POPULATION AND FUNCTIONAL CHANGES OF VILLAGES IN WESTERN PENNSYLVANIA

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The village from the earliest period of land occupancy has been an important unit in the settlement pattern of western Pennsylvania. The role of the villages has changed from time to time largely depending upon the economic conditions of the area which it serves. It is the purpose of this study to investigate and analyse changes in the population and functions of villages in six west-central Pennsylvania counties—Armstrong, Butler, Venango, Clarion, Jefferson, and Forest. All settlements with a population between 25 and 1000 persons are included. The lower limit was set in order that a definite grouping of houses would occur.1 There has, thus, been an attempt to eliminate those places where no effective agglomerated settlement exists, such as crossroad hamlets where a single store or filling station and possibly one or two houses are located. The upper limit of 1000 people was selected for it differentiated basically residential and service communities from multifunctional towns and cities where manufacturing plays a significant role.

Sources and Methodology

The obtaining of precise data on village population is difficult because the United States census is given by political units and all unincorporated villages appear in the total figure of township population. In the six counties selected for this study over 95 per cent of the villages were unincorporated. As a consequence village population can only be estimated.

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1 Because many of the smaller villages have lost their economic functions in recent years, a compact residential area was used as the criteria for the designation of the village structural form. The residential village with no other functions is a common phenomenon in this region.
A number of sources are available that aid in determining the distribution of settlements and their population. The annual Rand McNally Commercial Atlas and Marketing Guide first published in 1876 locates essentially all settlements and presents their approximate population. A number of individual maps are also available, such as those published by the George F. Cram Company that give population data for unincorporated places. These sources, however, rely for population data upon the estimates of local residents. The accuracy of this type data must frequently be questioned. Also, a number of smaller villages are omitted which actually exist, and conversely a number of villages are listed which have no genuine settlement.

There are a number of map sources available that present only the distributional pattern of the villages. The railroad maps published by the Pennsylvania Department of Internal Affairs are one of the most important of these map sources. There are also two important series of highway maps by counties on Pennsylvania. The first are highway maps published by the United States Bureau of Public Roads. The second series are highway maps published by the Pennsylvania Department of Highways and based on the State-wide Highway Planning Survey. These maps were prepared between 1939 and 1941 under the general supervision of the United States Bureau of Public Roads. The maps for the six counties under study are published at a scale 1 inch = 1 mile. A wealth of cultural information includes residences, churches, hotels, schools, businesses, factories and many others. Inset maps of many of the smaller villages present the street patterns, and buildings are identified by type of use. From field study some errors have been found on these maps, but considering that the mapping was done from moving cars by untrained men, and data recorded on blank sheets of paper, the results are good.

Two sets of aerial photographs prepared by the Production and Marketing Administration and the U. S. Geological Survey are available for the entire six counties; one set was made in 1938-39 and the second in 1951-52. They were valuable in securing the location of buildings, for most of the photographs were taken in winter or spring before the leaf cover obscured the pattern. The photographs were of limited value in determining the functional uses of the buildings.
Other sources of information on villages include county histories and atlases. Most of these were published between 1875 and 1900. Five of the six counties have local histories. The Dun and Bradstreet annual Reference Books are valuable sources on the commercial functions of the region. The Pennsylvania Industrial Directory published approximately every three years since 1913 lists every factory, its location and number of employees. The village newspapers, usually published weekly, are important sources of information. There have been more than 24 village papers published since 1860 in the six counties. At present about ten local papers are in existence. The publication of books and pamphlets commemorating special historical events also present information on villages. The libraries in the larger villages and towns have been found to be a storehouse for local and regional data.

Although library sources were necessary to the development of the present study, field surveys were also fundamental. Because the accuracy of many of the sources could be questioned, only by field survey could data be authenticated. The author also feels that an intimate knowledge of the area extending over several decades was of the utmost importance. During the summer of 1955 the author spent six weeks in the field surveying in detail Turkey City and its environs, in lesser detail twelve other villages, and visiting every

*History of Venango County, Pennsylvania*, Columbus, Ohio; Published by J. A. Caldwell, 1879, 651 pp.


village in the six counties to validate its existence and then estimate its population.

Early Origins of the Village Pattern

The first settlers entered this area shortly before 1800, and the initial hamlets appear on maps in the early 1800's. Because the area under study is part of the dissected Allegheny Plateau it was among the last regions of Pennsylvania to be settled, and population grew slowly. By 1850 the total population of the six counties was about 115,000 of which approximately 6 to 8 per cent lived in villages, possibly 10 per cent were in larger towns, and over 80 per cent were rural dwellers. The villages were few in number and widely scattered. The economy of this region until the late 1850's was based predominantly on a self-sufficiency agricultural system. In Clarion County local deposits of bog iron ore provided the raw material for a small iron industry beginning in the 1820's. A few villages such as Monroe Furnace, Black Forest Furnace, Old Forge and Martha Furnace grew around these installations. Since the furnaces were small, they supported only a few people and the village population did not increase greatly. By the late 1850's most of the iron furnaces had disappeared due to competition from the larger blast furnaces in the Pittsburgh area. Consequently, as late as 1860 this isolated region had a pioneer economy which required little in the form of services which would have encouraged the growth of villages.

Establishment of Modern Village Pattern 1859-1880

After 1859 the local economy expanded rapidly with the increasing importance of agriculture and the exploitation of the region's petroleum, coal and timber resources. The discovery of petroleum at Titusville in 1859 created a new source of wealth that attracted thousands of people to this backwoods country. This was the greatest single impetus to the growth of the local economy. Between 1860 and 1880 scores of towns developed to serve the expanding oil economy (Fig. 1D). Such names as Petroleum Center, Petrolia, Greece City, Shamburg, Oleopolis and Pithole attest to the influence of petroleum in the creation of the village pattern. Many

5 Data from map by A. W. Harrison: The Keystone State, Pennsylvania and Her Eminent Men, Philadelphia, 1847.
of the oil villages came into existence on the completion of an oil well, grew to modest size, and then declined rapidly on exhaustion of the oil pool. Therefore, at the same time that the village pattern was rapidly evolving, villages were also disappearing. There are several scores of oil "ghost towns" in the area. The unrestricted exploitation of petroleum has frequently created "boom and bust" conditions causing a fluid state in the settlement pattern of a region.

Other local resources of the six counties were also developed after 1859. The demand for lumber in the oil industry provided a large local market. The exploitation of the mixed deciduous-coniferous forests began on a significant scale in the 1860's. Because the lumbering industry required relatively few workers, and was migratory, only a few villages developed as lumber communities. A number of the smaller villages reflect their role as lumber centers such as Newton Mills, Hickory, and Cooper Tract.

The southern and central portions of these six counties are well endowed with coal resources, and mining became important in the 1860's (Fig. 1C). By 1880, 2100 miners were employed in the coal industry and a number of coal mining settlements had developed. Villages such as Coal Glen, Clarion Mines, Coaltown, Carbon Center, Red Bank and Coal Hill appear on maps of the 1880 period.

Agriculture also experienced a considerable expansion between 1860 and 1880. Not only was a local market for agricultural products created by the influx of population to exploit the region's resources, but the growing railroad system gave an outlet for marketing some agricultural products beyond the immediate area. Self-sufficiency agriculture gradually declined as commercial agriculture replaced it. By 1880 the amount of land in farms reached its all time peak within the six counties of 1,766,000 acres. Many villages such as Rural Valley, West Valley, Knox Dale, Agnews Mills and Cool Springs grew to serve the needs of a prosperous agricultural section.

By 1880 the rural economy was highly developed. Because local service centers were needed, the village population had grown rapidly. Of a total population in the six counties of 216,594, about 41,400, or 19.2 per cent, were located in villages, 50,100, or 23.1

Figure 1. Distribution of villages in 1880. Notice the relationship between the location of the villages and the railroad pattern, petroleum and coal deposits.
per cent, were in towns and cities, but 125,094, or 57.7 per cent, were still rural dwellers.

At this time there was a total in the six counties of 269 villages (Fig. 1A). The intensity of the development of the local resource base was the major factor in determining the density of the village pattern (Figs. 1C and 1D). Where more than one economic activity existed in an area, such as farming and the petroleum industry in Clarion and Venango Counties, the village pattern became quite dense. By contrast, in Forest and northern Jefferson Counties where forest industries predominated only a few villages developed. The village density pattern also depended upon the size of the area served by larger towns and cities. Because towns and cities were able to service a larger area, the number of villages was notably fewer around these major urban agglomerations. This is particularly noticeable in central Butler County, where Butler, one of the largest cities in the six counties, is located.

In the specific location of villages, accessibility to transportation was the major localizing factor. Of transportation facilities, railroads played the dominant role. Of the 269 villages, 140 were located on railroad routes (Fig. 1B). These villages were also larger in size than villages found along the unpaved roads.

Continued Village Growth 1880 to the 1920's

For about 40 years after 1880 the rural economy of the region remained strong with expansion in many of its phases. Although farmland acreage declined slightly after 1880, the value of farmland and buildings rose from $60,460,000 in 1880 to a peak of $93,166,000 in 1920. The coal mining industry also expanded rapidly after 1880, reaching a peak in employment of over 18,000 workers about 1920. Production of petroleum in the six counties reached its peak in the early 1880's, and although output declined sharply after 1900, employment in the oil industry remained fairly stable until the 1920's. Lumbering remained an important economic activity until about World War I.

As a result of the prosperous rural economy, the village popu-

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lation, as well as the total population, continued to expand. Of a
total population in the six counties of 317,751 in 1920, 63,250, or
20.0 per cent, were located in villages,\(^{11}\) 118,412, or 37.2 per cent,
were rural dwellers, and 136,089, or 42.8 per cent, were urban
dwellers in towns of over 1000 population. Between 1880 and 1920,
although the percentage of people in villages remained essentially
stationary, the larger towns and cities were increasing their per-
centage from 23.0 to 42.8 per cent of the total. At the same time
the rural population declined from 57.7 per cent of the total to 37.2
per cent.

The absolute increase in village population between 1880 and
1920 is reflected in both larger villages and greater numbers. The
number of villages reached its maximum about 1920 when 322 were
found in the region.\(^{12}\) The same general distribution pattern re-
mained as in 1880. The localizing influence of the railroads per-
sisted with 181 of the 322 villages located on railway routes.

**Village Functions 1860-1930**

During the period 1860 to the late 1920's when the rural economy
of this region was expanding, the village was the economic and cul-
tural center of the small region which it served. The village nodes
developed primarily because transportation was slow and difficult,
and the local inhabitants needed a service center that was not more
than one to two hours distance from their home by horse and buggy.

To illustrate the village functions from 1860 to about 1930,
Turkey City in west-central Clarion County has been selected for
it is believed to represent typical village development in the region
(Fig. 2). This village came into existence during the oil boom of
the 1870's and for a few years may have had a population of about
400. By 1880 its population had declined to about 100. In 1930
its population was 129.

The economic and cultural functions of the village portray its
importance to its immediate area. The commercial services of the
village were well developed in 1930. The village contained two
general stores, two garages, a meat market, a postoffice, a barber
shop, a watch repairman, a boarding house, and a machine shop.

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12 *Railroad map of Pennsylvania*, Department of Internal Affairs, Harrisburg, 1920;
Figure 2. Land use in Turkey City and its environs 1930.
Turkey City could provide for most of the basic economic needs of the rural people within several miles of the village.

Turkey City was also a local transportation node. The village was served by four passenger trains daily, two north to Buffalo and two south to Pittsburgh, and two freight trains. A railroad paddy crew operated from headquarters in this village for maintaining the railroad facilities. There was also a road repair crew working from headquarters in this village. Largely because Turkey City occupied a crossroads position, it was a focal center for distributing the farm products and minerals of the local area. A large percentage of the immediate area around the village was in farms specializing in dairying. A milk depot in the village, established by the farmers, served as a collecting point for fluid milk which was marketed in the Pittsburgh area. The natural gas pumping station of the Alum Rock Gas Company and the petroleum pumping station of the Standard Oil Company provided links in the transportation system of western Pennsylvania to market the petroleum and natural gas resources of the region.

The village was also a cultural and recreational center for the local area. A one room school existed in Turkey City in which the first eight grades were taught. A community church, non-denominational in nature, was the center for many community endeavors such as socials and dinners. The village general stores were major gathering spots for a social evening of card playing and dispersal of local news. There was also a community picnic park with a roller skating rink-dance pavilion.

Of the age structure of the village population in 1930, 72 of the 129 persons were between 20 and 60 years of age, 52 were less than 20 years, and only five were over 60 years old. There were only two retired men in the village, and one widow. At this time there were 38 wage earners in the village. Of the 35 men employed in the community, nine farmers lived in the village, 10 were employed in the oil industry, nine in transportation industries, six in commercial and professional activities, and one was a handy man. Only three men were employed outside the local area, one in St. Petersburg, three miles away, and two in Foxburg, five miles away.

There was no manufacturing in this village in 1930. Manufacturing was noticeably absent in more than 95 per cent of the villages of the six counties. In a survey of manufacturing in the
six counties in 1930, of a total of 16,560 employees, 80 per cent were located in the larger towns and cities, 17 per cent in villages and only three per cent in rural areas.13 Where manufacturing had developed in villages, the refining of petroleum was most important and in a few places the processing of local agricultural products, particularly dairy products, and lumber had developed.

Besides the economic and cultural functions of the village, there was also the residential function. Thirty-two families maintained homes in Turkey City in 1930. All families lived in single houses. Although the houses were sufficiently close to give a sense of compactness there was considerable open space in the village. Most of the residential structures were modest. In Turkey City only four houses could have been considered above average for the village as a whole, and only two were below average. Most of the village dwellers lived on the same economic level. The homes reflected a fairly prosperous middle income economy. The village lot was large so that 30 of the 32 homes had a vegetable garden. Many of the village dwellers also raised chickens, pigs, and kept a cow and a calf. Consequently the village dweller occupied a mid-position between the rural dweller and the city dweller in providing his own food supplies.

Decline of the Rural Economy Since the Late 1920's

Beginning in the late 1920's the rural economy began a decline which is still in progress. This decline has been experienced by all phases of the rural economy. The abandonment of farmland and lowering of agricultural productivity is quite striking within the six counties. The amount of farmland has declined from 1,513,000 acres in 1920 to 1,062,000 in 1950.14 The decrease in value of farmland and buildings from $93,166,000 in 1920 to $54,111,000 by 1940 is even more significant.15 This reflects decline not only in quantity of farmland but also its quality. A considerable amount of cultivated land reverted first to pasture, which in turn was abandoned.

There has also been a noticeable decline in the mineral output

13 Seventh Industrial Directory of the Commonwealth of Pennsylvania, Department of Internal Affairs, 1931.
of the region. The number of coal miners has decreased from about 18,000 in 1920 to 4,220 by 1955.\textsuperscript{16} Coal mining as a source of livelihood has essentially disappeared from many sections of the six counties where it was once of major importance. The oil industry has declined sharply in the region. Oil output has decreased from 2,693,000 barrels in 1921 to 1,270,000 in 1954.\textsuperscript{17} A majority of the full-time oil workers in the region have disappeared, and most of the remaining oil field operators are part-time employees. The virgin forests of the six counties are depleted and there is little second-growth timber to foster a thriving lumber industry.

As a result of the decline of the rural economy, the economic basis which fostered village growth prior to 1920 has greatly deteriorated. A pertinent question now is, how has the village population adjusted to the altered economic conditions? Between 1920 and 1950 the total population of the six counties grew from 317,751 to 335,921, certainly a modest increase. The total village population rose from 63,250 to 66,200.\textsuperscript{18} Although village population grew moderately from 1920 to 1950, the town and city population actually declined from 136,089 to 133,486. In contrast the rural population grew from 118,412 to 136,235. This increase is due to the growth of the rural non-farm population reflecting the trend of movement of people from the cities to nearby rural areas. The villages, however, have attracted few people from this migration. If people prefer to live in uncongested areas, then neither the environment of villages nor cities is particularly attractive, and they usually seek the open country. Rural areas are no longer isolated due to the rapid transportation provided by the automobile.

Within the region, the village population reflects some differences in its growth patterns. In the least industrialized counties of Clarion and Forest, the village population has actually declined since 1920. The village population has had its greatest growth in Butler and Armstrong Counties since 1920. The increase in village population in these counties has been in the larger villages near major industrial cities.


The number of villages has decreased from 322 in 1920 to 273 in 1955.\textsuperscript{19} With the decline in the importance of the railroad, many of the smaller railroad villages, that were also poorly served by highways, have decreased in population and some have disappeared as agglomerated settlements. Also, some of the smaller villages, particularly those serving the needs of mining areas, have disappeared.

\textit{Present Day Village Functions}

As the original economic basis for village existence ebbed, the functions of the villages have been altered since the 1920's. Basically, the commercial and social functions have declined and the residential function has become increasingly important. Turkey City will be used as a typical example to illustrate present day village functions (Fig. 3). In 1955 the population of this village was 123, just slightly below its population of 1930. However, its economic and cultural functions have changed remarkably. Of its commercial functions only two general stores remained in 1955, one of which was open only part of the time. The decline of commercial service is primarily due to two factors. The local economy has declined and with it the local market. Possibly more important, the local inhabitants are now able to shop, due to the automobile, in the larger towns where there is not only a greater choice of goods, but also lower prices due to chain stores.

The transportation function has also deteriorated. Passenger train service was discontinued in the early 1930's and freight service in 1937. With the abandonment of farm land, and decrease in agricultural output, the milk depot was closed in 1935. With the decline of local oil supplies, for the last well was drilled in 1926, and the development of more powerful oil pumping stations elsewhere, the oil pumping station was abandoned in 1933. The gas pumping station remains, but it is now a booster station receiving its gas from outside the state.

No manufacturing industries developed in Turkey City between 1930 and 1955. Of a total employment of 29,114 in manufacturing in 1955 within the six counties, 23,455, or 80.5 per cent, were located in cities, 3,365 in villages, or 11.5 per cent, and 2,294, or 7.8 per cent, in rural areas.\textsuperscript{20} As a percentage of total employment


Figure 3. Land use in Turkey City and its environs 1955.
in manufacturing the villages declined 5.5 per cent since 1930; at the same time the rural areas increased 4.8 per cent. The percentage of manufacturing employment in towns and cities remained stable.

A number of cultural functions have likewise declined. The building of a consolidated school in St. Petersburg, three miles away, resulted in the closing of the local school in 1931. The ball park has been abandoned, and the roller rink-dance pavilion was destroyed by fire in 1934 and not rebuilt. The picnic park has also been abandoned. The custom of visiting when purchasing supplies at the local stores, has declined with the importance of the local stores. However, one new church has been added to the community since 1930, and regular services are held in the two existing churches. In the past 25 years, there has been little or no decline of the religious functions of the villages in the six counties.

Of the age structure of the village population in 1955, 61 of the 123 persons were between 20 and 60 years of age, 38 were less than 20 years, and 24 were over 60. There were six retired men in the village and five widows. The average of the village population was considerably older than in 1930. In 1955, 38 wage earners maintained a home in Turkey City, the same number as in 1930. Of these 38 only five were employed locally, and of these five, two were in business, and one each in farming, the gas industry, and transportation. The other 33 wage earners were employed from three to 114 miles away. The importance of trades learned locally appears in the type of employment of many of the commuting workers at the present time: ten are engaged in the oil industry, six in construction, eight are factory employees, three are in transportation, and one each in coal mining, teaching and accounting. Three women were employed outside the village in secretarial work.

Although the economic and social functions of the village have declined greatly, the residential function has correspondingly grown in importance. This function, now the basic motive for village existence, has remained for a number of reasons. With the excellent paved road system and the rapid transportation of the automobile, a wage earner is no longer limited to local job opportunities. Commuting 60 to 100 miles a day is common in this six county area.

Commuting is practical because of certain economic and intrinsic values which the villages possess. In the larger towns and cities,
housing is frequently scarce and if available costly. The village homes are fairly old and demand for housing is limited, so that if a house owner were to sell his home he could not purchase a comparable house in the larger urban centers. Besides this factor, cost of living in villages is lower than in cities due to such factors as lower taxes, and fewer expenses such as for water, sewage disposal, and police protection.

There is also the consideration that many people prefer the village environment in which to live. This may be due to family attractions, lack of congestion, or to the friendliness of the village group. Although many of the younger people are migrating from the villages because of lack of economic opportunity, others remain simply because it is home. There is considerable evidence that village life is becoming more urbanized. In 1955 only about one-half of the village dwellers had gardens, and only a few raised pigs and chickens for home consumption.

Conclusions

The village is today in a period of transition. The maintenance of the village form of settlement appears to depend on the availability of economic opportunity in the larger towns and cities in the region, and the continuance of a type of life within the villages that is desired by certain individuals. In conclusion, most of the present villages will persist, but in the role of residential dormitory centers serving as dispersed suburbs of larger towns and cities.

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