SETTLEMENT PATTERNS OF ILLINOIS

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The use of the term "settlement" usually calls to mind a colony or a backwoods village—the pioneer or incipient stage of a regional economy. Again it may have sociological implications such as the settlement house of a congested urban district. In this paper the term is applied to the cities, towns, and villages of a state which has long since reached the stage of maturity. Although the individual cabin was an important factor in the original settling of the state, because of a somewhat changed function, the individual farmstead or isolated rural home is not included.

NATURE AND FUNCTIONS OF SETTLEMENTS

Within the limits of the state of Illinois, which, by virtue of its area of about 56,400 square miles, is the twenty-third largest state, lives the third largest population (7,897,241 according to the 1940 census). Of this number 5,809,650 or 74 per cent reside in towns and cities of 2500 or more, and four-fifths of those live in one metropolitan district. When towns and villages with populations less than 2500 and unincorporated places are included an imposing array of settlements results. There are 220 towns and cities with populations over 2500. Two of these rank among the some six hundred cities of the world that have populations of 100,000 or more. There are more than 800 towns and villages with less than 2500 and innumerable unincorporated villages.

Settlements come into existence, grow, and flourish because they perform certain functions. When the need for those functions no longer exists the settlements diminish and may ultimately disappear. There are ghost towns even in Illinois. Economic, social, and political services are rendered by the settlements. Some, notably the saxicultural towns, produce wealth directly from the natural environment. Thus cities, towns, and villages are the product of cultural adjustments made to two natural environmental components—site and situation. Site qualities include such items as terrain, drainage, bedrock, soil, native vegetation, and the like at the immediate site of the settlement, whereas qualities of situation include space, distance, and time. The concept of location, other than the latitude and longitude of a point, implies qualities of situation.

It is obvious that every settlement is the product of some type of association, wise or otherwise, with some type of natural environmental site, the details of which differ from place to place. The structure, however, of each settlement is basically the same. It is safe to say that, with the possible exception of the residential su-

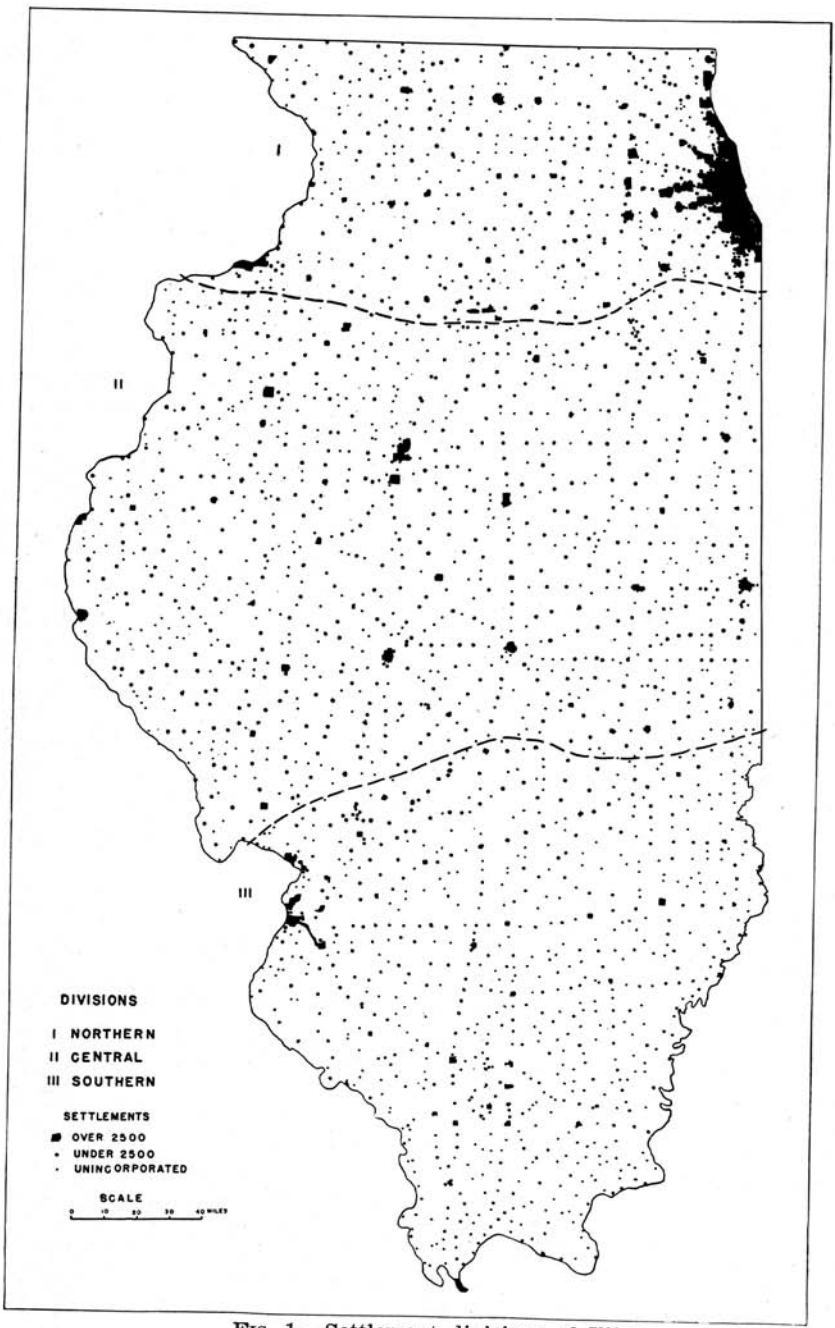

FIG. 1.—Settlement divisions of Illinois.

burbs of the large metropolitan districts, every settlement consists of several well-marked concentric zones. The larger the settlement the more perfectly developed are the zones. As interesting as an investigation of the relation of settlement structure to the site qualities might be, the very number prohibits a thorough investigation on a state-wide basis. On the other hand the space arrangement of cities, towns, and villages produces a series of patterns which are the results of both site and situation associations and which are worth geographic consideration without the necessary detailed investigation of the former. Perhaps some term such as the "gross structural settlement pattern" might be introduced to imply the space arrangement and relation of cities, towns, and villages in the light of the general association of each to its natural environment.

In an area as lacking in sharp physical contrasts as the state of Illinois it would seem logical to expect a similarity of pattern throughout the state. Casual inspection of the map (Fig. 1) indicates the lack of similarity, suggests variations of a logical nature, and raises the question of agreement or the lack thereof between settlement and natural environmental patterns.

TYPES OF SETTLEMENT PATTERNS

There are two basic types of settlement patterns in Illinois. The first, the alignment, is ubiquitous and is chiefly the product of a route of transportation. Different areal arrangements of alignments result in different patterns. The convergence of several alignments on a common center, often a large town or city, produces a radial pattern, whereas parallel alignments result in a checkerboard pattern. In this state the township has been an important factor in crystallizing the above patterns composed of settlements spaced six miles apart.

The second type is the group of which there are two distinct classifications in Illinois. One is the metropolitan association, which in one sense is the end product of a radial pattern of national or even global proportion, and the other is a cluster. The former is composed of a major city and numerous associated cities, towns, and villages. Closely spaced short alignments with a definite focus on the major city characterizes the metropolitan association. On the other hand the cluster is a closely spaced indiscriminate arrangement of towns and villages of about the same size.

SETTLEMENT DIVISIONS

As the map (Fig. 1) indicates, with the exception of metropolitan associations, the various types of settlement patterns are distributed over the entire state, yet enough areal similarity is present to justify the delimiting of three settlement divisions. A line from the Mississippi River, just below the confluence of the Rock River, to the great bend of the Illinois River and thence to the Indiana boundary, following the south side of the Illinois River, separates the northern division from the central. In the same fashion the central and southern divisions are separated by a line from the Mississippi, just below the confluence of the Illinois, to the nearest part of the Shelbyville moraine which it follows to the Indiana boundary.

Each division is differentiated by dominant conditions of settlement pattern. The northern division is characterized by a variety of patterns changing rapidly from east to west across the state. The central division is made distinctive by a

series of overlapping radial patterns centering on a dozen or more large towns and cities. In the southern division long alignments, thickening here and there into well-marked clusters, dominate the pattern.

NORTHERN DIVISION

Settlement patterns of the northern division are diverse; some are in accord with and others are at variance with the diversity of natural environmental conditions of the area. Five north-south districts comprise the northern division. They are: the metropolitan district, the moraine border district, the Rock Valley district, the northwestern district, and the Mississippi border district (northern segment).

The metropolitan district. — The metropolitan district is very sharp and distinct. It is an area of cities with only a scattering of villages near the outer margin. The district terminates sharply in the Fox Valley urban alignment (Elgin, St. Charles, Geneva, and Aurora) and the lower DesPlaines Valley towns (Lockport and Joliet). With the exception of the above alignments, the entire metropolitan district is associated with recent Wisconsin glaciation. The site of Chicago is the sand plain beyond which are the lake border and Valparaiso moraines over which the associated cities and towns spread. With the exception of the DesPlaines Valley, railroads and super highways radiate in all directions with little regard for the site. Qualities of situation are much more significant in a highly developed urban district, especially where there are no sharp contrasts in site conditions.

The Mississippi border (northern segment).—The Mississippi border and the Rock Valley alignment are settlement patterns that conform closely to the natural environment. The width of river and the nature of the valley bottom and associated bluffs are such that east-west traffic is interrupted at the Mississippi. At four points trans-Mississippi paired settlements (East Dubuque-Dubuque, Savanna - Sabula, Fulton - Clinton, and Rock Island-Moline-Davenport) mark the crossings. The rest of the alignment is composed of small towns and villages on the highways and railroads that follow the valley.

The Rock Valley district.—Although the Rock River is not wide enough to be a costly obstacle to transportation, an alignment of settlements spaced roughly at ten mile intervals has developed. Each of the larger towns and cities, the largest of which is Rockford, is a crossing for a railroad or major highway radiating from the Chicago metropolitan district. In turn the alignment is further strengthened by valley highways. At the confluence of the Rock and the Mississippi the two alignments focus on Rock Island and Moline.

The northwestern district. — Between the Mississippi and Rock rivers is the northwestern district. Here one well-developed radial pattern centering on Freeport occupies the drift-covered portion of the district, whereas a cluster of villages and towns are characteristic of the dissected unglaciated portion.

The moraine border district.—The remaining district, which extends from the metropolitan district to the Rock Valley alignment, is an indiscriminate mixture of alignments, radials, and clusters. Highways and railroads, radiating from the Chicago metropolitan district, cross the area along which the well-marked alignments are developed. The closely spaced town and city alignment on the southern edge of the district is the upper Illinois Valley. A north-

south system of moraines crosses the district, in fact the Bloomington moraine roughly bisects it. In general, the spacing of settlements and the resulting patterns are not concerned with the moraines in this district. Radials and checkerboard groups characterize the central portion, whereas a closely spaced cluster occupies the glacial lake section of the northeast, and a couple of weakly developed alignments occupy the great, flat valley of the Green River. Drainage, perhaps, has been a significant factor in the development of the settlement pattern over much of the entire district. This is a portion of the Grand Prairie through which small groves were scattered. As the names of many of the towns and villages suggest, these groves became settlement sites. Good drainage and protection from the wind seem to be important factors in the development of groves in the prairie. The great swamps of the Green Valley were generally avoided, thus accounting for the weak alignments of villages on the railroads that now cross them. The alignment and radial pattern of the rest of the district, like the patterns of the rest of the state, has been crystallized by the railroads and highways, however, groves were significant items in the sites in the early development of these settlements. The fact that most of the forests occupied the better drained and dissected land adjacent to the streams, accounts for the location of most towns on or near streams, many of which are too small to be of any economic value, with the possible exception of small mill sites.

CENTRAL DIVISION

Although a system of overlapping radials characterizes the settlement patterns of the central division, enough diversity is present to make possible the recognition of four distinct districts. The Illinois Valley alignment separates the eastern district from the western, and the Mississippi border district (central segment) constitutes the fourth district.

The eastern district.—The eastern district is characterized by a series of overlapping radials the centers of which are large towns and cities spaced at 40-mile intervals with lesser centers at shorter distances. Decatur, Springfield, Bloomington, and Danville are among the major centers, whereas, Jacksonville, Lincoln, Pontiac, Streator, Kankakee, Champaign-Urbana, and Mattoon are some of the lesser centers. Peoria, the major city of the Illinois Valley alignment, is also a radial center. A general settlement pattern of this type is a logical one to develop on a flat, productive, agricultural land. The fact that a variety of natural environmental conditions are present seems to be of no great significance. An irregular line from Shelbyville to Peoria marks the boundary between Illinoian and Wisconsin glaciation. There seems to be no marked difference in settlement patterns in the two parts. As was also true in the northern division, there does not seem to be a marked relationship between settlement patterns and individual moraine patterns. Bloomington and Champaign-Urbana are the only large towns on the moraines, although Decatur is very close to the Shelbyville moraine. There is little evidence of alignments following glacial moraines, in fact there is some indication of a lack of settlements on the moraine sites. The open portion of the pattern on the northern edge of the district on the Marsailles moraine is an area of that type. Paris, Mattoon, Charleston, and a number of smaller towns and villages following the inner edge of

the Shelbyville moraine is the best morainic alignment in the division. Three of the alignments of the Peoria radial follow the general trend of the Bloomington and Shelbyville moraines, although they do not actually occupy them. However, it is possible that it is more of a prairie problem than it is of land form. With the exception of the southwestern portion, the district lies within the Grand Prairie and, as was pointed out earlier, settlements were made in or near groves which, for the most part, occupied the better drained land. The location of most of the settlements, both large and small, on or near streams is a relationship to the forest. Bloomington and Champaign-Urbana on their morainic sites are exceptions to the stream pattern adjustments, yet there were groves near both.

In several spots, notably the forested area adjacent to the Illinois-Mississippi confluence, and the coal mining area on the inside of the great bends of the Illinois and of the Illinois-Kankakee, the radial pattern is broken. In the former the valleys of the Illinois and Mississippi break the ease of travel in all direction, and, since the major crossings are just to the north or south, this area has assumed a checkerboard pattern. On the other hand the coal mining towns and villages form quite irregular clusters on the uplands south of the trough of the Illinois valley.

Point should also be made of the fact that deposits of loess varying in depth from two to more than twenty-five feet cover most of the district. The loess cover is thickest just east of the lower Illinois Valley, diminishing in thickness eastward and northeastward to an area in the northeast where the loess is not identifiable. In the zone where the inequalities left by glacial activities are covered by loess, the radial pattern of settlements is best developed.

The western district.—The western district repeats the patterns and relationships of the eastern on a reduced scale. One major radial, centering on Galesburg, is related to the loess covered Illinoian drift in the prairie portion of the district. The southern portion, the forested triangle between the Illinois and the Mississippi rivers, whose situation is out of focus with major crossings of both valleys, possesses a checkerboard pattern of towns and villages comparable to the embayment across the Illinois Valley.

The Illinois Valley district.—Separating the eastern and western districts is the well-marked alignment of the Illinois Valley. From Pekin to the great bend of the valley the pattern consists of a double alignment of closely spaced towns and villages each on a river terrace site. This district, known as the middle Illinois Valley, was among the first to be identified and investigated geographically. Peoria, as the major city in the alignment and the second largest city in the state, is also the center of a radial reaching both the eastern and western districts. Since the Bloomington and Shelbyville moraines, as well as the Illinois Valley, focus on the site of Peoria, it is here that the closest agreement of a large radial pattern to the natural environmental patterns is found. In addition to the middle and lower Illinois Valley alignments are those from several other directions, three of which follow the general trend of the Bloomington moraine from the north and southeast, and the Shelbyville moraine from the south.

From Pekin southward another double alignment of towns and villages follows the lower Illinois Valley. The valley is wide and poorly

drained, especially above the glacial border, and there the alignments follow the valley sides, reaching the river only at intervals of 25 or 30 miles. At these points, numbering five in all, both railroads and highways bridge the valley. Below the glacial border, which follows the eastern wall of the valley, small towns and villages are connected across the Illinois by ferry. At the Illinois - Mississippi confluence the settlement pattern is limited to one small town.

The Mississippi border district (central segment).—Two alignments of towns and villages make up the settlement pattern of the Mississippi Valley. A closely spaced alignment follows the valley wall where the alluvial bottoms are wide, whereas a widely spaced alignment of bridge and ferry towns line the river. At several points where the valley bottom narrows the alignments meet. It is there that large towns, Quincy and Warsaw, have developed, and major river crossings have been established.

SOUTHERN DIVISION

The southern division is composed of four districts: The Mississippi border district(southern segment), the Wabash border district, the northern district, and the southern district.

The Mississippi border district (southern segment).—A well-marked alignment of towns and villages follows the bluff side of the Mississippi Valley, and a secondary alignment of widely spaced towns and villages occupies the water front below the East St. Louis cluster. In this segment of the valley there are only two bridge crossings of the river, both of which are in the extreme southern part.

In the northern part of the southern segment the East St. Louis-Alton cluster marks the convergence of a number of alignments on the St. Louis metropolitan area, one of the major crossings of the Mississippi.

The southern district. — Weak alignments and clusters of small towns and villages characterize the settlement patterns of the southern district. From Shawneetown to Cairo a closely spaced alignment follows the Ohio River, whereas a second alignment occupies the Cache depression with a few scattered villages on the loess area between. In the maturely dissected section between the glacial boundary and the alluvial lands of the Mississippi embayment, the settlement pattern consists of three irregular alignments of little villages. There is only one town in the area with a population greater than 2500. The drainage of the area is divided into north-flowing and south-flowing streams by a well-marked east-wise divide. On this divide is an alignment of towns bearing such names as "Mountain View," "Alto Pass," and "Tunnel Hill." On both sides of the divide are the other alignments, the individual villages occupying sites in the little tributary valleys.

The Wabash border district.—An alignment of small towns and villages follows the Wabash Valley. Mt. Carmel, the largest town on the river, marks one of the three bridge crossings. There are no Illinois towns at the other two. The alignment leaves the valley where it is joined by the Embarrass River (locally Ambraw), thus the settlement pattern is conspicuously meager on the wide alluvial bottoms at the Ohio-Wabash confluence.

The northern district.—The remaining district is large and the numerous towns and villages present a settlement pattern of well-marked

alignments. A series of four or five alignments of closely spaced settlements cross the area in an east-west manner. These straight lines are, of course, railroad and highway routes from southern Indiana that converge on the Mississippi crossing at East St. Louis. A few north-south alignments cross the district, thus developing radials. The one developed on Centralia is perhaps the best. Between the slightly converging alignments a number of little villages are scattered somewhat at random. Like the eastern district of the central division, the loess covered groundmoraine presents a smooth, featureless surface over which straight alignments could easily be built. Unlike the Grand Prairie to the north, this area was forested and, therefore, there is no settlement-grove relationship. The rivers of the area, the Kaskaskia, Little Wabash, and Embarrass flow in wide alluvial valleys to the southwest and southeast. Their swampy valleys and vegetation-choked channels made them undesirable for transportation or settlement. Thus they are not occupied by settlement alignments, and the only towns in the valleys are those that are a part of the major highway and railroad alignments.

At two points, however, the alignments thicken into well-developed clusters. One is on the northwestern border of the division and the other is in the south near the drift-border. Both of these, like the clusters in the northern edge of the central division, are saxicultural groups.

CONCLUSIONS

In the above presentation certain ideas appeared with such regularity that they might well be enumerated. Among these is the varied but recurring theme that settlement patterns conform to some natural environmental patterns and seemingly neglect others. Settlement patterns make a sharp adjustment to major drainage patterns, a partial adjustment to vegetational cover, lithic materials, and the like, and seem to disregard surface features.

The second recurring point is the importance of situation. Routes of transportation, railroads and highways, and their interruptions at large rivers are the crystallizing factors of the settlement patterns. Relationship to situation is especially significant. The combination of a variety of natural environmental elements, which permits maximum occupance and presents minimum obstacles to free movement, is the natural environmental complex to which settlement patterns in Illinois are related.

From an areal point of view the comparative importance of site and situation clearly stand out. The northern and southern divisions, dominated by alignment settlement patterns, are the products of the situation of the metropolitan districts of Chicago and St. Louis, whereas the central division, just beyond the focus of both, possesses the radial pattern of the productive, agricultural plain. Further investigation, however, of the functional relation of the various settlements to their site and situation conditions would bring into sharper focus geographically the regional qualities of Illinois.