executed the crossing of the river at Market Street will have once more passed through a stage of evolution designed to lift it above the steadily accumulating congestion of traffic.

At the Lower Ferry a similar sequence of ferries and bridges can be traced in the records. There is a petition recorded in 1695 for a "ferrie at the rock" which appears to have been granted. In later years George Gray was keeper of this ferry and gave his name to the ferry as well as the road which led to it from South Street. The present bridge, the country road which formerly led west to Sherwood, and the modern Gray's Avenue are other survivals of the name of the old ferry keeper.

The first bridge at the Lower Ferry was probably Putnam's floating bridge in 1776. It was replaced by a series of more substantial bridges with heavy chains to make them secure, ingenious hinges to accommodate them to the tides or floods, and coupling at the middle to open when ships sought to come up the river. There were bridges built of logs and covered with planks, with railings on each side. When wagons passed over this flexible driveway the bridge might be submerged several inches, but it was safe and carried far more traffic than the ferries which had preceded it. "Newkirk Viaduct," a long wooden bridge built by the Philadelphia, Wilmington and Baltimore Railroad Company and opened in 1838, was the first permanent bridge at Gray's Ferry. According to the monument which marks the site of the bridge, some distance below the present bridge, it cost a million dollars. It provided for vehicular traffic as well as trains, and in 1847, in consideration of the payment of $55,000 by the county it was made a public bridge, free of tolls. Unfortunately it was burned in the early sixties, and was some time later replaced by another bridge. The present structure was erected in 1901 at a cost of nearly half a million dollars.

At the Upper Ferry, a permanent bridge, designed by Louis Wernwag, was built in 1812. This was said to be the first large suspension bridge in the United States, and at the time of its

construction, the longest in the world. It was built of wood but in order to demonstrate its strength the architect employed teamsters to load their carts with stone and drive onto the bridge until it was jammed from end to end by this heavy freight.[3] In this way confidence in the new type of bridge was created, and it soon became one of the most popular of all places for crossing the Schuylkill. A great deal of livestock and produce came into the city over this route from the territory to the northwest served by Haverford and Lancaster Roads.

In 1838 the wooden bridge was burned but in 1842 it was replaced by the famous "Wire Bridge," designed by Charles Ellet, Jr. The present two-level bridge was built in 1875 to replace the "Wire Bridge" and was at the time considered one of the most beautiful bridges in the world. A number of other bridges have been built at various places along the river and West Philadelphia is ever being linked more closely to the central city. As early as 1854 an editorial in a local newspaper suggested that "the Schuylkill is likely to become to this metropolis what the Seine is to Paris."[4] The suggestion is perhaps sanguine but not preposterous and the development along the river should make it a beautiful stream if pollution can be stopped.

A tabular summary is presented on page 96 to describe the adequancy of transportation facilities across the Schuylkill. The approaches for the University Avenue Bridge are not yet complete but they have been authorized. There are also a number of smaller bridges or viaducts across streams and railroad excavations, but they are not significant for the present discussion. We may now turn our attention to the highways which served the growing community.

Highways, Turnpikes and Streets

The plan of West Philadelphia presents an urban community with a gridiron system of streets laid out over a basic pattern

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[3] Vieira, *op. cit.*, p. 33.
[4] "North American," January, 1854, quoted from *Philadelphia History*, p. 34.

TABLE III

PUBLIC BRIDGES OVER THE SCHUYLKILL RIVER[5]

LOCATION	TYPE	LENGTH	DATE BUILT	COST
City Avenue	Deck Truss	712	1889	$ 102,000
Falls Bridge	Double Deck Truss	560	1895	262,000
Girard Avenue	Deck Truss (100 ft.wd.)	1000	1874	1,525,000
Spring Garden	Double Deck Truss	2730	1876	2,500,000
Market Street	Cantilever	550	1887	300,000
Chestnut Street	Iron Arch	1528	1866	495,000
Walnut Street	Pratt Truss Deck	2404	1890–93	752,000
South Street	Bascule-Electric Draw	576	1923	644,000
University Avenue	Bascule-Electric	536	1929	1,330,000
Grays Ferry	Electric Draw	1660	1899–01	469,000
Passyunk Avenue	Bascule-Electric Draw	1310	1911	590,000
Penrose Ferry	Electric Draw	800	1877–78	375,000

of country roads. It is this system of country roads, dating from about 1690, that furnishes the community with its diagonal streets, concentrating traffic upon the "neck" of Market Street from Thirty-second Street to the Schuylkill River. In the section south of Market Street, Woodland Avenue cuts diagonally across the Fortieth and Twenty-seventh Wards, and is fed by Kingsessing, Chester and Baltimore Avenues which are also diagonal streets. Practically all of the heavily traveled streets of the section have direct or indirect access to Woodland Avenue. In the northern portion of the community, Lancaster Avenue performs practically the same function, cutting across all of the main streets from City Line Avenue to Market Street at Thirty-second Street. In the northern area Haverford and Girard Avenues feed the bridges which carry the burden of the old Upper Ferry, while South Street and Gray's Ferry Avenue, to be supplemented in the future by University Avenue, carry traffic from the southwest to the central portion of the city. Still farther south Passyunk Avenue and Penrose Ferry Road supply almost indispensable service to a smaller clientele.

[5] *Manual of the City Council of Philadelphia for 1929*, p. 137. Some discrepancies may be noted between the date of construction here and in the preceding account. This is due to citation of date of authorization or dedication instead of date of actual opening.

Crosstown streets which carry a heavy load are Fortieth Street, Belmont Avenue and Forty-fourth Street, Forty-ninth Street below Baltimore Avenue, Fifty-second Street north to Columbia Avenue and Fifty-fourth Street beyond that point. Fifty-eighth Street below Baltimore Avenue and Sixtieth Street above that avenue, Sixty-third Street above Market and Cobb's Creek Parkway below. Most of the streets north of Market are laid out at the oblique angle set by Powelton Avenue, the Twenty-seventh and Forty-sixth Wards have been surveyed to articulate with Market Street, while the plan of the Fortieth Ward is determined by Woodland Avenue. A study of some of these primary streets will reveal in some measure how the city has grown and taken shape.

The road most closely associated with the history of West Philadelphia is Darby Road, now called Woodland Avenue.

"Darby Road is always spoken of as the oldest road in Philadelphia County, but it is supposed that a still earlier one of the Swedes ran between Tinicum and Wicaco, from the Lower Schuylkill Ferry."[6]

If Darby Road was second in priority it was at least the first permanent road. It is said to have been run first to the Middle Ferry,[7] but later to the Lower or Gray's Ferry. Concerning this road Vieira says:

"The site of the old Philadelphia, Wilmington and Baltimore bridge, erected in 1838, is the point of the most ancient crossing of the Schuylkill.

"On May 23, 1695, a petition of Chester County for a 'ferrie at the rock,' was presented to the Provincial Council. The prayer of the petition was granted and Benjamin Chambers, patentee of the land on the west side of the river was for a time the 'Farmer of the Ferry.'

"In 1747, George Gray, who had become the owner of the 'Lower Ferry,' as it was called, petitioned Council for a warrant to survey the road, etc., showing 'that the said road leading from the South Street of the said city over said ferry to Cobb's Creek near Darby in the County of Chester has time out of mind been the only and accustomed road to Darby, New Castle and the Lower Counties.' . . ."[8]

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[6] *Philadelphia History*, Lynch, M. A., *The Old District of Southwark*, p. 84.
[7] Scharf and Westcott, *op. cit.*, Vol. 1, p. 10.
[8] Vieira, *op. cit.*, p. 173.

Some time later Darby Road was cut through the Hamilton estate, "Woodlands," from which it ultimately took its name.

". . . The road to Darby until late in the (eighteenth) century was from Gray's Ferry, but in 1780 a petition was received by the council asking that the road be opened to Market Street. This appears to have been reported favorably the following year, and the act passed to have the road opened through Hamilton's land . . ."[9]

At a later date the road appears to have become a very popular resort for sportsmen.

"A member of one of the oldest of the prominent families of West Philadelphia says in writing of Darby Road: 'It has been there as long as I can remember, first as a plain country road. In the fifties, about 1853 or 1854, it was called the 'Plank Road' because of its covering which was placed there principally, I think, for the sporting fraternity, who speeded their fast horses over it. In suitable weather on Sunday afternoons, the sides of the road were lined with thousands of onlookers, who had come out from the city to see the races. From what is now Forty-ninth Street, out as far as the 'Blue Bell' Tavern, was the usual 'speedway.' I have seen dozens of broken wagons strewn along the roadway on pleasant Sunday afternoons. It seemed as if all Philadelphia were congregated there. The planks speedily wore out, the law interposed, and Darby Road resumed its old life, and more recently assumed a new name, Woodland Avenue. . . .'."[10]

The road in the old days was beset by many difficulties and hardships. In some places it was boggy or streams bearing quicksand must be forded, there were steep grades such as those at Maylandville, on Mill Creek, and portions were too rocky for comfortable travel, but it has been well smoothed out and is now one of the most important channels of traffic to the southwest. And not only is it one of the main arteries of traffic, but it is also the chief business street of the Fortieth Ward.

Haverford Road was opened in 1700 and ran from the Upper Ferry past Haverford Meetinghouse to West Chester, in Chester

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[9] Jackson, *op. cit.*, p. 338.
[10] Vieira, *op. cit.*, p. 172.

County.[11] It was along Haverford Road, at the Whiteside tavern that the nucleus of Haddington was established. Haverford Avenue follows the course of the old road.

Some time later the West Chester Pike was opened on the line of present-day Market Street. After the death of Washington it was given his name through West Philadelphia but it was more commonly called "Market Street." The last stagecoach about Philadelphia ran from the William Penn Hotel near Thirty-eighth and Market Streets to Newtown Square in Chester County until 1896, when the trolley line to West Chester was opened.

Old Lancaster Road and the somewhat different Lancaster Pike were two of the most noted routes of travel through West Philadelphia. The first road to Lancaster was opened in 1730,[12] running on the line of Lancaster Avenue to Fifty-second Street, and from there north into Montgomery County along what is now Fifty-fourth Street.

The Lancaster Pike proper followed the present-day Lancaster Avenue to City Line Avenue. It was built of stone by a private company between 1792 and 1795. It was sixty-two miles long and cost approximately $360,000. During the first twenty-five or thirty years of its existence the turnpike was exceedingly profitable, and paid as much as fifteen per cent in dividends, but when the railroads were introduced, it was doomed. It fell into disrepair, parts were totally abandoned, and the remainder sold for about fifty thousand dollars. The portion within the limits of the city of Philadelphia, about three miles, was sold to the Hestonville and Mantua street railway company in 1867, and trolley tracks were laid from City Line Avenue to the end of the turnpike at Thirty-second Street. The deed to the property was transferred to the city of Philadelphia.[13]

There are numerous other streets of much interest in West Philadelphia. Baltimore Avenue follows the route of "Chadd's

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[11] Vieira, *ibid.*, p. 31.

[12] Vieira, *ibid.*, p. 31. Miss Vieira speaks of the road as "Lancaster Pike," which is not quite correct. The pike was not built until 1790, but Old Lancaster Road must have been open at least by 1730.

[13] Vieira, *ibid.*, pp. 75–86.

Ford Road," which was later a toll road known as "Lyons Pike" and still more recently as "Baltimore Pike." Gray's Lane once followed roughly the course of Fifty-eighth Street from Woodland Avenue to Baltimore Avenue, and ran north from Baltimore Avenue along the line of Sixtieth Street as far as Market Street. Sixty-third Street was once Blockley Avenue north of Market Street. Belmont Avenue is a well established line of travel which now falls largely in Fairmount Park. Powelton Avenue was opened up many years ago to furnish a direct route from the Upper Ferry to Market Street, or the West Chester Pike.

In the early days most of the freight was hauled in big heavy Conestoga wagons, drawn by four, six or eight sturdy horses. Considerable pride was felt in Pennsylvania over the efficiency and speed of these wagons, and until they were eliminated by competition with a newer form of transportation, they added color to the highways of the state.

"In speaking of the great wealth of Pennsylvania, Edmund Burke stated in his *European Settlements*, in 1757 that, 'Besides the quantity of all kinds of the produce of the Province, which is brought down the rivers Delaware and Schuylkill . . . the Dutch employ between eight and nine thousand wagons drawn each by four horses in bringing the products of their farms to this market.' The wagons in question were large, but when the bridge came to be erected there appeared those huge Conestoga wagons, commonly called the 'Indiamen of the road.'

"To see them gathered in hundreds along Market Street presented an odd sight. With their six and eight mammoth horses surmounted with bells and colored ribbons they court the attention of all. When the railroads and canals were built it was claimed that 'Philadelphia was ruined' and that 'no railroad could ever carry the freight the old Conestogas did.'"[14]

Despite these protests, the Conestoga wagon has gone the way of the stagecoach and is to be seen now only in museums or out-of-way rural sections. With it went the old system of transportation and after it came the railroad, automobile, motorbus and freight truck.

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[14] Vieira, *ibid.*, p. 173.

Street Railways

The forerunner of the modern system of street railways was the omnibus. The omnibus appeared in Philadelphia about 1830 as a sort of local stagecoach, went through a period of rapid expansion as new lines were established and new services provided, reached the peak of its popularity by about 1855, and declined steadily after the introduction of street railways. West Philadelphia was served by such a route in 1852, according to the report of the Commissioners of the District, but the exact schedule was not described. The routes depended largely upon subscribers who received monthly or weekly tickets and traveled much as present-day commuters, at rates somewhat below the usual price. Where competition was keen the subscriber might ride several miles for as little as four cents, although the occasional rider was charged ten or twelve-and-one-half cents.[15]

The first street railway in Philadelphia was the "Philadelphia and Delaware River Railroad Company," later known as the "Frankford and Southwark City Passenger Railroad Company" which received permission in 1857 to operate street cars drawn by horses.[16] In the same year a number of additional charters were granted, among which were those of the "Philadelphia and Darby Railroad Company" and the "West Philadelphia Passenger Railway Company." In 1859 the "Hestonville, Mantua and Fairmount Passenger Railway Company" was formed. In succeeding years there were new companies formed, new lines built and better equipment added. Consolidations or mergers began at an early date and culminated in the incorporation of the Philadelphia Rapid Transit Company in 1902, with control of all the major street railways in the city. In 1911 the direction of the transit company passed into the hands of "Mitten Management" which operates the trolley lines, bus lines, taxicabs, subways and elevated railways of the city

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[15] Scharf and Westcott, *op. cit.*, Vol. 3, pp. 2199–2200.

[16] A local service was already provided by the Columbia Railroad, but not as a true street railway.

of Philadelphia under one of the most complete monopolies to be found in any modern municipality.[17]

In West Philadelphia the first street railways were laid on Woodland Avenue, Market Street, Spring Garden Street and Lancaster Avenue. As new bridges were built lines were extended over Chestnut Street, Walnut Street, South Street, Gray's Ferry Avenue and Girard Avenue. The Centennial Exposition was a boon to transportation, and by 1876 the West Philadelphia Company had a line as far west as Haddington, at Sixty-seventh Street and Haverford Road, while the West End Company had carried its line out along Baltimore Avenue. In 1907 the Market Street Elevated Line was opened to supply high-speed transportation to West Philadelphia as far west as Sixty-ninth Street in Upper Darby, Delaware County, and cross-town feeder lines were developed to shorten the time required to reach the center of the city.

The first street cars were drawn almost exclusively by horses or mules. In the very nature of things they could not have been very rapid, and sometimes the animals were too weak to drag a heavily loaded car up a grade. This gave rise to a jesting application of the term "G.O.P." ("Get Out and Push,") to some of the local lines. And not only was the power inadequate, but the cars were small, dirty, dark and poorly ventilated. They were lighted only by coal oil lamps, the only heat came from stoves and in the winter the floors were covered with marsh grass which became a mass of filth and vermin. The drivers and conductors were not only sometimes lacking in courtesy but often dishonest or brutal. In turn they suffered from exposure to the storms on open platforms, incredibly long hours on duty, and starvation wages. The brunt of an unhappy system was frequently borne by the emaciated animals which pulled the cars through the streets day after day, and the more articulate animals who paid fares to ride in the cars.

Substitutes for horse power were undertaken at an early date but were not wholly successful until the electric trolley car was

[17] For a good treatment of the transit system of Philadelphia consult the articles by Edmund Stirling published daily in the *Public Ledger* beginning Monday, February 10, 1930, and running until Thursday, March 13, 1930.

introduced. "Dummy" engine cars, something like our present-day gasoline-driven railway cars were introduced but never very generally adopted. In 1883 the use of "cable cars" was begun and later adopted for the tracks on Market Street. An underground cable was driven by stationary engines located at convenient intervals, and each car was fitted with a "grip" by means of which it could attach itself to or release itself from the moving cable. Such power was welcome in that it eliminated the horses but it also had many faults. The cars started and stopped in an abrupt fashion, while points at which the cables crossed and cars must coast along on their momentum were a constant source of embarrassment. They gained in patronage but the application of electric power soon displaced all other forms.

The first electric trolleys were introduced on Bainbridge and Catherine Streets in 1892.[18] The demonstration was successful but Philadelphia, always conservative, delayed city-wide adoption because of the superstitious fear of electricity and the overhead trolley system. Objections were slowly overcome, and in 1896 practically all of the lines were electrified. Electricity has also been used exclusively for subway and elevated lines, while the suburban railroads are now electrifying their lines to expedite service for the commuters. It is urged in some quarters that the old electric trolley must give place to the gasoline motorbus which requires no tracks and substitutes rubber tires for iron wheels but so far the motorbus lines in West Philadelphia have been used to supplement rather than replace the trolley car. The resort to motorbus service would have many interesting effects, among which would be freeing the vehicular traffic on the streets of the danger and inconvenience of steel rails, and the elimination of the system of trolley wires, but the maintenance of streets would likely not be simplified. So far the employment of the motorbus and the trackless trolley have not seriously encroached upon regular trolley service in West Philadelphia. A likely movement in the future will be toward

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[18] *Philadelphia History*, article by Lynch, M. A., *op. cit.*, p. 123.

subways, one of which is projected for Market Street and another for Woodland Avenue.

There are at present in West Philadelphia, beside the "Bat Line" which runs from Elmwood over into South Philadelphia, and the Market Street elevated, twenty separate car lines, some of which are surface lines to the center of the city, some subway-surface lines, and other local lines wholly within the area west of the Schuylkill. A summary list of the routes is presented below:

ROUTE NO.	TYPE	CHIEF STREETS OR COMMUNITIES SERVED
10	Subway-Surface	Market—Lancaster—Lansdowne
11	Subway-surface	Market—Woodland to Darby
12	Surface—city	Gray's Ferry—Woodland to Darby
13	Surface—city	Chester Avenue
14	Local	Forty-second Street
15	Surface—city	Girard Avenue
30	Local	Haverford Avenue
31	Surface—city	Market Street
34	Subway-surface	Woodland—Baltimore Avenues
35	Local	Forty-ninth—Fifty-second—Parkside
36	Surface—city	Elmwood Avenue
37	Subway-surface	Woodland—Island Road—Eastwick Avenue to Chester, Delaware County
38	Subway-surface	Lancaster Avenue—Baring Street—Parkside Avenue
40	Surface—city	Spruce—Fortieth and Forty-first Streets to Parkside
41	Local	Sixty-third Street
42	Surface—city	Chestnut—Spruce—Walnut
43	Surface—city	Parkside—Belmont—Lancaster Avenues and Spring Garden Street
46	Local	Fifty-eighth and Sixtieth Streets
69	Local	Haverford and Lansdowne Avenues
70	Local	Forty-ninth Street — Baltimore Avenue — Fifty-second Street—Fifty-fourth Street to Bala

This list gives the reader a perspective of the facilities available for transportation and the streets served. To this might be added the "Fairmount Park Trolley" which is regarded primarily as a pleasure line, carrying passengers along a scenic route through Fairmount Park to Woodside Park, a private amusement center, and across the Schuylkill River to Dauphin Street

in the Strawberry Mansion section. However, year-round service is provided and many regular passengers are carried.

At present no new trolley lines are being built. In some places old tracks have been abandoned or torn up. In 1928 Route 42 was removed from Chestnut and Forty-fifth Streets, but it was re-routed over new double tracks on Spruce Street, and the service was not really curtailed. In the suburbs the motorbus has unquestionably supplanted many trolley lines, but whether the city will give up its clashing clanging trolley cars for the quieter bus is another question. If the trolley system is to be displaced, the date is certainly rather distant.

Railroads

The railroads are not local institutions in the same sense as street railways and bridges but in their growth they become important ecological factors. Frequently they follow some course previously used by a highway, and like the highways they determine the location of villages, factories, and homes.

In West Philadelphia there are branches of three railroad companies, but only the tracks of the Pennsylvania system are of great significance. The lines of the "Philadelphia and Reading" and the "Baltimore and Ohio" systems cut across the community and have minor stations for passengers and freight, but they are not closely identified with the ecology or history of West Philadelphia. On the other hand the tracks of the Pennsylvania Railroad were the first in West Philadelphia and its various branches serve to separate communities. Moreover, one of the three important terminals of the Pennsylvania System in Philadelphia is located in West Philadelphia and the present terminal development on the west bank of the Schuylkill River will be the greatest railroad center of the entire city. The West Philadelphia Depot is already the distributing point for lines which run southwest along Woodland Avenue through Paschallville along the route of the "Philadelphia, Baltimore, and Washington" company, which is now merged into the Pennsylvania System; the line to the west along Baltimore Avenue, which was formerly the "Philadelphia and West Chester" railroad; the main line of the

Pennsylvania Railroad along Lancaster Avenue; the "Schuylkill Branch," which runs north from the "Main Line" at Fifty-second Street to Wynnefield, Bala and communities along the valley of the river; and the old "Connecting Railroad" which branches off the "Main Line" near Thirty-fourth Street, describes a semi-circle about the Zoological Garden, crosses the Schuylkill above Girard Avenue and runs northeast across Philadelphia. There is an additional line which runs from the old Philadelphia, Baltimore and Washington road at Sixtieth Street across the low open territory of the Fortieth Ward to Hog Island. This "Sixtieth Street Branch" runs along a high embankment which was thrown up during the development of the Hog Island shipyards, at the time of the World War. There is no station, in fact, hardly a building along its course until it reaches the Back Channel, but ultimately it will serve the industrial district which promises to develop along the west bank of the Schuylkill River.

Beside West Philadelphia Station there are Pennsylvania Depots at Fifty-second Street and Lancaster Avenue, Overbrook, Wynnefield, Forty-ninth Street and Chester Avenue, Angora, and Paschallville. The old Hestonville Station at Fifty-second Street and Lancaster Avenue is a considerable center, with extensive yards and shops of the railroad company to the north and east. The others are only local stations. Similar local stations are found at Belmont and West Falls on the Reading System and at Sixtieth Street and Woodland Avenue on the Baltimore and Ohio. From time to time changes have been made in the route of tracks, the location of stations and the combinations of lines. These have steadily concentrated the interests of the Pennsylvania Railroad Company in West Philadelphia.

The evolution of the Pennsylvania Railroad System dates back to the period of internal development in Pennsylvania during the early national period.

"From the year 1791 to July, 1828, the sum of $22,010,554 was expended by the State of Pennsylvania and by corporations, on canals, rivers, turnpike roads, railways and bridges, etc., and this exclusive of the sums expended by the state prior to the year 1791.

"The first act passed in America for a railway for general purposes of commerce was that to Mr. Stevens and others, to make a railway from Columbia to Philadelphia—eighty-four miles. (This road was built after 1832). . . .

"In 1834 the Columbia Line, combined of canal and railroads, was opened from Philadelphia. It was first constructed for horse power but in 1836 locomotives were taken into use. In 1847 a charter was granted to the Pennsylvania Railroad, which has since become one of the greatest agencies of progress to the city and state."[19]

This first unit of the Pennsylvania System, built by state funds to link the Susquehanna and Delaware Valleys, was only one of the railroads in process of construction at the time, but it was perhaps the most significant of all. As originally built, this line crossed the Schuylkill River below Peters' Island on a wooden bridge and was drawn up an inclined plane to the elevation at Belmont, from which it ran through what is now Fairmount Park to the west. This route was later abandoned and the Columbia bridge was sold to the Reading Railroad Company. In 1850 the city remodelled the Market Street bridge and prepared the northern portion for the tracks of a connecting link which ran from the west bank of the Schuylkill to the station near Broad and Market Streets. The tracks in West Philadelphia were relocated along Lancaster Avenue where they have run for about eighty years.

The Philadelphia, Wilmington and Baltimore Railroad was organized in sections under the laws of Pennsylvania, Delaware and Maryland. It was consolidated and opened in 1838. There was a railroad to West Chester with horse-drawn cars as early as 1833, but the tracks on the line of the present Pennsylvania branch were laid between 1848 and 1853. The Baltimore and Ohio Railroad Company completed its line to Philadelphia about 1886.[20]

The earliest forerunner of the present development of terminal facilities in West Philadelphia was a depot located at Thirtieth and Market Streets by the Pennsylvania Railroad in 1864. It was succeeded by a large building at Thirty-second and

[19] Vieira, *op. cit.*, pp. 94, 97.
[20] Scharf and Westcott, *op. cit.*, Vol. 3, pp. 2171–2199.

Market Streets, hastily erected in 1876 to serve the crowds coming to the Centennial Exposition. When the new Broad Street Station was opened in 1881, the importance of the old wooden structure in West Philadelphia declined and in 1896 it was destroyed by fire. The present stone building at Thirty-second and Market Streets was begun in 1902, and completed a year or two later. It is to be superseded after 1932 by the new terminal at Thirtieth and Filbert Streets. After that time minor changes will be made, additional lines will be electrified to facilitate cleanliness or economy, and unsightly features of the yards may be eliminated, but the aspect of railroad development will probably be permanently cast so far as the built-up section of West Philadelphia is concerned. This is not a prediction that no changes will be made in the future, but the present construction is part of an extensive city plan which proposes to concentrate rail facilities on the Schuylkill, and it may assume something of the permanence characteristic of older cities. The most marked changes may be expected in the Fortieth Ward where industrial development and population growth will certainly call for improved transportation.

Future Developments in Transportation

The purchase of Hog Island from the United States Shipping Board by the city of Philadelphia on April 9, 1930, opens the way for developing, in and near the borders of West Philadelphia, one of the most remarkable centers of transportation of the nation. A small airport has been maintained on city owned land in the lower end of the Fortieth Ward for several years. It is now proposed to greatly expand this airport, supply adequate rail facilities and develop the resources of the Delaware River for ocean transportation. If the growth of air transportation lives up to the predictions made for it, this spot should profit from the versatility of its site, and become a scene of exceptional activity. It will be the only major airport in Philadelphia, and when proper connections are made with the central part of the city it should be a great boon to rapid long-distance travel.

VI

The Use of Land

The preceding chapters have attempted to recapitulate the urban development of West Philadelphia. There remains the task of analyzing the present-day distribution and trends in the utilization of land for the satisfaction of human wants. It is empirically known that some portions of the community are used for economic purposes such as producing goods and selling them, as homes for families and as places of recreation or seclusion. Just why certain areas were chosen for given purposes or what circumstances led to the specialization of their peculiar functions it is not so easy to determine. In the absence of an effective zoning ordinance the uses of land in West Philadelphia have been almost unrestricted but there has been a considerable tendency for certain forms of enterprise to segregate and seek company with related organizations. In some places this may have been due to cheap land, in others to favorable locations and in still others to natural resources. An examination of some of the most common lines of division should enlighten us as to why relatively homogeneous areas are formed.

Barriers and Boundaries

Where two communities adjoin there must be a line or zone which separates them, even though it be an arbitrary or an imaginary mark. In some places this matter of boundaries is readily solved by the presence of natural barriers, barriers inherent in the geographic features of the territory. Such are streams, hills or mountains, ravines, forests, quicksand, stones, waterless desert, marshes or swamps, and hazards from wild animals. To these man adds walls, embankments, excavations, parks, cemeteries, industrial areas, wide streets, heavy or high speed traffic and certain less tangible bars to easy intercourse such as race, language, religion and tradition. These are the factors which are proposed for the isolation of natural groups and the definition of natural areas. Presumably, the task of

human ecology is that of determining the processes which bring about the segregation of homogeneous natural groups, and the specialization of land for their use.

Those areas which have as boundaries very permanent physical barriers are likely to be more stable than those which have purely arbitrary limits, but even physical barriers may not be potent unless they are defined in social experience as division lines. The "Chinese Wall" was once the boundary of a great country, but when changes in population pressure and political organization removed its function it lost most of its significance. A railroad may serve to divide a community into radically different ecological areas, or it may be wholly without significance for local organization. A ravine may be a dividing line between the elite and slum quarters of a community, or it may be surrounded and inhabited by a population of uniform economic and ethnic composition. But it frequently occurs that such a geographic boundary determines the desirability of the adjacent areas for residential and commercial purposes, or forms a convenient basis for a tradition or practice of specialization.

The separate existence of West Philadelphia is due to streams which bound it on three sides. In places the community limits are emphasized by permanently reserved open spaces like Cobb's Creek Park. The Schuylkill River is lined by parks above Spring Garden Street, but the banks below that point are utilized almost entirely for industrial purposes. Mill Creek and the ravine through which it flowed are no longer important ecological factors, but the East Branch of Indian Creek, with Morris Park, clearly sets off a good-sized portion of Overbrook from the more densely settled section. The inland streams of the lower Fortieth Ward appear to have very little part in the determination of the growth of Elmwood. Church Creek flows along the eastern boundary of Elmwood but Essington Avenue has not been modified to conform to it in the city plans.

The hills of West Philadelphia are not serious enough obstacles to travel to have become important factors in community life at many points. Wynnefield is bounded on the east by a sharp declevity, and on the south by a less marked one. The high ground along the line of Thirty-second Street from Mantua

Avenue south to University Avenue, and from that point along the elevation which cuts across the Fortieth Ward on the line, roughly, of the Philadelphia, Baltimore and Washington Railroad has been historically the line of division between residential and industrial or between settled and undeveloped areas. This distinction may be lost when the plans for filling in the lowlands and bringing them up to grade are completed but at present it appears to have considerable validity. Along the river and across the alluvial land of Elmwood, marshes have been a serious obstacle to urban development.

Among the geographic barriers interposed by man the railroads are of prime importance. The main line of the Pennsylvania Railroad, presenting as it does at times deep excavations and at other points considerable embankments, is one of the most important barriers to traffic in the entire community. Between Belmont Avenue at the line of Forty-fourth Street and the bridge in Overbrook which joins Fifty-seventh and Fifty-ninth Streets, there is only one crossing for vehicular traffic, the one at Fifty-second Street. While demarkation is less distinct in the Parkside community near Fortieth Street, where an adequate bridge is provided, it serves to set Wynnefield off clearly from lower Overbrook, but so far East and West Overbrook are not clearly defined.

In the Twenty-seventh Ward the railroads have almost excluded other developments from riverside locations, and in the Fortieth Ward they provide a maze of "cuts" and embankments which are not adequately bridged and tunnelled for vehicular traffic. On a line drawn from east to west from Bartram Park to Mount Moriah Cemetery, the railroads and industrial establishments almost pinch out residential development, offering a natural boundary zone of industrial character between the residential areas to the north and south. The Chester Branch of the Reading System also separates the Eastwick Avenue area from Elmwood Village, but since the road is at grade it is not a difficult barrier to pass.

In enumerating streets which serve as obstacles to easy passage we could proceed indefinitely with channels of varying degrees of importance, depending upon their width and the

flow of traffic. Generally a wide street with double trolley tracks and heavy automobile traffic is considered dangerous for children and inconvenient for adults. A business house on one side of such a street may be patronized because it is easy to reach, or avoided because the customers must cross the street. However there is also the difficulty that the streets which may be thought of as most likely boundaries also serve as the economic centers of communities. To lay out community boundaries along such lines is an error, but these streets may separate the larger communities into neighborhoods.[1] Because of this fact, even Market Street, with its elevated railroad does not serve as a genuine boundary between communities. While it once served that purpose the recent trend appears to make it the axis of a group of trading centers and to identify the surrounding population with the trading center. Therefore, among our natural boundaries in West Philadelphia, the ones which show permanence and usefulness are a few hills or elevations, the streams, railroads, and open spaces such as parks and cemeteries. Those laid out along streets are still relatively unstable, and depend upon tradition rather than economic activity for their definition.

Industrial Areas

The earliest industrial establishment in Philadelphia was the little Swedish mill at Paschallville, but the recent industrial developments in West Philadelphia are hardly in any way related to that primitive plant. In fact, they are not directly associated with the old paper mill at Maylandville, the glass factory at the foot of Haverford Road or any local industrial establishments. Instead, they are plants which have moved from a central location to a point where land is cheaper, transportation more accessible or labor more plentiful. Some of the plants found greater attractions beyond rather than within the city limits, but as a rule, they are still linked to the city ecologically and financially. New establishments seeking locations have also been induced to open plants in West Philadelphia.

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[1] It is this fact which has been taken as the basis for planning neighborhood units in recent proposals for rationally constructed cities. See Whitten, Robert, *A Research in Land Sub-Division*, New York Regional Plan, 1927.

The earliest industrial section of any size in West Philadelphia was located along the west bank of the Schuylkill River from Spring Garden Street down to Maylandville and west as far as Thirty-fourth Street. It was stimulated by the Schuylkill Navigation Company and later the railroads with their yards and shops. It now reaches, with some interruptions, to a point below Gray's Ferry Avenue, and below Bartram's Park a further extension is being added. Ultimately this extension below Fifty-eighth Street may become the most important industrial area in West Philadelphia. The transportation facilities available by water, land and air assure it a favorable differential in the cost of marketing and its ecological position between South Philadelphia and the industrial area of Delaware County assure it of every resource in the way of labor, technical skill, and power. Viewed geographically it is a logical link in the industrial development of the west bank of the Delaware River.

Another line of expansion for the same area has been out along or near Woodland Avenue. It is a rather dispersive development, with shops and residences between plants, but among the better known firms are Brill's Car Works, the General Electric manufacturing plant and Fels and Company soap factory. There are also a number of sizeable woodworking establishments and machine shops.

A minor extension of the area along the West Chester Branch of the Pennsylvania Railroad is centered near Forty-ninth Street. This zone contains a number of coal and lumber yards, so that it may be considered a distributing rather than a manufacturing center.

A number of establishments have been located from time to time along Market Street, but there is no real industrial district near the course of the street beyond Thirty-fourth Street. Until fairly recently a huge brick building at Market and Ludlow Streets, reaching up to Thirty-third Street, was occupied by Crofts milk chocolate company but it is now deserted. At Thirty-fourth Street is located a paper company. At Fortieth and Market Streets once stood the Avil Printing Company, one of the largest printing firms in the city. It occupied an eight-story building in which practically all of the printer's

arts were applied, but in 1903 the building burned and it was never rebuilt. A laundry center, with a number of plants is located about Market Street west of Fortieth. The Kolb Bakery Company has a large plant at Fifty-sixth Street.

A fairly distinct industrial area is located northeast of Fifty-second Street above Lancaster Avenue. There are in this area a large plant operated by the Collins-Aikman Plush Company, one owned by the Cunningham Piano Company and the shops and yards of the Pennsylvania Railroad Company. The transit company also owns an establishment in this area. There are a number of plants of various sorts located along Fifty-second Street, but no concentration of industries below Lancaster Avenue.

In addition to these areas it is worth while to mention the local service and storage facilities of the Philadelphia Electric Company, now merged with the United Gas Improvement Company. An electric plant is located at Thirty-third and Market Streets, and gas storage tanks at Forty-seventh and Chestnut and on Lindbergh Boulevard near Fifty-eighth Street in Kingsessing. The Philadelphia Rapid Transit Company has car barns at Fifty-eighth and Vine Streets and at Forty-ninth Street and Woodland Avenue. It also has a garage at Forty-first Street and Haverford Avenue. There are several brick companies scattered through West Philadelphia but they show no considerable concentration. None of the plants mentioned in this paragraph is of impressive proportions, but collectively they employ a great many workers.

The movement of industries is steadily toward the Fortieth Ward. The stock yards and slaughter houses are being moved from their present location near Arch Street to a point below Bartram's Park. A gypsum plant of large capacity has recently located in the same area, and farther down the river the Standard Oil Company is beginning a large plant. The industrial area along the Schuylkill above South Street will probably undergo a great change in the course of the next twenty-five years, with a steady trend toward warehouse and service establishments to replace the present factories. North of Baltimore Avenue there is no likelihood of a large industrial expansion, but rather a

prospect of a heavy residential population and more intensive commercial development. The future of industrial development in West Philadelphia is on the west bank of the Schuylkill River below Gray's Ferry Avenue.

Trade and Shopping Centers

The growth of commercial centers in West Philadelphia has been particularly pronounced since 1910. In the absence of a zoning law stores and offices are scattered along most of the principal residential streets, but there are centers of concentration at several points, some of which are identical with business centers of a hundred years ago. Usually these shopping districts are located where two streets of commercial importance cross, or where there are special advantages in the way of transportation.

The definition of the term "shopping center" is not an easy task. A corner with a drug store and a grocery is a shopping center for a neighborhood. A little larger center may have a restaurant, tailor shop, men's furnishing store and fruit market. One stage above this class may be found one with a bank, dry-goods stores, moving picture theatre and hardware stores. One seldom finds a complete department store in the satellite business centers, but the presence of such establishments is an indication of a large volume of local business. Studies conducted by Professor R. D. McKenzie[2] show that people will buy groceries near home, but for furniture, men's suits and similar staple articles they seek the central business district with its wide range of stocks and quality. Since it is hardly worth while to list all of the minor centers, the treatment of shopping centers will be limited here to a few of those which are most important.

The satellite business centers of West Philadelphia will be found at the intersection of commercial streets along a few of the principal avenues. On Market Street sizeable centers are located at Fortieth, Fifty-second, Sixtieth and Sixty-third

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[2] McKenzie, R. D., "The Scope of Human Ecology," *Am. Soc. Society Proceedings*, 1926, p. 152.

Streets. On Lancaster Avenue points of concentration are found at Forty-first, Fifty-second and Sixty-third Streets. On Woodland Avenue the greatest activity will be found at Thirty-seventh, Forty-ninth, and Seventieth Streets. Trading centers are located on Baltimore Avenue at Fifty-second and Fifty-eighth Streets, on Chester Avenue at Fifty-fifth Street, and on Girard Avenue at Fortieth and Sixty-third Streets. There is a business development along Fifty-fourth Street in Wynnefield, while Elmwood has its shops on Tinicum Island Road, Eastwick Avenue and Penrose Avenue.

It is interesting to note that so many of these business streets and intersections are the same ones which carry the trolley lines and offer the greatest facility of transportation. There is reason to believe that the prosperity of these shops is dependent upon the ease with which they can be reached by prospective purchasers of commodities.

In addition to these general trading centers we may note certain specialized districts. The wholesale food center at Thirtieth and Market Streets is one of these, but it is to be moved shortly to make way for the new post office. West of Thirty-third Street on Walnut and Chestnut Streets the Armenians have concentrated their shops to form a sort of Oriental rug district. In the same area, on Walnut Street, the number of agencies displaying motor cars has led people to speak of it as "Automobile Row." Market Street about Sixtieth Street has a surprising number of second-hand furniture stores. Just outside the city at Sixty-third and Market Streets is one of the chain department stores of Sears, Roebuck and Company, something of an anomaly in its location. Another establishment which would normally be found in a downtown district is the central office of the Provident Mutual Life Insurance Company on the grounds of the Pennsylvania Hospital for the Insane at Forty-sixth and Market Streets. It is possible that this building is only a forerunner of a commercial development which will replace the hospital on this location.

Fifty-second and Market Streets

The hegemony of the Fifty-second and Market Street business center is almost beyond dispute. In the last twenty years it

has grown rapidly and now draws trade from almost all over West Philadelphia. It has a dense population all about it, and the fact that it is the chief transfer point for the elevated railway and cross-town trolleys is a very important factor in its progress. Business centers are also located on Fifty-second Street at Baltimore Avenue and at Lancaster. Fifty-second Street at Market has not only become a shopping district but also a recreation center with two large moving picture theaters, one of them the finest in West Philadelphia, two smaller ones, and two dance halls, one of which is quite large. The shops of this district extend from Pine to Race on Fifty-second Street, with scattered stores beyond, and from Fiftieth to Fifty-fourth on Market Street.

Sixtieth and Market Streets

From Fifty-eighth Street west to Sixty-third Street, Market is a business street. At Sixtieth there is less development north of Market than south, where a busy line of stores extends as far as Cedar Avenue. There are comparatively few stores on other streets in the neighborhood, but the concentration about Sixtieth is pronounced. Here again transportation facilities favored the growth of a trading center. There are a large moving picture theater, several banks, a few restaurants, and furniture stores galore. The influence of the Jewish population is seen in the number of stores along Sixtieth Street which have signs painted in Hebrew.

Fifty-Second and Lancaster Avenue

The business center which succeeded the old village of Hestonville at Fifty-second Street and Lancaster Avenue is especially favored as a center of traffic. In addition to the "hub" of streets created by the intersection of Fifty-second Street, Lansdowne Avenue and Lancaster Avenue there is the fact that no other street between Belmont Avenue and Fifty-ninth Street offers access to Wynnefield. Moreover, the junction of the "Main Line" and "Schuylkill Valley" divisions of the Pennsylvania Railroad makes the Fifty-second Street Station an important stop and compensates in part for the lack of a high speed line

such as that which serves Market Street. Next to the trading center on Fifty-second Street at Market, the one at Lancaster Avenue is likely the most important in all of West Philadelphia. It is surrounded on the south, southeast and west by a dense population and draws a considerable patronage from the communities to the north.

A detailed description of each of the shopping centers enumerated in the above list reveals practically the same factors as those noted in the three cases analyzed. Almost invariably trade depends upon the adequacy of transportation. The businesses which flourish are shops containing men's furnishings, women's clothing, groceries, fruits, drugs and confections. There are almost always banks, restaurants, moving picture theaters and real estate companies, depending in number and size upon the prosperity of the district. One center, at Sixty-third Street and Girard Avenue, boasts a full-fledged department store.

Another feature of the development of satellite business centers is the tendency for local communities to crystalize about them. They are centers of economic and social activity, as a consequence of which they are called upon to furnish the leadership for civic improvement. The citizen looks to the nearest trading section for organized expression of local needs and ultimately identifies himself with it. In this way traffic and trade are focussed upon the local center and its position correspondingly strengthened.

Housing and Residential Areas

The housing of an urban community may be classified as to architecture, but the residential areas can be more readily defined in terms of the economic status of the tenants. That certain types of architecture are correlated with given classes of tenants may be a reasonable assumption, but the fact remains that while the architecture of the houses in a community remains substantially unchanged, the character of the population housed may change markedly. In our study of where people live in West Philadelphia, we shall first indicate the type of housing, and then attempt to characterize the occupants to be found.

Types of housing in West Philadelphia include detached houses, semi-detached or twin houses, row houses, two-family houses, family apartments, efficiency apartments, converted apartments and rooming houses. This classification may appear to be involved but at least that much differentiation is necessary for an accurate analysis and description of the housing available.

In these houses live persons of economic classes which may be designated as workingmen, or manual laborers; lower middle class, which includes the "white-collar" workers, clerks, skilled workmen, and lower salaried professional men; the upper middle class, which includes those persons who because of income from accumulated property or generous earnings are able to live at a fairly liberal level; and the well-to-do, whose standard of living is not restricted seriously by the factor of income, but whose chief consideration is comfort or taste. There is no particular desire to defend this scheme. The classes may be sub-divided indefinitely and any set of names applied to them, but this classification will serve the purposes of our analysis.

Detached houses are relatively few in numbers and limited in distribution through West Philadelphia. They are in general an indication of affluence, but caution should be exercised in generalizing, for the detached homes of two generations ago are now likely to be the dilapidated resorts of slum dwellers. Those of the better class are to be found along Chestnut, Walnut, Locust and Spruce Streets from Thirty-seventh Street west to Forty-sixth Street in old Hamiltonville; along Baring Street, Powelton Avenue and Spring Garden Street in Mantua; and along City Line, Overbrook and Woodbine Avenues in Overbrook and Wynnefield. Their numbers in Hamiltonville and Mantua have been steadily reduced by commercial developments and conversions, but the number of such homes in the northern part of West Philadelphia is still increasing. These are generally inhabited by the well-to-do or wealthy.

The semi-detached houses are built in pairs with one common wall, thus constituting a single architectural unit but providing for two families. There are a great many of them in West Philadelphia, built mostly before 1910. They are typically three- or sometimes four-story brick buildings with bay windows

and porches. Some were quite large and pretentious, but the average had only ten rooms, some of which were quite small. As a rule they had space for grass in front and a little garden or lawn was provided at the back. They are notably upper middle class, substantial and respectable. Great numbers were built from Thirty-fourth Street west to about Fifty-second Street, and from Spring Garden Street south to Baltimore Avenue or at places to Chester Avenue. A sprinkling of them will be found over the entire area of West Philadelphia, but they are not built so frequently in recent years as the row houses. They were concentrated north of Baltimore Avenue and west of Fiftieth Street below Walnut Street. Those in the Mantua section and east of Forty-third Street in the Hamiltonville area were frequently built or faced with stone.

The row house is a one-family dwelling of which the side walls are only partitions from the adjacent houses. Most of them are built with air and light courts which are open at the back and run about half the length of the houses. The economy of construction and operation has made such houses very popular in Philadelphia. They have been subjected to a great deal of architectural ingenuity to make them attractive and they offer greater privacy and comfort than the tenements which characterize so many large cities.

This type of construction is easily the most common of all in West Philadelphia. Practically all of the houses on minor streets have been built in this style, and in recent years they have been introduced into the very best residence sections. Most of the new operations for middle class and workingmen's homes are of the row-house type. Some are small brick or stucco buildings which are built flush to the sidewalk with only a stone stoop for an entrance, while others have a little plot of grass at the front or a small garden at the back. Thousands of such houses may be seen in Hestonville, Haddington, West End, Sherwood and Kingsessing. There are some rather large buildings with porches and bay windows, but the most recent developments are featured by two-story dwellings which have sun porches and garages. Comparatively few three-story houses are now being erected.

As to the types of residents to be found in row-houses there is as much diversity as in their architecture and location. Such houses may rent for sums varying from twenty-five to one hundred-fifty dollars a month, amounts which would indicate that the tenants are of all classes except the wealthy. A generalized conclusion which can be safely made is that practically all of the workingmen's families, and most of the lower middle class families are domiciled in row-houses.

Realtors in West Philadelphia have been experimenting with apartment houses since about 1895, but Philadelphians have been slow to give up their houses and until quite recently multiple-family housing has languished.

One of the earliest developments was the residential hotel, which was in some respects the forerunner of our efficiency apartment. The first of these in West Philadelphia was the "Bartram Hotel" between Chestnut Street and Woodland Avenue above Thirty-third Street. It was for years one of the favorite residences in the entire city but has been supplanted in recent years by other developments. During the same period the "Belmont" apartment house at 4142 Parkside Avenue was built but it was never a successful enterprise. In 1903, Hamilton Court, at Thirty-ninth and Chestnut Streets, was opened. It is now overshadowed by the Pennsylvania Hotel just across Thirty-ninth Street but remains one of the most exclusive apartment or residential hotels in the city.[3]

The earlier apartment houses provided spacious quarters and were more suitable for families then the present type of construction, but never met with unqualified approval. Apartments of this type may be seen along Chestnut and Walnut Streets between Forty-second and Forty-eighth Streets. As a rule an apartment occupies an entire floor of a unit of the development, but in recent years some have been sub-divided into smaller apartments. The demand for large apartments has not increased very rapidly and few have been built since about 1920.

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[3] To Mr. Thomas Shallcross, formerly identified with the real estate company most active in building up West Philadelphia, I am indebted for supplying and verifying much of this material on apartment housing.

Two-family houses, resembling the older apartments in many respects, enjoyed a period of popularity in West Philadelphia. These are two-story buildings, usually in rows, with quarters for a family on each floor. Most of them were built between 1910 and 1920, along the streets from Chestnut south to Locust, and from Forty-fifth Street west to Fiftieth Street or in scattering developments as far west as Sixtieth. Practically none are being built at the present time, and those in use are said to be unprofitable to the owners. They are inhabited largely by a middle class population, depending upon their size, location and equipment.

The trend in housing since 1920 has been sharply toward the multiple-family dwelling of the efficiency apartment type. Efficiency apartments usually contain a miniature kitchen and dining room, a bathroom, living room and one or more bedrooms. A number have folding beds in the living room and no bedroom, while others are not provided with kitchens. They are notable for efficient utilization of space, freedom from responsibilities for care, and equipment with the most modern conveniences; but they involve loss of room, lack of privacy and high rentals. In recent years they have become increasingly popular and now constitute one of the most important elements in the construction of new dwellings in West Philadelphia.

There are three areas in West Philadelphia where such efficiency apartment houses are concentrated. By far the most important is in the Forty-sixth Ward, about Forty-seventh and Pine Streets. Here the land owned by the Eli K. Price and Anthony J. Drexel estates was withheld from development until fairly recently and has been built up almost exclusively with apartment houses, of the efficiency type. Most of these houses have been built above Osage Avenue, and below Chestnut Street. The concentration is between Forty-fifth Street on the east and Fiftieth Street on the west, but along Spruce Street some of the most exclusive buildings are east of Forty-fifth Street. One of the largest hotel apartments in West Philadelphia is just outside this area at Forty-third and Locust Streets. Another is at Walnut Street and Cobb's Creek Parkway, while a few are located on Baltimore Avenue and others are to be found throughout the ward.

A second very recent development of efficiency apartments is along Chester Avenue from Forty-sixth Street out to Sixtieth Street. The invasion seems to have come very quickly for while there have been apartment houses on the avenue for many years, the new type has come within the last five years, and innumerable operations appear to have sprung up almost overnight. There are fewer of the very large apartment houses in this area than in the Forty-sixth Ward, but those built have become very popular.

A third concentration of efficiency apartments is in Overbrook. A portion of them are across City Line Avenue in Merion, but a number are located near Overbrook Station on the Pennsylvania Railroad and several others along Lancaster Avenue from Sixty-third Street west. These include some of the very large type and some that are very exclusive. However, the population in this section is not yet heavy enough to support a great number of apartment houses.

The class of residents in apartment houses is quite varied in some respects but is homogeneous in others. It selects fairly prosperous persons, usually those of the upper middle class, or persons of the lower income groups who have few financial obligations. In general the married couples who live in efficiency apartments are young and have very few children, or more frequently, none. In some of the apartments tenants with children are not accepted and in those where they are admitted, conditions are not likely to be favorable to the rearing of children. Frequently both of the marriage partners are employed. Many of the apartments are occupied by unmarried men or women, some of whom are young and some old. Parents whose children have grown up and married or moved away often seek the comfort and simplicity of apartment house life.

The converted apartments have played an important role in housing the population of West Philadelphia but the market for them now appears to be about saturated. Converted apartments stand mid-way between the family apartment and the rented room. Thousands of them have been fitted up during the last fifteen years for during the shortage of housing which accompanied war time activity the possibility of sub-dividing

many of the old houses offered itself as a ready alternative to costly and time-consuming operations for new buildings. The earlier sub-divisions usually allowed an entire floor for each family but more recently a little ingenuity provides two efficiency apartments where there was formerly only one of a more generous size. The tendency toward smaller houses has also induced people to turn the third floors of the old houses into apartments. The converted apartment seems to be in large measure a characteristic of the three-story houses, especially in the older district east of Fifty-second Street, where the three-story semi-detached houses were so popular thirty years ago. Another concentration of converted apartments is to be found along Parkside Avenue between Fortieth Street and Belmont Avenue. Here some imposing brick houses of four stories were erected to attract residents to the favored location along the Park. The tenants failed to come, and the houses were converted into more or less profitable apartments. In recent years the construction of so many new apartment buildings has induced tenants to leave the less modern converted apartments for the neatly appointed cubicles in the multiple-family dwellings. The result is a reduction of rents and a prevalence of vacancies among the converted apartments.

Since there is a variety of types among the converted apartments there is also a diversity of tenants. However, they are characterized by a lower middler class population, and a certain number of workingmen's families. The cheaper rent makes available a wider clientele and brings the competition of apartments with houses into a still greater number of areas.

Finally there is the rented room. It is usually only the lower middle class families and workingmen's families that are willing to admit roomers, but this situation is varied in West Philadelphia by the number of large houses, which are often occupied by small families, and the availability of students, who are presumed to be desirable tenants. The student tenants live mostly east of Forty-fourth Street, but the rooming house district extends beyond Fifty-second Street. An examination of rooms advertised for rent in the daily papers shows that the eastern portion of West Philadelphia is the most advertised

rooming house district in the city. The location of the rooms advertised coincides strikingly with the zone of three-story houses, and the implication is that these are used more for roomers than are the smaller houses.

West Philadelphia has been more hospitable to apartment houses than any other section of the city and it has not only the largest single apartment house district, but the greatest proportion of multiple-family homes exclusive of the converted-dwelling type. This may be due to the presence of more persons of the necessary economic status, to the improvement of transportation which has increased the population very rapidly or to the fact that much of it has been built up very recently. Regardless of what the most active cause may have been, there is prospect that in the future apartment housing will gain rapidly here as it has elsewhere, at the expense of the single-family house.

Other Uses of Land

In addition to the districts outlined we find certain areas which have practically no population. These include parks and recreation centers, cemeteries, farm lands and lowlands which have not yet been developed. There are still farm lands in the Fortieth Ward and considerable areas are withheld from development for various purposes in other sections.

Beside Fairmount Park there are a number of other large park areas in West Philadelphia. These are listed below.[4]

PARK	AREA
Cobb's Creek Park	621 acres
Morris Park	91 acres
Bartram's Garden	37 acres

In addition to these there are several smaller parks or plots of which the largest are Carroll Park at Fifty-eighth Street and Girard Avenue, Clarke Park at Forty-third Street and Baltimore Avenue, Connell Park at Sixty-fourth Street and Elmwood

[4] *Manual of Council*, 1929, p. 164.

Avenue, Durham Park at Forty-seventh Street and Lancaster Avenue, and Black Oak Park at Fifty-second and Pine Streets. Moreover, there are four recreation centers in West Philadelphia each occupying one or two city blocks. These are "Sherwood," at Fifty-fifth and Christian Streets, "Kingsessing," at Fifty-first Street and Chester Avenue, "Mill Creek," at Forty-eighth and Aspen Streets and "Haddington," at Fifty-seventh Street and Haverford Avenue. All of these areas are permanently withheld from commercial development.

To these might be added the tract of land held by the Pennsylvania Hospital, bounded on the south by Market Street, on the west by Forty-ninth Street, on the north by Haverford Avenue and on the east by Forty-second Street. It contains approximately one hundred and eleven acres of ground, some of which is occupied by the buildings and recreation grounds of the hospital. The Drexel athletic field is on these grounds near Forty-sixth Street and Haverford Avenue, and the offices of the Provident Mutual Life Insurance Company are at Forty-sixth and Market Streets. The new Institute of Mental Hygiene has been erected near Forty-ninth Street and Haverford Avenue, but it is generally understood that the acute patients will be removed to a new site in Delaware County, and the present grounds turned to commercial use or developed for a park.

There are three large cemeteries in West Philadelphia and two smaller ones. "Cathedral Cemetery" at Forty-eighth Street and Lancaster Avenue was opened in 1849 and contains about forty-three acres. "Woodlands Cemetery" at Thirty-ninth Street and Woodland Avenue was created from the remnant of the old Hamilton Estate, "The Woodlands", in 1840 and it contains about eighty-seven acres. "Mount Moriah Cemetery" was opened in 1855 and extends from Kingsessing Avenue over into Delaware County. Approximately sixty acres of the cemetery lies within the city limits. In addition to these, there is a Jewish cemetery, "Koal Kadosh Mickve Israel" at Fifty-fifth and Market Streets and a smaller one for colored persons, "Olive," at Girard and Belmont Avenues.

In the Fortieth Ward the visitor may be surprised to find crops growing and cows grazing in the meadows. In the eastern

portion of the ward from Pennypacker Avenue to Hog Island there is land which still yields bounteous harvests. Some of the remainder is idle, awaiting commercial development, and some is cultivated intensively in truck patches. These are the last of the unsettled areas and constitute the opportunity of the city, one which promises to be taken, for developing municipal works for air transportation, sewage disposal and recreation.

VII

The Analysis of the Population

The foregoing chapters have attempted to review the geographic background, the history and the economic foundations of West Philadelphia. In the effort to reconstruct the processes through which the community has reached its present status treatments of local areas from the angles of historical tradition, transportation and economic use have been undertaken. With the perspective of the area gained from these studies the analysis of the population statistics gathered by the United States Bureau of the Census for local community areas can be carried to its conclusion. Preliminary to this analysis a brief statistical picture of the population of West Philadelphia is presented below:

TABLE IV

Summary of Population of West Philadelphia. 1920

Territory	Gross Area in Acres	Population 1920	Foreign Born	Negroes	Dwellings	Families
West Philadelphia	13,622	359,601	55,955	23,217	72,500	81,486
Ward 24...	2,565	60,408	11,355	8,152	10,940	13,395
Ward 27...	883	24,290	4,005	2,927	3,314	4,180
Ward 34...	2,821	72,326	11,214	3,557	15,496	16,875
Ward 40...	5,197	78,900	10,817	3,946	16,553	17,790
Ward 44	748	45,467	7,748	3,595	8,998	9,953
Ward 46 ..	1,408	78,210	10,816	1,040	17,199	19,293

The Growth of Population

Figures cited from Tables I and II (Chapter IV) have shown the way in which the population of West Philadelphia has increased from a handful of farmers and landed gentry in the early days to the present populous residential district. Some features of this growth may be pointed out as affecting the status of the present population.

One fact to keep in mind is that the greatest increases of population take place along the periphery of the urban development, while at the center of a city there is a progressive decline in the resident population. When the periphery of urban growth extends beyond the city limits, the day of rapid increases of population will be over, and when the central business district begins to encroach upon the residential areas, certain territory in the zone of deterioration may be expected to lose population. In the past two decades heavy additions to the population of West Philadelphia were registered along the line of Market Street, but in 1930 a new feature has been added in the overflow of population into Delaware County to the west. At the same time the industrial and commercial developments in the Twenty-fourth and Twenty-seventh Wards will have a tendency to restrict any increases in that territory. No great additions to the population of the Forty-fourth Ward can be expected, so the increase for the decade of 1920-30 must be sought in the Thirty-fourth and Fortieth Wards. The Forty-sixth Ward should have gained in the apartment house district, but aside from that area it was a built-up section by 1920.

So long as transportation facilities keep pace with the growth of population there will probably be no serious congestion of population in West Philadelphia. At the present time there are only occasional tendencies to increase the density of settlement beyond that which can be achieved by families in row houses. There are a few places where apartment houses have appeared in force but that they have greatly increased congested is not demonstrated.

Distribution and Density

The calculations made for the density of population for West Philadelphia in 1920 by census tracts, according to the census figures, are contained in Table V. The area of the census tracts was determined by consulting the block measurements from a standard atlas and by measurements with a planimeter. Areas contained in parks, cemeteries and industrial establishments were eliminated in order to secure the net acreage. In

MAP No. 3
West Philadelphia showing the Census Tracts used in 1920.

some places the institutional population has been subtracted from the total in order to secure the specific density of a tract.

TABLE V

THE SPECIFIC DENSITY OF WEST PHILADELPHIA BY CENSUS TRACTS IN 1920.[1]

TRACT	NET AREA (ACRES)	POPULATION	DENSITY (PER ACRE)
Ward 24	1,108.43	60,408	54.5
X–1	133.38	8,031	60.1
X–2	68.01	6,825	100.4
X–3	84.51	7,237	85.6
X–4	109.41	7,135	65.2
X–5	64.71	5,354	82.7
X–6	64.82	316	4.9
X–7	97.00	7,755	79.9
X–8	77.41	7,075	91.3
X–9	85.73	9,603	112.0
X–10	323.45	403	1.2
Ward 27	457.04	24,290	53.1
AA–1	35.75	3,609	100.8
AA–2	24.35	1,955	Phila. Gen. Hosp.
AA–3	120.05	5,147	42.7
AA–4	95.67	4,713	49.3
AA–5	99.87	812	8.2
AA–6	81.35	5,217	64.1
Ward 34	2388.69	72,326	30.3
AH–1	1019.50	4,491	4.4
AH–2	110.74	7,959	71.9
AH–3	89.77	7,012	78.1
AH–4	89.38	7,037	78.7
AH–5	76.83	6,713	87.4
AH–6	79.42	7,138	89.9
AH–7	122.33	8,276	67.7
AH–8	105.57	9,800	92.8
AH–9	695.15	13,900	20.0
Ward 40	3668.38	78,000	21.5
AN–1	460.82	6,209	13.5
AN–2	275.48	10,873	39.5
AN–3	1959.27	13,965	7.1
AN–4	219.28	5,192	23.7
AN–5	241.08	12,277	50.7
AN–6	180.85	11,776	65.1
AN–7	107.67	7,968	74.0
AN–8	223.93	10,640	47.5

[1] Ward 27—From total for AA-1 subtract the 2837 inmates of the Philadelphia Home for Insane and Indigent. Density totals do not include the figure so subtracted.

Ward 44	548.96	45,467	82.8
AR–1	53.46	3,081	57.6
AR–2	54.12	4,769	88.1
AR–3	91.47	6,250	68.3
AR–4	77.18	6,618	83.0[2]
AR–5	49.94	5,976	120.0
AR–6	86.94	6,628	76.2
AR–7	76.94	7,302	94.9
AR–8	58.91	4,843	82.2
Ward 46	1210.78	78,210	64.6
AT–1	213.99	9,822	45.9
AT–2	146.33	6,380	43.6
AT–3	86.64	5,075	58.6
AT–4	187.90	17,559	93.4
AT–5	91.84	6,936	75.5
AT–6	123.77	8,164	66.0
AT–7	123.54	9,107	73.7
AT–8	236.77	15,167	64.1

The accuracy of the figures for net density probably increases with the rise in the density of the tract. When a sparse population is recorded for a tract it often happens that the actual condition is a concentration of all the population within a small area while the remainder of the tract has practically no population. This could be partly corrected by securing the area of enumeration districts, which are still smaller than tracts, but the clerical work it involves is probably not justified.

A summary of the densities is contained in the following check list:

CLASS INTERVAL	FREQUENCY
Under 10	5
10–29	3
30–49	6
50–69	11
70–89	15
90–109	6
Over 110	2

Of the forty-eight tracts twenty-six have specific densities falling between fifty and ninety per acre, with a tendency toward the upper limit.

The areas of greatest density are listed below:

[2] Ward 44—AR-4. Subtract 211, the number of inmates in the Western (Male) portion of the Pennsylvania Hospital to secure density of 83.0 per acre.

TRACT	DENSITY
Ward 24	
Tract X–2	100.4
Tract X–8	91.3
Tract X–9	112.0
Ward 27	
Tract AA–1	100.8
Ward 34	
Tract AH–8	92.8
Ward 40	
Tract AN–7	74.0
Ward 44	
Tract AR–5	120.0
Tract AR–7	94.9
Ward 46	
Tract AT–4	93.4

The areas of greatest density appear to be widely distributed. There are most evidences of congestion in the Twenty-fourth and Forty-fourth Wards in Tracts X-2, 8, 9, and AR-5 and 7.

Distribution of the Sexes

Only a careful study of communities showing a marked disproportion of the sexes can reveal the significance of any variation from the normal distribution. For the United States as a whole in 1920, there were 104 males for each 100 females. For the "standard million"[3] used commonly by statisticians the normal ratio of the sexes indicates a slight excess of females. Moreover, cities show an excess of females over males, even in the United States.[4] A cursory examination of figures for the city of Philadelphia and the six wards of West Philadelphia reveals an interesting distribution.

TABLE VI

DISTRIBUTION OF SEXES FOR WEST PHILADELPHIA BY WARDS. 1920

	CITY OF PHILADELPHIA	WEST PHILADELPHIA	WARD 24	WARD 27	WARD 34	WARD 40	WARD 44	WARD 46
Total	1,893,779	359,601	60,408	24,290	72,326	78,900	45,467	78,210
Male	907,633	173,192	28,702	10,961	34,801	39,165	22,899	36,664
Female	916,146	186,409	31,706	13,329	37,525	39,735	22,568	41,546
Males per 100 females	99.1	92.9	90.5	82.2	92.7	98.6	101.5	88.2

[3] See Whipple, G. C., *Vital Statistics*, Second Edition, John Wiley, New York, 1923, p. 192.

[4] United States Bureau of the Census, *Abstract of the Fourteenth Census of the United States*, pp. 120–133.

A feature of this table is the fact that although the actual excess of females for the entire city is only about 8,500, that for West Philadelphia is over 13,000. In other words, without West Philadelphia, the city would have a slight excess of males. Moreover, the excess of females in West Philadelphia is built up in only four wards, particularly the Forty-sixth Ward, for in Wards 40 and 44 the numbers of the sexes are about equal.

The following table will show those areas with the most marked deviations from the normal distribution for the sexes:

TABLE VII

COMPARATIVE NUMBERS OF EACH SEX BY CENSUS TRACTS. 1920

AREA	TOTAL	MALES	FEMALES	EXCESS OF FEMALES
West Phila	359,601	173,192	186,401	13,217
Ward 24	60,408	28,702	31,706	3,004
X–1	8,013	3,693	4,320	627
X–2	6,825	3,185	3,640	455
X–3	7,237	3,483	3,754	271
X–4	7,135	3,321	3,814	493
X–5	5,895	2,876	3,019	143
X–6	316	34	282	248[5]
X–7	7,755	3,688	4,067	379
X–8	7,075	3,447	3,628	181
X–9	9,603	4,776	4,827	51
X–10	554	199	355	156
Ward 27	24,290	10,961	13,329	2,368
AA–1	6,446	3,184	3,262	78
AA–2	1,955	985	970	—15
AA–3	5,147	2,266	2,881	615
AA–4	4,713	2,019	2,694	675
AA–5	812	340	472	132
AA–6	5,217	2,167	3,050	883
Ward 34	72,326	34,801	37,525	2,724
AH–1	4,491	2,000	2,491	491
AH–2	7,959	3,824	4,135	311
AH–3	7,012	3,336	3,676	340
AH–4	7,037	3,491	3,546	55
AH–5	6,713	3,305	3,408	103
AH–6	7,138	3,417	3,721	304
AH–7	8,276	3,987	4,289	302
AH–8	9,800	4,856	4,944	88
AH–9	13,900	6,585	7,315	730

[5] Pennsylvania Hospital for the Insane, Women's Ward.

Ward 40	78,900	39,165	39,735	570
AN–1	6,209	3,140	3,069	—71
AN–2	10,873	5,671	5,202	—469
AN–3	13,965	7,304	6,661	—643
AN–4	5,192	2,571	2,621	50
AN–5	12,277	6,044	6,233	189
AN–6	11,776	5,598	6,178	580
AN–7	7,968	3,857	4,111	254
AN–8	10,640	4,980	5,660	680
Ward 44	45,467	22,899	22,568	—331
AR–1	3,081	1,549	1,532	—17
AR–2	4,769	2,350	2,419	69
AR–3	6,250	3,107	3,143	36
AR–4	6,618	3,302	3,316	14
AR–5	5,976	3,253	2,723	—530
AR–6	6,628	3,389	3,239	—150
AR–7	7,302	3,558	3,744	186
AR–8	4,843	2,391	2,452	61
Ward 45	78,210	36,664	41,546	4,882
AT–1	9,822	4,672	5,150	478
AT–2	6,380	2,636	3,744	1,108
AT–3	5,075	2,159	2,916	757
AT–4	17,559	8,232	9,327	1,095
AT–5	6,936	3,327	3,609	282
AT–6	8,164	3,963	4,201	238
AT–7	9,107	4,437	4,670	233
AT–8	15,167	7,238	7,929	691

The following check lists indicate those areas with the greatest excess of females and the highest proportion of males:

TRACT	POPULATION	EXCESS OF FEMALES
Ward 24		
X–1	8,013	627
X–7	7,755	379
Ward 27		
AA–3	5,147	615
AA–4	4,713	675
AA–5	812	132
AA–6	5,217	883
Ward 34		
AH–1	4,491	491
Ward 40		
AN–6	11,776	580
AN–7	7,968	254
AN–8	10,640	680
Ward 46		
AT–2	6,380	1,108
AT–3	5,075	757

TRACT	POPULATION	EXCESS OF MALES
Ward 24		
X–1	9,603	—51
Ward 34		
AH–4	7,037	—55
AH–8	9,800	—88
Ward 40		
AN–1	6,209	71
AN–2	10,873	469
AN–3	13,965	643
AN–4	5,192	—50
Ward 44		
AR–1	3,081	17
AR–5	5,976	530
AR–6	6,628	150
AR–8	4,843	—61

From this list it is possible to see at a glance that the heavy concentration of women is in the western portion of the Twenty-seventh Ward, southeastern portion of the Forty-sixth, northern portion of the Fortieth Ward, and in the far removed institutional section of the Thirty-fourth Ward. On the other hand, the greater parts of the Twenty-fourth and Thirty-fourth Wards show a fairly constant, but not exceptional excess of females.

An excess of males is found in the eastern and southern portions of Ward 40, where industries are located, while a similar excess of males is to be found in Ward 44 in the northwestern portion of the ward, again an industrial area. What the significance of this distribution of the males may be will be indicated by further analysis of the composition and characteristics of the population.

Age Distribution

The distribution of age groups may be significantly related to a number of characteristics of the population. It seems reasonable to believe that areas with a large proportion of children should contain a large number of adults in the reproductive ages, that factory or industrial districts are likely to contain an excess of persons in the prime of life, and that older persons are likely to be found where the pace of life is not so fast.

In Table VIII, an effort is made to indicate those areas where there are very many or very few persons in each of three age groups. The age group of "under five" was selected because it is the nearest approach to a birth rate available, while it is also less vitiated than older age groups by the institutional provisions scattered through West Philadelphia. The age group of "20–45" is a measure of the wage earners, while the group "over 45" is our best index of the superannuated class. By the use of a selective table such as is employed here it is possible to bring into relief the contrasts of age distribution. Percentages are cited here as the most convenient and most comparable indexes.

The most striking feature of the table is the appearance of the two industrial areas in Wards 40 and 44. These show a high proportion of children, particularly in Ward 40, but the proportion of older adults is markedly lower than in other areas.

TABLE VIII

ANALYSIS OF THE AGE DISTRIBUTION OF THE POPULATION OF WEST PHILADELPHIA BY WARDS AND CENSUS TRACTS. 1920[6]
(FIGURES IN PARENTHESES ARE PERCENTAGES OF THE TOTAL POPULATION OF THE WARD OR TRACT INDICATED)

AREA	UNDER 5 YEARS		20–45		OVER 45	
	HIGH	LOW	HIGH	LOW	HIGH	LOW
West Phila....	Wd. 40 (11.0) Wd. 44 (10.0) Wd. 34 (9.4)	Wd. 27 (4.1) Wd. 46 (7.4 Wd. 24 (8.2)	Wd. 46 (47.2) Wd. 27 (45.6)	Wd. 44 (42.6) Wd. 24 (43.5) Wd. 34 (43.8) Wd. 40 (43.9)	Wd. 27 (36.0) Wd. 24 (24.8) Wd. 46 (24.3)	Wd. 40 (19.3) Wd. 44 (20.7) Wd. 34 (22.2)
Ward 24	X–9 (10.4) X–2 (10.4) X–3 (8.4)	X–1 (6.3) X–4 (6.6) X–5 (7.1)	X–5 (48.6) X–1 (45.4) X–7 (44.7)	X–2 (40.7) X–8 (42.2) X–4 (43.0)	X–4 (31.7) X–1 (30.1) X–8 (26.5)	X–9 (17.8) X–2 (21.3)
Ward 27.....	AA–1 (5.1) AA–5 (4.8)	AA–6 (3.7) AA–4 (3.9) AA–3 (4.3)	AA–3 (46.4) AA–4 (46.4)	AA–6 (43.0)	AA–6(36.1) AA–5 (35.2) AA–3 (35.1) AA–4 (34.5)	AA–1 (30.0)
Ward 34.....	AH–4 (11.1) AH–9 (9.7) AH–8 (9.8) AH–5 (9.5)	AH–1 (8.0) AH–6 (8.4) AH–7 (8.5)	AH–5 (46.5) AH–4 (45.6)	AH–1 (41.0) AH–3 (41.5) AH–2 (41.6)	AH–1 (28.4)[7] AH–7 (23.9)	AH–4 (18.5) AH–5 (18.9) AH–8 (19.8)
Ward 40.....	AN–4 (13.8) AN–3 (13.2) AN–2 (12.4)	AN–7 (7.8) AN–8 (9.2) AN–6 (10.3)	AN–8 (51.2) AN–6 (46.7)	AN–4 (36.9) AN–3 (41.6) AN–1 (42.3)	AN–7 (27.1) AN–8 (21.4) AN–4 (21.3)	AN–3 (14.2) AN–2 (15.4) AN–1 (18.9) AN–6 (19.8)
Ward 44.....	AR–5 (11.8) AR–6 (11.6) AR–2 (11.5)	AR–8 (7.2) AR–7 (7.8) AR–4 (8.4)	AR–8 (48.2) AR–4 (45.4) AR–7 (45.2)	AR–5 (36.0) AR–2 (37.8)	AR–4 (24.1) AR–8 (24.0)	AR–5 (16.1) AR–3 (16.7) AR–1 (17.9)
Ward 46.....	AT–8 (9.6) AT–4 (8.6) AT–7 (8.5)	AT–3 (3.3) AT–2 (4.3) AT–1 (5.0)	AT–5 (50.5) AT–1 (49.8) AT–7 (48.5)	AT–3 (42.1) AT–2 (42.7)	AT–2 (35.3) AT–3 (34.8) AT–1 (26.9)	AT–8 (20.3) AT–6 (20.8) AT–4 (21.8)

[6] Tracts known to contain an institutional population which would seriously affect the results are excluded.
[7] Partly institutional.

On the other hand, Wards 27 and 46 show a small proportion of young children and an excessive rate of older persons. This is particularly pronounced in Ward 27, Tracts 6, 4, and 3, and in Ward 46, Tracts 1, 2, and 3.

Nativity of the Population

The nativity of the population concerns us primarily with respect to the foreign born. The basic analysis of the population by nativity includes tabulations of the native born of native parentage (NBNP), the native born both of whose parents were foreign born (NBFP), the native born one of whose parents was foreign born (NBMP), and foreign born (FB). A separate tabulation has been made for Negroes but they have not been analyzed by nativity since nearly all of them are native born. A summary of the base tables by wards is given in Table IX, p. 139.

West Philadelphia is and always has been of predominantly native white stock. This does not mean that the inhabitants are descended from colonial ancestors, but the infusion of foreign blood has proceeded slowly and the amalgamation has taken place unobtrusively. There are now two groups, the Jews and Italians, in West Philadelphia which may be less readily absorbed. In Ward 24, Tract X-9, where we find a heavy concentration of Jews the native-born persons of native parentage number only 13.6 per cent of the total, while in Ward 44, Tract AR-1, they comprise 22.6 per cent of all. On the other hand, in Ward 46, Tract AT-3, the native born of native parentage constitute 72.5 per cent of the total. With the decline of immigration and the passing of the foreign-born generation, the Jewish and Italian colonies may merge gradually into the general population as easily as their Irish forerunners.

The Negroes

The first census of the United States, taken in 1790, reported that of the 373 slaves, probably negroes, in Philadelphia County, seven were in Blockley Township and four in Kingsessing Township. The records from that time are not complete but the census reports of 1850 place the total negro population of West

TABLE IX

ANALYSIS OF POPULATION OF THE WARDS OF WEST PHILADELPHIA BY NATIVITY. 1920

	TOTAL		N W N P		N W F P		N W M P		F W		NEGRO	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
West Philadelphia...	359,601*	100.0*	181,289	50.4	67,947	18.9	30,959	8.6	55,955	15.6	23,217	6.5
Ward 24.....	60,408	100.0	24,103	39.9	12,441	20.6	4,321	7.1	11,355	18.8	8,152	13.5
Ward 27.....	24,290	100.0	13,121	54.0	2,720	11.2	1,453	6.0	4,005	16.5	2,927	12.1
Ward 34.....	72,326	100.0	36,820	50.9	13,638	18.9	7,063	9.8	11,214	15.5	3,557	4.9
Ward 40.....	78,900	100.0	42,561	53.9	14,352	18.2	7,172	9.1	10,817	13.7	3,946	5.0
Ward 44.....	45,467	100.0	20,289	44.7	10,002	22.0	3,813	8.4	7,748	17.0	3,595	7.9
Ward 46.....	78,210	100.0	44,395	56.9	14,794	18.9	7,137	9.1	10,816	13.8	1,040	1.3

* Omission of classification "other" from this table accounts for slight variations from this total.

MAP NO. 4
West Philadelphia, showing the Significant Concentrations of Negro, Jewish and Italian Population in 1920.

Negro ● 500 persons or major fraction thereof.
Jewish ■ 500 persons or major fraction thereof.
Italian ▲ 500 persons or major fraction thereof.

Philadelphia at 1009, of whom 462 were in the boro of West Philadelphia, 363 in Blockley Township and 184 in Kingsessing Township. A summary of such data as could be secured for the period since the consolidation of the city is given below:

TABLE X

GROWTH OF THE NEGRO POPULATION OF WEST PHILADELPHIA 1860–1920

	1860	1870	1880	1890	1900	1910	1920
West Philadelphia....	878	1766		4080	6826	12,025	23,217
Ward 24.....	878	414		930	2193	3,958	8,152
Ward 27.....		1352		2077	2171	3,195	2,927
Ward 34.....				1073	1773	997	3,557
Ward 40.....					689	1,307	3,946
Ward 44.....						1,463	3,595
Ward 46.....						1,105	1,040

Table X indicates a rapid growth of the Negro population of West Philadelphia during the decade 1910–1920. The unofficial estimates indicate a still more rapid growth since 1920. The tracts in which Negroes had settled most densely are shown in the following check list:

TABLE XI

CENSUS TRACTS IN WEST PHILADELPHIA WITH FIVE PER CENT OR MORE NEGROES. 1920

AREA	PERCENTAGE	AREA	PERCENTAGE
Ward 24.....	13.5	Ward 34.....	4.9
Tract X—1.....	6.2	Tract AH—4.....	17.7
2.....	9.0	5.....	21.9
3.....	17.6	Ward 40.....	5.0
4.....	14.7	Tract AN—1.....	15.1
5.....	36.4	3.....	15.9
7.....	29.8	4.....	11.7
Ward 27.....	12.1	Ward 44.....	7.9
AA—1.....	8.6	AR—1.....	9.5
2.....	10.3	3.....	37.1
3.....	14.3	8.....	9.5
4.....	21.6	Ward 46.....	1.3
6.....	7.6		

From this summary four definite areas of concentration for Negroes in West Philadelphia may be described.

1. The largest of these is distributed over Wards 24, 27 and 44 with a certain amount of continuity. The tracts in which concentration is most pronounced are AR-3, X-5, X-7, X-4, X-3, AA-4, AA-5, AA-6. The boundaries are changing steadily but at present the limits might be defined as follows: From the northwest corner at the junction of Forty-eighth Street and Westminster Avenue east along Westminster to Fortieth Street at the Pennsylvania Railroad tracks, along the railroad or Mantua Avenue to Thirty-eighth Street, along Thirty-eighth south to Lancaster Avenue, on Lancaster to Thirty-third Street, on Thirty-third to Sansom Street, along Sansom to Forty-second Street, along Forty-second Street to Haverford Avenue, on Haverford to Forty-eighth Street, and along Forty-eighth to Westminster Avenue, at the place of beginning. This area contains some white streets, and excludes some Negroes but it includes about half the Negro population of West Philadelphia.

2. A second area lies north of Market Street in Tracts AR-8, AH-4 and AH-5. It is bounded roughly on the west by Fifty-eighth Street, the north by Vine Street, the east by Fifty-second Street and the south by Market Street. It contains a number of Negroes of more substantial means and does not reveal the same squalor as is found about Fortieth Street.

3. An increasingly important Negro settlement is growing up in Ward 40, in Tracts 3 and 4. This includes sizeable settlements in Paschallville, Clearview and Elmwood. Certain portions of Elmwood are almost entirely colored, and there are many evidences of an increasing predominance of Negroes.

4. In the upper end of the Fortieth Ward, in Tract 1, there is a steadily expanding colored population. It was formerly located near Forty-ninth Street, extending over into the remaining houses of old Maylandville in the Twenty-seventh Ward. This settlement is pushing its way cautiously west and north toward Chester Avenue, and growing southwest along Woodland Avenue. The section south of Woodland Avenue and east of Forty-fifth Street in Ward 27 is almost solidly colored.

The evidence from the figures of the past decade suggests an

inevitable increase of the Negroes in West Philadelphia, especially as commercial development prepares the way with deteriorating residential districts.

Foreign Born White Population

In 1920 there were 55,955 persons of foreign birth in West Philadelphia, constituting 15.6 per cent of the total population. The history of how this population grew and from whence it came has never been satisfactorily compiled. The Census Bureau has only rather recently undertaken the publication of figures on the numbers of foreign born by wards. It was indicated in the census report of 1870 that of a total population of 44,317 in West Philadelphia, 11,147, just about twenty-five per cent, were of foreign birth. Since that time therefore, the proportion of foreign born has declined, while the absolute numbers have increased. A summary of such data as could be secured from the census reports has been compiled, but there are no figures available for West Philadelphia in 1880 or 1890.

TABLE XII

THE GROWTH OF THE FOREIGN BORN WHITE POPULATION OF WEST PHILADELPHIA. 1870–1920

	1870	1900	1910	1920
West Philadelphia (Total)...	44,317	148,548	247,918	359,601
Foreign Born.....	11,147	24,121	38,965	55,955
Ward 24.....	5,798	7,787	8,384	11,355
27.....	5,349	6,192	4,574	4,005
34.....		7,173	7,968	11,214
40.....		3,005	7,083	10,817
44.....			6,748	7,748
46.....			4,208	10,816

Of the 55,955 foreign-born persons in West Philadelphia in 1920, the greater share were distributed among five nationalities. We can analyze the foreign-born population of West Philadelphia as follows:

TABLE XIII

ANALYSIS OF THE FOREIGN BORN WHITE POPULATION OF WEST PHILADELPHIA BY WARDS, 1920

	TOTAL	ENGLISH	IRISH	GERMAN	ITALIAN	RUSSIAN (JEWISH)	OTHER
West Philadelphia	55,955	5,388	15,068	4,387	6,174	13,229	11,709
Ward 24	11,355	872	2,842	652	329	5,069	1,591
Ward 27	4,005	401	1,361	430	187	462	1,164
Ward 34	11,214	1,104	3,040	939	2,632	1,503	1,996
Ward 40	10,817	1,325	3,045	938	1,044	1,711	2,754
Ward 44	7,748	517	2,701	609	1,708	1,035	1,178
Ward 46	10,816	1,169	2,079	819	274	3,449	3,026

The figures included as "others" are of considerable size but do not represent any single nationality significant of numbers. The German and English elements show practically no tendency to congregate in colonies and the Irish are now so generally diffused that they do not in any place amount to more than about fifteen per cent of the total population. On the other hand the Jews (for West Philadelphia "Russians" may be safely taken to be Jews) and Italians show a much greater tendency to congregate. Consequently it is only these two that are significant for our attempt to determine natural areas. The Irish are important because they have contributed so largely to the native stocks which now people West Philadelphia. In the past it was possible to locate approximately the centers of Irish population by the Roman Catholic churches in the area but at present these churches are to be found in almost all parts of West Philadelphia, and the Irish are correspondingly scattered.

Another fact to remember in connection with our study of the foreign-born population is that native white persons of foreign parentage escape our count when we consider the groups which are to be identified with a particular country. Where the Negroes have settled every colored child is identified and counted, but where the children of Irish or Italian parentage are part of a community, they may not be listed as other than native. In Ward 24, Tract 9, for example, the Jews constitute 78.6 per cent of the foreign-born population and about 35 per cent of

the total population, but only 13.5 per cent of the total population is native white of native parentage. Of the native born of foreign or mixed parentage probably 80 per cent are Jewish, but they do not appear as such in the statistics compiled.

The Jews

It is not easy to say just when the Jews began to move into West Philadelphia, but they were apparently an insignificant element in the population prior to 1910. Since that time at least four centers of Jewish population have appeared, and the numbers living here have been increased manyfold. Comparative figures for 1910 and 1920 are as follows:

	1920	1910
West Philadelphia	13,229	3,337
Ward 24	5,069	963
Ward 27	462	431
Ward 34	1,503	275
Ward 40	1,711	1,060
Ward 40	1,035	343
Ward 46	3,449	265

Within the wards, in 1920, a marked segregation of the Jewish population has taken place, as is indicated by the following table:

TABLE XIV

CONCENTRATION OF JEWISH POPULATION BY CENSUS TRACTS. 1920.

AREA	TOTAL POPULATION	FOREIGN BORN POPULATION	JEWISH POPULATION	PER CENT OF ALL F B WHO ARE JEWISH
Ward 24				
X–8	7,075	1,487	785	52.8
X–9	9,603	4,231	3,327	78.6
Ward 34				
AH–1	4,491	1,049	466	44.4
Ward 40				
AN–3	13,965	2,405	924	38.3
Ward 44				
AR–1	3,081	893	435	48.7
Ward 46				
AT–4	17,559	2,389	660	27.6
AT–6	8,164	1,504	653	43.5
AT–7	9,107	1,826	700	38.4
AT–8	15,167	2,539	1,022	40.3

From this examination four areas of concentration may be distinguished.

1. The largest and most populous of all is the area embraced by X-8, X-9 and AR-1. This includes the Parkside community which has become almost solidly Jewish since 1910. It really includes only that portion of AR-1 above the railroad tracks, but a part of X-3 might be added to the areas enumerated here.

2. The second district is Wynnefield. In 1920 this development had not proceeded far enough to make an impressive population total, but figures for 1930 will show a large proportion of AH-1 to be Jewish.

3. The rather loosely determined area in Ward 46, containing portions of AT-4, 6, 7 and 8, centered around Fifty-seventh and Pine Streets is the section which made the most pronounced growth between 1910 and 1920. Many of the houses in the areas were built after 1910, and rather than expelling some other group the Jews were on the ground for the first development.

4. A surprising growth of Jewish population in Elmwood, a colony containing more than half the Jews in the Fortieth Ward, is the final area. It is small but promises to grow with the community.

An interesting feature of the distribution of Jewish population through the northern portion of West Philadelphia is the drift along Girard and Parkside Avenues from Fortieth Street to Wynnefield. It would be very interesting to analyze the population of these areas and determine whether it has followed the line of Girard Avenue from Northern Liberties as the Strawberry Mansion population followed Ridge Avenue from the "Ghetto" in South Philadelphia.

The Italians

The Italians had settled in West Philadelphia before 1910, but between that time and 1920 their numbers nearly doubled. The following summary indicates the distribution and growth of the Italian population during the decade. Unfortunately, figures cannot be obtained for 1900.

TABLE XV

GROWTH AND DISTRIBUTION OF ITALIAN POPULATION IN WEST PHILADELPHIA. 1910–1920

	1920	1910
West Philadelphia	6,174	3,610
Ward 24	329	310
27	187	170
34	2,632	1,547
40	1,044	482
44	1,708	980
46	274	121

There has been no sensational increase of the Italian population, but such as has occurred appears to be concentrated about three points, as shown in Table XVI:

TABLE XVI

CONCENTRATION OF ITALIAN POPULATION OF WEST PHILADELPHIA BY CENSUS TRACTS. 1920

	TOTAL POPULATION	FOREIGN BORN POPULATION	ITALIANS	
			NUMBER	% OF ALL F B
AH–7	8,276	869	371	30.1
AH–8	9,800	1,727	596	34.5
AH–9	13,900	2,391	1,166	48.7
AN–2	10,873	1,917	373	19.5
AR–1	3,081	893	169	18.9
AR–5	5,976	1,389	578	41.6
AR–6	6,628	1,565	831	53.2

The chief point of concentration of Italian population in West Philadelphia is in Haddington, where it is located largely east of Sixtieth Street, north of Race Street, and south of Haverford Avenue. Unofficial estimates indicate that this population has been considerably increased since 1920, and it is supplemented by an increase of native-born children of Italian parentage, for the birth rates in this area are rather high.

Another concentration appears in Ward 44, Tracts 1, 5 and 6.

The Italian colony is below Lancaster Avenue, whereas, in Tract 1, there is a Jewish population north of the railroad tracks.

A slight infusion of Italian population has taken place in Ward 40, Tract 2, and there is good reason to believe it will continue. The industrial development offers many opportunities for employment and there is space for cheap housing.

Dwellings, Families and Home Ownership

The data for dwellings and families in West Philadelphia indicate a number of interesting tendencies. The possibilities of social analysis based upon the relation of number of persons per dwelling, number of persons per family, and number of families per dwelling are almost unlimited.

Viewing Table XVII we find that the regions of largest families are in Wards 40 and 44. The smaller families are to be found in Wards 34 and 46, the better residential areas. In Ward 46, the two tracts with the smallest families are AT-1 (3.9) and AT-5 (3.8), but these same tracts show larger figures for persons per dwelling than the average for the ward. The rate for AT-1 (5.2 persons per dwelling) is an exceedingly high one. This is no doubt due to the presence of apartments in which families are small, but in which several families occupy a single dwelling.

There is probably a great deal of "doubling-up", that is, the sharing of a single house by two or more families, in the deteriorated sections, but the extent to which it influences "persons per dwelling" is not known. It will be interesting to compare the trend of this index in the enumerations of 1920 and 1930, for while the former census was taken during a period of great prosperity the latter is being made during a season of depression in business. The results would of course be affected by the adequacy of housing facilities in the two periods and the range of rents.

TABLE XVII

NUMBER OF PERSONS PER FAMILY AND PER DWELLING IN WEST PHILADELPHIA BY WARDS AND CENSUS TRACTS. 1920

AREA	TOTAL POPULATION	DWELLINGS NUMBER	DWELLINGS PERSONS	FAMILIES NUMBER	FAMILIES PERSONS
West Philadelphia...	359,601	72,500	5.0	81,486	4.4
Ward 24.....	60,408	10,940	5.5	13,351	4.5
Tract X–1.....	8,013	1,318	6.1	1,983	4.0
2.....	6,825	1,290	5.3	1,454	4.7
3.....	7,237	1,398	5.2	1,580	4.6
4.....	7,135	1,382	5.2	1,708	4.2
5.....	5,895	1,165	5.1	1,291	4.6
6.....	316*	1	316.0*	4	79.0*
7.....	7,755	1,494	5.2	1,722	4.5
8.....	7,075	1,343	5.3	1,586	4.5
9.....	9,603	1,510	6.4	2.027	4.7
10.....	554*	39	14.2*	40	13.9*
Ward 27.....	24,290	3,314	5.9	4,180	4.7
Tract AA–1.....	6,446	547	6.6	696	5.2
2.....	1,955	3	651.7	3	651.7*
3.....	5,147	842	6.1	1,060	4.9
4.....	4,713	770	6.1	948	5.0
5.....	812	140	5.8	239	3.4
6.....	5,217	1,012	5.2	1,234	4.2
Ward 34.....	72,326	15,496	4.7	16,875	4.3
Tract AH–1.....	4,491	815	5.5	901	5.0
2.....	7,959	1,753	4.5	1,910	4.2
3	7,012	1,510	4.6	1,639	4.3
4.....	7,037	1,558	4.5	1,709	4.1
5.....	6,713	1,428	4.7	1,572	4.3
6.....	7,138	1,629	4.4	1,748	4.1
7.....	8,276	1,873	4.4	1,988	4.2
8.....	9,800	2,006	4.9	2,254	4.3
9.....	13,900	2,924	4.8	3,154	4.4
Ward 40.....	78,900	16,553	4.8	17,790	4.4
Tract AN–1.....	6,209	1,215	5.1	1,295	4.8
2.....	10,873	2,232	4.9	2,290	4.7
3.....	13,965	2,748	5.1	3,008	4.6
4.....	5,192	927	5.6	1,023	5.1
5.....	12,277	2,565	4.8	2,741	4.5
6.....	11,776	2,704	4.4	2,850	4.1
7.....	7,968	1,499	5.3	1,748	4.6
8.....	10,640	2,663	4.0	2,835	3.8
Ward 44.....	45,467	8,998	5.1	9,953	4.6
Tract AR–1.....	3,081	532	5.8	639	4.8
2.....	4,769	892	5.3	944	5.1
3.....	6,250	1,287	4.9	1,445	4.3
4.....	6,618	1,377	4.8	1,472	4.5
5.....	5,976	1,002	6.0	1,100	5.4
6.....	6,628	1,267	5.2	1,496	4.4
7.....	7,302	1,564	4.7	1,677	4.4
8.....	4,843	1,077	4.5	1,180	4.1

Ward 46.....	78,210	17,199	4.5	19,293	4.1
Tract AT–1.....	9,822	1,881	5.2	2,492	3.9
2.....	6,380	1,231	5.2	1,448	4.4
3.....	5,075	1,137	4.5	1,224	4.1
4.....	17,559	4,044	4.3	4,235	4.1
5.....	6,936	1,444	4.8	1,834	3.8
6.....	8,164	1,758	4.6	1,993	4.1
7.....	9,107	2,042	4.5	2,294	4.0
8.....	15,167	3,572	4.2	3,773	4.0

* Contains institutional population.

Consultation of Table XVIII reveals the fact that home ownership is much more general in the newly built-up areas than in the "older" wards. Wards 27, 24 and 44, exactly the districts which have been settled longest show the greatest proportions of rented homes, and the smallest proportion of homes owned by the tenants. Tracts within a ward vary sharply in this respect, but the differences indicate that more homes are owned by the families living in them in precisely those areas which have been built up most recently. Even AT-1, characterized by an apartment house development, shows only 53.5 per cent of all homes rented.

A comparative study of home ownership along certain of the principal streets, after the fashion of studies conducted in Chicago,[8] together with data for the size of families in those areas presents an interesting trend. Tracts along the north and south sides of Market Street, the routes of Lancaster Avenue and of Baltimore Avenue have been selected for this study.

Table XIX reveals a very pronounced tendency toward a higher proportion of homes owned as one nears the outer zones of the urban development. This may be due to the economic status of the residents or it may be due to intensive sales campaigns in those areas to induce tenants to buy their homes, but the facts as they stand here confirm the tendency noted in Chicago for the proportion of homes owned to increase as the distance from the center of the city is increased.

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[8] Burgess, E. W., "The Determination of Gradients in the Growth of the City," *Am. Soc. Society, Proceedings*, 211178–184, 1927.

TABLE XVIII

ANALYSIS OF TENURE OF HOMES IN WEST PHILADELPHIA BY WARDS AND CENSUS TRACTS. 1920.
(FIGURES IN PARENTHESES ARE PERCENTAGES OF ALL HOMES FOR THE UNIT OF POPULATION)

AREA	HOMES RENTED		HOMES OWNED, FREE		HOMES OWNED MORTGAGED	
	HIGH	LOW	HIGH	LOW	HIGH	LOW
West Phila....	Wd. 27 (67.5) Wd. 24 (64.0) Wd. 44 (60.1)	Wd. 46 (37.5) Wd. 34 (45.6) Wd. 40 (50.6)	Wd. 27 (12.3) Wd. 34 (12.0) Wd. 46 (11.6)	Wd. 40 (7.4) Wd. 44 (9.8) Wd. 24 (11.4)	Wd. 46 (48.8) Wd. 34 (40.3) Wd. 40 (40.1)	Wd. 27 (17.2) Wd. 24 (22.5) Wd. 44 (27.5)
Ward 24.....	X–5 (76.2) X–1 (71.9) X–2 (71.9)	X–9 (44.9) X–8 (54.4) X–3 (63.0)	X–8 (14.8) X–4 (14.1) X–3 (13.4)	X–9 (7.2) X–5 (9.6) X–1 (11.0)	X–9 (44.9) X–8 (30.2) X–7 (20.3) X–3 (20.3)	X–5 (10.9) X–1 (14.9) X–2 (15.6)
Ward 27.....	AA–1 (87.8) AA–2 (79.0) AA–5 (72.8)	AA–6 (46.0) AA–4 (66.1)	AA–6 (18.6) AA–5 (17.2)	AA–1, 5 (2.9) AA–3 (8.8)	AA–6 (32.9) AA–4 (15.1) AA–5 (10.5)	AA–1 (7.9) AA–3 (8.7)
Ward 34.....	AH–4 (67.4) AH–5 (55.9) AH–8 (51.9)	AH–9 (28.9) AH–1 (35.4) AH–7 (40.9)	AH–1 (21.2) AH–3 (19.5) AH–9 (13.5)	AH–5 (4.3) AH–4 (7.2) AH–8 (9.3)	AH–9 (55.9) AH–6 (45.9) AH–7 (45.0)	AH–4 (23.7) AH–3 (26.6) AH–5 (31.7)
Ward 40.....	AN–1 (74.7) AN–2 (62.8) AN–3 (59.7)	AN–8 (30.5) AN–6 (38.6) AN–5 (47.0)	AN–7 (11.3) AN–4 (10.6) AN–6 (8.2)	AN–1 (5.1) AN–5 (5.4) AN–8 (5.5)	AN–8 (63.3) AN–6 (52.3) AN–5 (45.6)	AN–1 (15.7) AN–2 (27.5) AN–7 (28.6)
Ward 44.....	AR–3 (80.2) AR–2 (69.4) AR–1 (59.0)	AR–8 (47.9) AR–7 (52.4) AR–6 (56.8)	AR–5 (17.5) AR–8 (10.6) AR–6 (10.4) AR–2 (10.4)	AR–3 (5.7) AR–4 (6.3) AR–1 (9.9)	AR–8 (38.8) AR–7 (35.0 AR–4 (33.7)	AR–3 (12.6) AR–2 (19.2) AR–5 (22.7)
Ward 46.....	AT–5 (55.8) AT–1 (53.5) AT–6 (43.7)	AT–3 (23.6) AT–8 (25.9) AT–4 (32.1)	AT–3 (26.3) AT–2 (21.6) AT–1 (11.5)	AT–7 (6.7) AT–5 (7.2) AT–6 (8.6)	AT–8 (61.2) AT–4 (56.5) AT–7 (49.3)	AT–1 (33.6) AT–5 (36.6) AT–2 (39.5)

TABLE XIX

OWNERSHIP OF HOMES AND NUMBER OF PERSONS PER FAMILY ALONG ROUTES OF RADIAL EXPANSION IN WEST PHILADELPHIA. 1920

LANCASTER AVENUE			NORTH OF MARKET			SOUTH OF MARKET			BALTIMORE AVENUE		
TRACT	HOMES OWNED	PERSONS PER FAMILY	TRACT	HOMES OWNED	PERSONS PER FAMILY	TRACT	HOMES OWNED	PERSONS PER FAMILY	TRACT	HOMES OWNED	PERSONS PER FAMILY
X–5	20.7	4.6	X–5	20.7	4.6	AA–1	10.8	5.2	AA–5	13.4	3.4
X–4	31.0	4.2	AR–4	40.1	4.5	AA–3	17.6	4.9	AT–2	63.2	4.4
X–7	31.1	4.5	AR–8	51.2	4.1	AA–4	32.3	5.0	AT–3	73.9	4.1
AR–2	29.8	5.1	AH–4	31.0	4.1	AA–6	51.7	4.2	AT–4	67.1	4.1
AR–5	40.6	5.4	AH–5	43.3	4.3	AT–1	45.3	3.9	AT–8	73.0	4.0
AR–6	37.3	4.4	AH–8	46.9	4.3	AT–5	43.8	3.8			
AH–2	53.2	4.2				AT–6	55.5	4.1			
AH–9	70.0	4.4				AT–7	60.1	4.0			

On the other hand there is not a pronounced trend in the size of families. Such tendency as there may be suggests a decrease in the size of families in the outer zones, but the differences are not marked or consistent.

Still other features may be noted in our description of West Philadelphia in terms of housing and families. We shall be interested in relating or seeking constant association of these traits with certain others.[9]

Summary

The objective of the foregoing analysis has been to isolate certain traits by which natural areas can be determined. This effort will not be successful until certain uniformities are established and certain elements found in constant association. It does not necessarily follow that any pronounced degree of association exists, but if it does exist, it is the purpose of this study to isolate and define it.

The summary tables for this chapter have been prepared with data from the basic tabulations and are designed to permit a ready comparison of those traits of the population of West Philadelphia which are most clearly defined. Such natural areas as we may hope to delineate gain their significance from use as "habitats of natural groups" and if our summary tables reveal any striking or constant association of characteristics indicative of such groups, a basis for classification begins to emerge. Table XX presents our first series of data.

The variations in classes of data for Table XX are not readily compared because of the wide differences of range and methods of calculation. In order to overcome this difficulty all of the items have been converted into index numbers in Table XXI. The mean of each class of data for the entire area of West Philadelphia is taken as the base (100). When each item is divided

[9] A curious condition may be noted concerning the relation between homes owned and the sex of the head of the family. Where the heads are women the proportion of homes rented is much the same as where the families are headed by men, but the proportion of homes "owned free" is double that for homes where men are heads, while the proportion "owned mortgaged" is only about half as great. A number of explanations may be offered, but a plausible one is the woman's desire for security of tenure.

TABLE XX

COMPARISON OF CERTAIN STATISTICAL MEASURES OF THE POPULATION OF WEST PHILADELPHIA. 1920

TRACT	NET DENSITY PER ACRE	SEX RATIO	PERSONS UNDER FIVE YEARS OF AGE%	PERSONS OVER 45 YEARS OF AGE%	NATIVE WHITE OF NATIVE PARENTS%	FOREIGN BORN%	NEGRO%	HOMES OWNED%	PERSONS PER FAMILY
West Philadelphia...	38.3	92.9	8.9	23.0	50.5	15.5	6.5	47.9	4.4
Ward 24.....	54.5	90.5	8.2	24.8	39.9	18.8	13.5	34.5	4.5
X-1.....	60.1	85.5	6.3	30.1	57.5	11.8	6.2	26.7	4.0
2.....	100.4	87.5	10.4	21.3	41.4	16.0	9.0	27.1	4.7
3.....	85.6	90.1	8.5	23.2	38.3	15.7	17.6	35.4	4.6
4.....	65.2	87.1	6.6	31.7	52.2	11.7	14.7	31.0	4.2
5.....	82.7	95.3	7.1	23.0	33.7	10.9	36.4	20.7	4.6
6.....	4.9	12.1	1.0	56.9	59.8	22.5			79.0
7.....	80.0	90.5	7.8	23.5	39.1	10.8	29.8	31.1	4.5
8.....	91.3	95.0	7.8	26.5	45.9	21.0	3.4	45.2	4.5
9.....	112.0	98.9	10.7	17.8	13.6	44.0	.3	52.5	4.7
10.....	1.2	56.1	4.2	39.8	77.9	13.7	.4	10.0	13.9
Ward 27*.....	53.1	82.2	4.1	36.0	54.0	16.5	12.1	29.6	4.7
AA-1.....	100.8	97.6	5.1	30.0	45.9	27.8	8.6	10.8	5.2
2.....	80.3	101.5	1.4	61.5	50.6	30.0	10.3	33.3	651.7
3.....	42.7	78.7	4.3	35.1	57.0	11.4	14.3	17.6	4.9
4.....	49.3	74.9	3.9	34.5	51.5	9.9	21.6	32.3	5.0
5.....	8.2	72.0	4.8	35.2	69.4	9.0	2.8	13.4	3.4
6.....	64.1	71.0	3.7	36.1	62.3	9.7	7.6	51.7	4.2
Ward 34.....	30.3	92.7	9.4	22.2	50.9	15.5	4.9	53.3	4.3
AH-1.....	4.4	80.3	8.0	28.4	45.5	23.4	4.9	63.2	5.0
2.....	71.9	92.5	9.5	23.6	56.3	12.7	.1	53.2	4.2
3.....	78.1	90.8	9.2	23.1	56.3	13.3	.8	47.0	4.3
4.....	78.7	98.4	11.1	18.5	43.1	14.0	17.7	31.0	4.1
5.....	87.4	97.0	9.5	18.9	37.8	15.1	21.9	43.3	4.3
6.....	89.9	91.8	8.4	23.4	57.9	12.2	1.8	57.7	4.1
7.....	67.7	93.0	8.5	23.9	55.9	14.9	1.0	58.0	4.2
8.....	92.8	98.2	9.8	19.8	49.0	17.6	1.6	46.9	4.3
9.....	20.0	90.0	9.7	22.4	52.1	17.2	1.4	70.0	4.4

Ward 40	21.5	98.6	11.0	19.3	53.9	13.7	5.0	48.1	4.4
AN–1	13.5	102.3	11.0	18.9	45.0	13.4	15.1	21.9	4.8
2	39.5	109.0	12.4	15.4	54.7	17.6	.1	35.5	4.7
3	7.1	109.7	13.2	14.2	38.8	17.2	15.9	28.5	4.6
4	23.7	98.4	13.8	21.3	50.9	10.9	11.7	46.0	5.1
5	50.7	97.0	10.4	20.6	60.1	12.5	.3	51.7	4.5
6	65.1	90.6	10.3	19.8	56.7	12.7	.2	60.9	4.1
7	74.0	93.8	7.8	27.1	57.3	14.0	1.0	41.7	4.6
8	47.5	88.0	9.2	21.4	67.2	9.0	.2	68.9	3.8
Ward 44	82.8	101.5	10.0	20.7	44.7	17.0	7.9	37.8	4.6
AR–1	57.6	101.1	10.5	17.9	22.6	29.0	9.5	38.7	4.8
2	88.1	97.1	11.5	21.3	43.6	16.7	4.0	29.8	5.1
3	68.3	98.9	11.3	16.7	28.1	11.5	37.1	18.6	4.3
4	83.0	99.6	8.4	24.1	60.1	12.8	1.0	40.1	4.5
5	120.0	119.5	11.8	16.1	33.9	23.2	1.7	50.6	5.4
6	76.2	104.6	11.7	20.8	44.9	23.6	.3	37.3	4.4
7	94.9	95.0	7.8	23.3	57.8	12.1	2.0	45.5	4.4
8	82.2	97.5	7.2	24.0	53.1	13.5	9.5	51.2	4.1
Ward 46	64.6	88.2	7.4	24.3	56.9	13.8	1.3	61.3	4.1
AT–1	45.9	90.7	5.0	26.9	67.0	8.9	2.1	45.3	3.9
2	43.6	70.4	4.3	35.3	68.8	8.2	2.7	63.2	4.4
3	58.6	74.0	3.3	34.8	72.5	6.4	1.1	73.9	4.1
4	93.4	88.3	8.6	21.8	55.9	13.6	.1	67.1	4.1
5	75.5	92.2	6.4	25.3	59.0	12.1	1.8	43.8	3.8
6	66.0	94.3	8.2	20.8	45.5	18.4	4.6	55.5	4.1
7	73.7	95.0	8.5	22.0	48.8	20.1	.2	60.1	4.0
8	64.1	91.3	9.6	20.3	50.7	16.7	.4	73.0	4.0

* Elimination of institutional population from tracts figures makes this total greater than sum of tracts.

TABLE XXI

COMPARISON OF INDEXES OF CERTAIN SPECIFIC TRAITS OF THE POPULATION OF WEST PHILADELPHIA. 1920.

	NET DENSITY	INDEX OF SEX RATIO	PERSONS UNDER 5 YEARS OF AGE	PERSONS OVER 45 YEARS OF AGE	NATIVE WHITE OF NATIVE PARENTS	FOREIGN BORN	NEGRO	HOMES OWNED	PERSONS PER FAMILY
West Philadelphia	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ward 24	142.3	97.4	92.1	107.8	79.0	121.3	207.7	72.0	102.3
Tract X-1	156.9	92.0	70.8	130.9	113.9	76.1	95.4	55.7	90.9
X-2	262.1	94.2	116.9	92.6	81.0	103.2	138.5	56.6	104.5
X-3	223.5	97.0	95.5	100.9	75.8	101.3	270.8	73.9	104.5
X-4	170.2	93.8	74.2	137.8	103.4	75.5	226.2	64.7	95.5
X-5	215.9	102.6	79.8	100.0	66.7	70.3	560.0	43.2	104.5
*X-6	12.7	13.0	11.2	247.4	118.5	145.2			
X-7	208.9	97.4	87.6	102.2	77.4	69.7	458.5	64.9	102.3
X-8	238.4	102.3	87.6	115.2	90.9	135.5	52.3	94.4	102.3
X-9	292.4	106.5	120.2	77.4	26.9	283.9	4.6	109.6	106.8
*X-10	3.1	60.4	47.2	173.0	154.3	88.4	6.2		
Ward 27	138.6	88.5	46.1	156.5	106.9	106.5	186.2	61.8	106.8
Tract AA-1	263.2	105.1	57.3	130.4	89.1	179.4	132.3	22.5	118.2
*2	207.5	109.3	157.3	267.3	100.2	193.6	158.5		
3	111.5	84.7	48.3	152.6	112.9	73.5	220.0	36.7	111.4
4	128.7	80.6	43.8	150.0	102.0	63.9	332.3	67.4	113.6
5	21.4	77.5	53.9	153.0	137.4	58.1	42.1	28.0	77.3
6	167.4	76.4	41.6	157.0	123.4	62.6	116.9	107.9	95.5
Ward 34	79.1	99.8	105.6	96.5	100.8	100.0	75.4	111.3	97.7
Tract AH-1	11.5	86.4	89.9	123.5	90.1	151.0	75.4	131.9	113.6
2	187.7	99.6	106.7	102.6	111.5	81.9	1.5	111.1	95.5
3	203.9	97.7	103.4	100.4	111.5	85.8	12.3	98.1	97.7
4	205.5	105.9	124.7	80.4	85.3	90.3	272.3	64.7	93.1
5	228.2	104.4	106.7	82.2	74.9	97.4	336.9	90.4	97.7
6	234.7	98.8	95.5	101.7	114.7	78.7	27.7	120.5	93.1
7	176.8	100.1	94.4	103.9	110.7	96.1	15.4	121.1	95.5
8	242.3	105.7	110.1	86.1	97.0	113.5	24.6	97.9	97.7
9	52.2	96.9	109.0	97.4	103.2	111.0	21.5	146.1	100.0

Ward 40	56.1	106.1	123.6	83.9	106.7	88.4	76.9	100.4	100.0
Tract AN-1	35.2	110.1	123.6	82.2	89.1	86.5	232.3	45.7	109.1
2	103.1	117.3	139.3	67.0	108.3	113.5	1.5	74.1	106.8
3	18.5	118.1	148.3	61.7	76.8	111.0	244.6	59.5	104.5
4	61.9	105.9	155.1	92.6	100.8	70.3	180.0	96.0	115.9
5	132.4	104.4	116.9	89.6	119.0	80.6	4.6	107.9	102.3
6	170.0	97.5	115.7	86.1	112.3	81.9	3.1	127.1	93.1
7	193.2	101.0	87.6	117.8	113.5	90.3	15.4	87.1	104.5
8	124.0	94.7	103.4	93.0	133.1	58.1	3.1	143.8	86.4
Ward 44	216.2	109.3	112.4	77.8	88.5	109.7	121.5	78.9	104.5
AR-1	150.4	108.8	118.0	92.6	44.8	187.1	146.2	80.8	109.1
2	230.0	104.5	129.2	89.6	86.3	107.7	61.5	62.2	115.9
3	178.3	106.5	127.0	72.6	55.6	74.2	570.8	38.8	97.7
4	216.7	107.2	94.4	104.8	119.0	82.6	15.4	83.7	102.3
5	313.3	128.6	132.6	72.6	67.1	149.7	26.2	105.6	122.7
6	199.0	112.6	131.5	90.4	88.9	152.3	4.6	77.9	100.0
7	247.8	102.3	87.6	101.3	114.5	78.1	30.8	95.0	100.0
8	214.6	105.0	80.9	104.3	105.1	87.1	146.2	106.9	93.1
Ward 46	168.7	94.9	83.1	105.7	112.7	89.0	20.0	128.0	93.1
AT-1	119.8	97.6	56.2	117.0	132.7	57.4	32.3	94.6	88.6
2	113.8	75.8	48.3	153.5	136.2	52.9	41.5	131.9	100.0
3	153.0	79.7	37.1	151.3	143.6	41.3	16.9	154.3	93.1
4	243.9	95.0	96.6	94.8	110.7	87.7	1.5	140.1	93.1
5	197.1	99.2	71.9	110.0	116.8	78.1	27.7	91.4	86.4
6	172.3	101.5	92.1	90.4	90.1	118.7	70.8	115.9	93.1
7	192.4	102.3	95.5	95.7	96.6	129.7	3.1	125.5	90.9
8	167.4	98.3	107.9	88.3	100.4	107.7	6.2	152.4	90.9

by the mean and multiplied by 100, directly and easily comparable index figures are obtained. Simply stated, the formula for this operation is as follows:

$$\frac{\text{Item} \times 100}{\text{Mean of Class}} = \text{Index Number}$$

The mean of each class may be thought of as a quota of 100 and each index number indicates the quota fulfillment of the item from which it is derived. If the quota fulfillment is greater than 100 it shows a greater prevalence of the trait than would be normally expected, while a number less than 100 indicates a prevalence below that of the population of West Philadelphia as a whole. It is true that wide differences of range remain for the different classes of data, but the method used shows the dispersion and concentration of traits with fidelity.

Inspection of Table XXI fails to reveal any general basis for dividing West Philadelphia into natural zones or areas. For certain cases a fairly definite and constant association of traits may be described, but they are not sufficient for a system of classification. Insofar as these associations are revealed by the data they may be distinguished as follows:

1. There appears to be an association of a large excess of females, a small number of persons under five years of age, a large number of persons over 45 years of age, a large proportion of native-born white persons of native parentage, a large proportion of homes owned, and small families. See AA-3, 4, 5, 6 and AT-2, 3.

2. There appears to be a corresponding relationship between an excess or large proportion of males, a high percentage of persons under five years of age, a low percentage of persons over forty-five years of age, a large foreign-born population (the Irish constitute an exception to this rule), a low percentage of homes owned, and large families. (See Tracts AN-1-4 and AR-1-6.)

3. Wherever there is a large Negro population the proportion of homes owned is small. This is due in part to the fact that the Negroes live in deteriorating sections of the city. However

the Jews about Parkside Avenue, an area of deterioration, own their homes in 52.5 per cent of the cases.

Whether these are stable or evanescent combinations can be told only after research in more communities and a long-term study to eliminate temporary unbalance in immigrant and native populations. We may safely say that in 1920, these associations held true for West Philadelphia. Even so they are of assistance only in certain restricted areas. Further factors must be studied to broaden the range of the criteria of natural social areas.

VIII

Conclusions

The attempt to dicover some natural basis for sub-dividing West Philadelphia into territorial units suitable for the detailed compilation and analysis of social and economic statistics has failed to reveal any generalized scheme inherent in the data. A brief evaluation of the merits and weaknesses of each of the criteria used may be worth while, but it is given with the strictest reservations, pending additional studies of similar areas and the application of still more precise methods.

It seems safe to say that a study of the original geographic features of the region offers very little in the way of schematizing local communities. A stream may separate two communities or it may bisect a single settlement. Marshes may place limits upon settlement, but as such they simply set apart places where people may live from places where people may not live. The same altitudes have been occupied successively by the elite and the under-privileged. Even such a barrier as the Schuylkill River in its entire course through Philadelphia shows no significant differences in areas on its opposite banks. It has most certainly affected the character of economic and social development on both banks, but as a boundary for natural areas it can be selected only by the most arbitrary procedure. The same can be said of many other geographic features of the region.

The historical criteria offer some more useful distinctions. A minute knowledge of the development of an area reveals a number of localities which have served as centers of growth and differentiation. They display tendencies toward the specialization of land utilization and the segregation of specific ethnic or economic classes of the population. Some of the old names are carried over and applied to modern areas of urban development. However, some of the most obvious barriers to easy communication or transportation appear to be more properly centers or axes of community life than logical boundaries of natural areas. Market Street with its width, trolley tracks, ele-

vated railroad and heavy traffic attracts attention as an apparent boundary line, but actually it serves to bisect the centers of economic activity. The historical study of the region is useful in defining traditional communities, but it offers no assurance that boundaries laid out along established lines will divide the territory into homogeneous sections.

The economic studies such as those of the use of land reveal significant concentrations of industrial plants, shops and various classes of housing. This concentration in West Philadelphia, which has grown up comparatively free of restrictions on buildings is by no means absolute, for there is much overlapping and interpenetration, but the evidence suggests the feasibility of districting the region on the basis of economic use. That the resulting districts would be homogeneous with respect to race, age, and other criteria is not necessarily implied. Moreover, even a cursory survey will show that the areas formed on the basis of economic use will not coincide with the traditional community boundaries.

Population figures offer a fairly reliable basis for breaking up the larger areas. There are regions which have a peculiar concentration of aged persons, children, negroes, foreign born, or home ownership. The difficulty with these criteria for mapping out natural areas lies in the gradations of the particular index from districts of concentration to those of normally expected or sub-normal occurrence. Moreover, such boundaries as may be indicated by variations of the data are likely to be changed by a shift of population or modification of economic use. Consequently there appears to be no uniformly satisfactory index for dividing the region into homogeneous population groups.

In the future a number of additional indexes will be applied to West Philadelphia in an effort to determine the most advantageous unit for statistical work. These indexes will include studies of land values, delinquency, dependency, family disorganization, occupations, rents, birth rates, general and specific death rates, religious affiliation, and such other avenues of approach as promise to be productive.

The Concept of the Natural Area

The conclusion of this study calls again for an exacting scrutiny of the concept of the natural area. A form of transcendentalism appears to survive in the superficial thinking concerning the foreordained existence of natural geographical units within the urban community. This unguarded logic starts with the premise that society is governed by natural law and must therefore be orderly. In that orderliness therefore, we should find some universal scheme of geographic units which will fit the categories we have previously devised. The units must be there, and some day we shall find them. Such a naïve approach should prepare the experienced investigator for the disappointment which must almost inevitably follow. The evidence gained from this study can only be interpreted to mean that such areas have not been revealed, and the likelihood of their ever being discovered is measurably reduced.

On the other hand it is not to be supposed that the districting of the territory studied for purposes of research is to be considered fruitless. On the contrary, a number of criteria have been applied on the basis of which a useful delineation of territorial units may be undertaken. Furthermore, there appear to be certain cases of fairly close correspondence between the frequency with which combinations of specific traits appear in a given locality. But there are few cases in which distinct boundaries may be found between data of markedly contrasting attributes. The study of the distribution of specific traits of the data suggests rather the futility of attempting to locate such boundaries, and the necessity for a more or less arbitrary subdivision of the region by inspection.

The Concept of the Gradient

The concept of the gradient, as worked out by Professor E. W. Burgess of the University of Chicago[1] appears to be much more useful for describing the distribution of attributes in a region than that of the natural area as it is commonly con-

[1] Burgess, E. W., *Opus cit.*, 21:178, 1927.

ceived. This concept pre-supposes certain areas in which a specific attribute or combination of attributes is concentrated, and from which there is a progressive decline in the frequency of occurrence of the attribute as the distance from the center of concentration is increased. There are, in other words, gradations in the intensity of the traits examined, but no inherent boundaries which would serve to mark off the gradations sharply.

If the notion of the gradient is too rigidly applied it may be open to much the same criticism as the concept of natural areas, but as the formulation of a descriptive term it seems to have validity. Moreover, it suggests a basis for districting the urban community which is in keeping with the very best practices of statistical method.

The mathematician, in seeking a simple method of calculating the area of a circle, divides it into an infinite number of triangles, the apexes of which are at the center of the circle and the bases of which are all lines of equal length joining two points on the circumference of the circle. He has no formula by which he can calculate the area of the circle, but he can easily calculate the combined areas of the triangles, and by the infinite subdivision of the triangles, reduce the difference between the sum of the bases of the triangles and the circumference of the circle to an insignificant amount. Roughly this method may be applied to our use of gradients.

From certain centers of concentration for specific traits to be analyzed (such centers to be determined by graphic methods or mathematical calculations, according to the precision sought), the region may be mapped quite arbitrarily into districts of the size desired. Data compiled for these areas may then be analyzed and indexes calculated to describe the prevalence of the trait subjected to measurement. The size of the territorial units must be determined by the precision sought in the data, and the cost of compiling and tabulating the statistics for the greater number of areas.

The advantages of such a plan are to be seen first in the flexibility which it permits for various uses. It makes possible a single tabulation of the basic data, and the combination of the smaller units into areas showing a concentration or segrega-

tion of specific traits. Inasmuch as we have discovered no natural area which will serve as a common denominator of all social data, we may provide an arbitrary unit which will serve such a purpose. If the areas showing the distribution of land values do not correspond with those showing infant mortality, special combinations of minor units may be formed without impairing the comparability of the findings, or restricting the adaptation of the data to areas indicated.

The second advantage of forming these small permanent areas is the readiness with which the combinations of such tracts may be accommodated to the shift in the economic and social characteristics of the region without a loss in the comparability of the data over a long period of time. This is particularly important in our rapidly growing American cities.

The practical difficulty involved in such a program of preparation for social research is the cost of compiling and analyzing the data of the basic studies, chief among which to date is the enumeration by the United States Bureau of the Census. The cost of tabulating these returns is almost directly proportional to the number of areas used, a fact which induces caution. However, if the research to be carried out has the value attributed to it, the cost of a reasonably detailed analysis of the data should be readily met.

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