THE WESTERN RESERVE OF CONNECTICUT: GEOGRAPHY OF A POLITICAL RELIC

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THE Western Reserve, the northeastern part of Ohio which was once claimed by the state of Connecticut, is now characterized by a mixed culture of old New England and modern America. The New England background is especially evidenced by the many regularly spaced old villages. Each village is dominated by a square, and New England architecture is everywhere present in the fine old homes and colonial churches. The modern American development is best exemplified in the cities where commerce and industry have strongly attracted foreign immigrants. The Cleveland Metropolitan District, famous for its cultural gardens and nationality groups, is the most outstanding. Akron and Youngstown are the centers of the two lesser urban districts. Although long since impotent, the roots of the past still leave their indelible imprint on the present-day culture and give to that portion of Ohio the illusive name of the "Western Reserve."

A Political Relic

The Western Reserve is not a region but rather a relic of past political conditions. After the Revolutionary War, when the eastern states were relinquishing their claims to western lands, Connecticut gave up all claim to western territory except the land between the 41st and 42nd parallels of latitude extending 120 miles westward from the Pennsylvania line. This part of the present state of Ohio was known as the Western Reserve of Connecticut (Figure 1). Although contrary to the Ordinance of 1787 which created the Northwest Territory, Connecticut sold a tract of 25,450 acres in the Mahoning Valley in 1788, and in 1792 gave a tract of one and a half million acres in the western end of the Reserve to approximately two thousand citizens of Connecticut who had suffered damages to their homes during the Revolution. This portion of the Reserve was known as the "Fire Lands." Later Connecticut deeded the remainder of the Western Reserve to a small group who organized the Connecticut Land Company, surveyed the land, and finally sold it to individual owners. In 1800 the state of Connecticut relinquished to the United States all jurisdiction to the Western Reserve. Because of its early development the Western Reserve was dominantly New England. Connecticut people settled the land and brought to it their customs, and today, especially in the rural districts, the imprint of New England still remains.

Urban Occupance

Upon this transplanted New England colonial background has been superimposed a modern urban culture conspicuous for its foreign elements. Although the foreign population tends to concentrate in the urban areas, the rural districts have also received a share of the foreign born. This is especially true of districts in which vineyards, orchards, and stone quarries are important and where skills acquired in foreign lands are adaptable. It has been the development of industry within the cities that has been the real attraction to the foreign immigrants who have tended to live in clear-cut, well-marked nationality

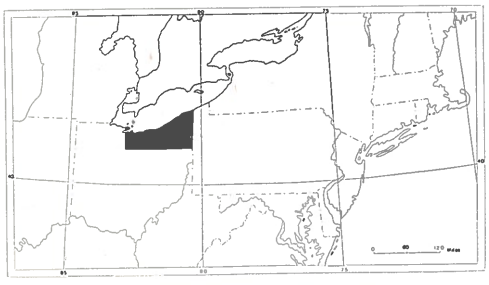

FIGURE 1.—The Western Reserve of Connecticut.

groups. The varied industry of the Cleveland Metropolitan District, the heavy industry, notably iron and steel of the Mahoning Valley, and the well-known rubber industry of Akron have all exerted their pull on the foreign groups.

Related as the several occupance types are to the Appalachian Plateau, the lacustrine plain, and the till plain of the Interior Lowland, several distinct occupance districts are readily recognizable within the arbitrary boundaries of the Western Reserve. From the point of view of area, rural districts are dominant, but from the point of view of cultural dominance, urban districts are outstanding. The largest, the Cleveland Metropolitan District, occupies the lower Cuyahoga Valley at about a mid-position in the Western Reserve. The Akron Metropolitan District to the south dominates the uplands between the Cuyahoga and the Tuscarawas valleys. The third and smallest urban district, dominated by the city of Youngstown, occupies the Mahoning Valley in the southeast (Figure 2).

Thus the present-day occupance focuses upon the Cleveland-Akron alignment which occupies the center of the region. To the west is a rural sector alike in many respects yet differing in others from the rural area to the east. Somewhat detached is the Mahoning Valley industrial area in the southeast. Although not a region in the strictest sense the Western Reserve has a real unity based upon its early development.

CLEVELAND METROPOLITAN DISTRICT

The Cleveland Metropolitan District is extensive, consisting of the city of Cleveland and many smaller cities, towns, and villages grouped in a fairly compact yet widespread pattern. Innumerable functions are centered here, which, reaching far and wide into the world of affairs, make of this district an inter-regional capital.

Urban Structure—The urban district centers on the core of Cleveland where the Public Square, indicative of its New England background, is surrounded by public and commercial functions. This focal point occupies a portion of the lake plain east of the lower Cuyahoga River near the lake front. Surrounding the core is an extensive intermediate area dominated by manufacturing, wholesale commercial activities, social and political institutions, and blighted, decadent residential districts. Adjacent to the core in the Cuyahoga Valley are the Cleveland Flats, the iron and steel center of Cleveland. On the lake front, shipbuilding, chemical industries, and the like, as well as harbor facilities occupy positions on both sides of the core. The remainder of the intermediate zone is characterized by an indiscriminate mixture of functions. Many small industries occupy railroad sites. Social and political functions utilize the well-built old homes in what formerly was an outstanding residential district. Euclid Avenue, once famous for its millionaire homes, is now conspicuous in this respect. Poor residential qualities dominate much of the district. It is here, especially in the southern and eastern portions, that the foreign population groups are found, and, as might be expected, it is within this same zone

that the several federal housing projects have been developed.

Beyond the intermediate zone is an extensive periphery in which residential as well as industrial activities are outstanding. This wide zone is largely beyond the political boundaries of Cleveland and is therefore composed of suburbs and satellitic cities. On the east much of the periphery occupies the higher land of the Appalachian Plateau and is known as the "Heights." Here, on a pleasant, wooded, rolling terrain, highly restrictive residential districts have developed. The first residential utilization was by large estates. In part due to improvements in transportation, it is now a fine residential section, the homes of which range from small well-kept cottages to extensive estates. On the narrow lacustrine plain, traversed by several railroads, is a new industrial district in which airplane parts, precision machines, brass goods, and defense products are made. Due to war conditions this portion of the periphery has witnessed an extremely rapid development which has caused the housing problem to become acute. One of the several unit housing projects has been developed here.

On the west the periphery is not as extensive as it is on the east. The better residential districts are found in the lake shore suburbs, whereas the Cuyahoga Valley residential section tends to feel the pull of the heavy industries along the railroad. This section also is dominated by extensive areas of greenhouses which cluster along the old beach ridges on the lacustrine plain.

Surrounding the periphery is an extensive extra-periphery which is an area of mixed urban and rural functions. The desire to live in the country seems to appeal widely to all classes and as a result all types of rural-urban communities are present. Improvements in transportation have greatly aided this movement, and old villages have been added to the Cleveland Metropolitan District and new ones have developed. Likewise, fully developed cities, such as Elyria, have become a functioning portion of the larger unit (Figure 2).

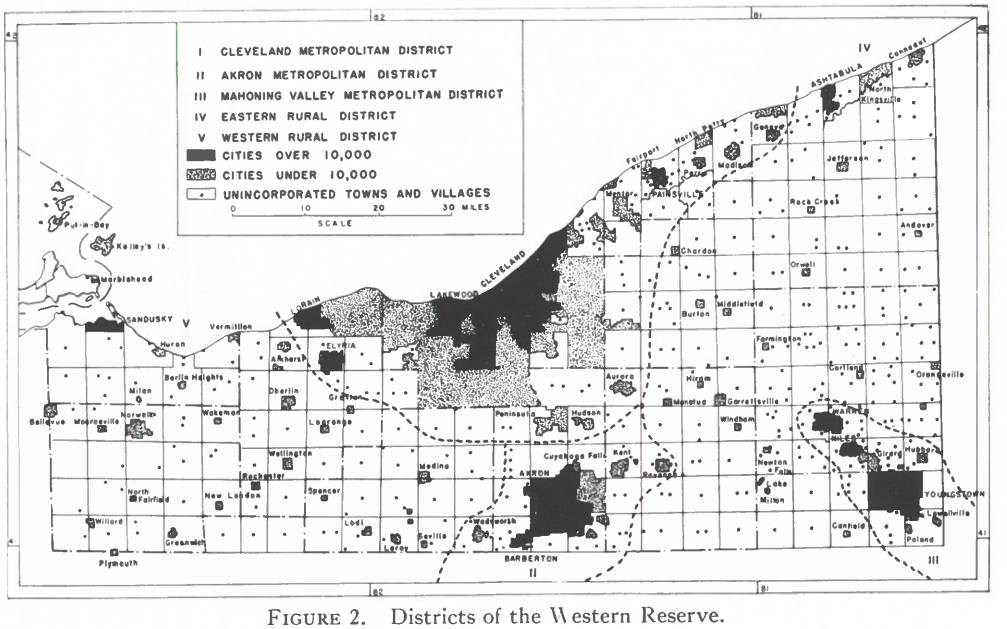

FIGURE 2. Districts of the Western Reserve.

The eastern portion of the extra-periphery is by far the largest. Here on the picturesque, rolling upland, extensive estates and exclusive subdivisions have developed. Old New England villages, such as Gates Mills, founded in 1793, have become the centers of modern development, whereas numerous new subdivisions have developed as a result of rapid transportation and vigorous real estate development. The lack of railroads in this portion of the upland has placed the full burden of transportation upon the highways (Figure 3). Well-cared-for wooded estates, private air fields, and polo grounds are evidences of the presence of wealth in this residential district. On the lake plain, following the route of railroads, are numerous towns and villages more compact in pattern than those on the upland. Here chemical and rayon factories, orchards and nurseries, as well as residential functions are closely spaced. Because of the corridor nature of the narrow lacustrine plain, separated by the steep face of the Portage Escarpment from the adjacent upland, the extra-peripheral zone is extremely wide, extending eastward almost to Ashtabula (Figure 10).

On the south the extra-periphery, in this case largely on the Interior Lowlands, consists of incorporated townships. In characteristic New England manner an old village occupies the center of each township, but its political jurisdiction has been extended to the township borders. Thus a great deal of farm land as well as much unused potential urban real estate are dominant features of the landscape. Although there are many fine country homes the evidences of wealthy rural living of the upland section are markedly absent, and in its place are many little cottages and three acre home sites.

On the west the extra-periphery is smaller and is characterized by the presence of completely developed cities such as Lorain and Elyria. The rest is a series of small towns and incorporated townships utilized alike for truck farming, orchards, and part-time farms as well as for residential purposes for the larger urban communities.

Another feature characteristic not only of the extra-periphery but also the several inner zones, excepting the core, is the presence of an extensive system of metropolitan parks following the courses of the Cuyahoga River,

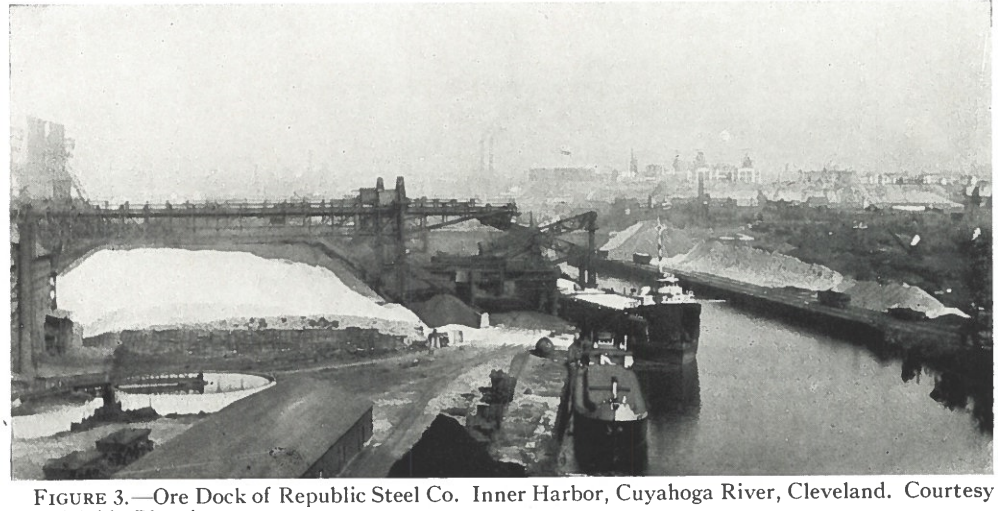

FIGURE 3.—Ore Dock of Republic Steel Co. Inner Harbor, Cuyahoga River, Cleveland. Courtesy of Adelaide Blouch.

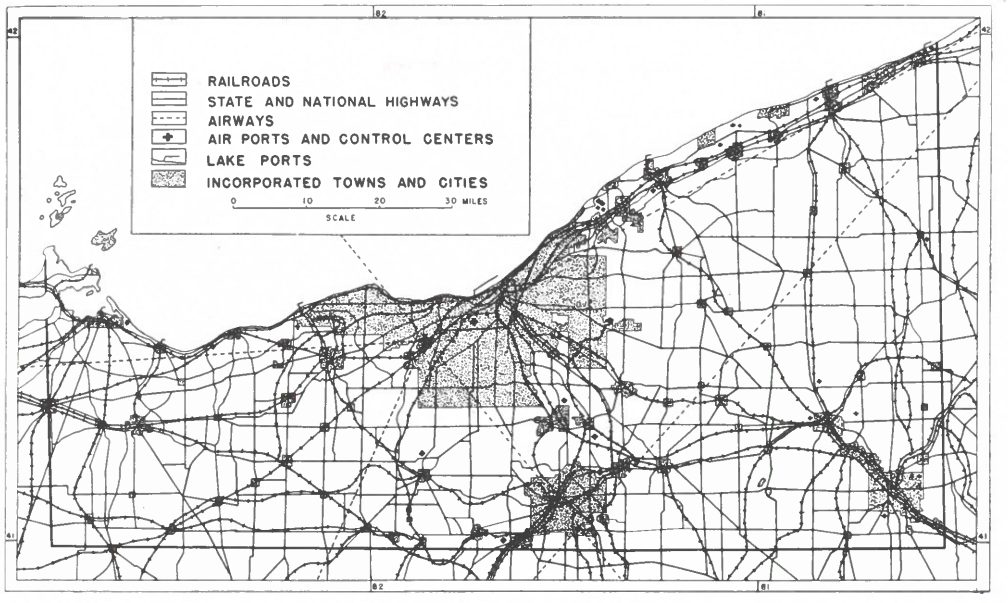

FIGURE 4.—Patterns of Transportation.

Rocky River, Euclid Creek, and several smaller streams. These stream valleys, deeply incised in the shales and sandstones, form splendid playgrounds readily accessible to the one million or more people in the Cleveland Metropolitan District.

Qualities of Situation—The importance of the Cleveland Metropolitan District is explained in a large measure by its situation and for that reason it is more than a portion of the Western Reserve. Since it is located on the southern shores of Lake Erie where the Appalachian Upland abruptly meets the Interior Lowland, east-west as well as north-south transportation of all types tends to focus here. Railroads and highways from the Middle West to the Eastern Seaboard skirt the lake and concentrate on the narrow lacustrine plain eastward from Cleveland as they follow the lowland route to the east coast. Likewise routes from the south tend to focus here in a great fan-shaped pattern (Figure 3). The major lineaments of this pattern are composed of routes from St. Louis and Indianapolis, from Louisville and Cincinnati, and from Pittsburgh. The lack of east-west railroads in the upland east of Cleveland is a significant feature. Highways, however, tend to be somewhat more regular, although they too break the grid pattern to focus on the city.

The major air route from Chicago to New York passes directly over Cleveland as well as minor routes from the north and south. Thus Cleveland has become a major airway traffic control center.

To the north the crescent-shaped pattern of the Cleveland Metropolitan District faces Lake Erie and here one of the major lake ports has been developed. All routes from the Upper Lakes center here, as well as on the neighboring ports, for the purpose of unloading ore for the important iron and steel industries of the immediate hinterland. In the same manner coal from the Appalachian Field is moved to the lake and is distributed to other portions of the country by boat. However other

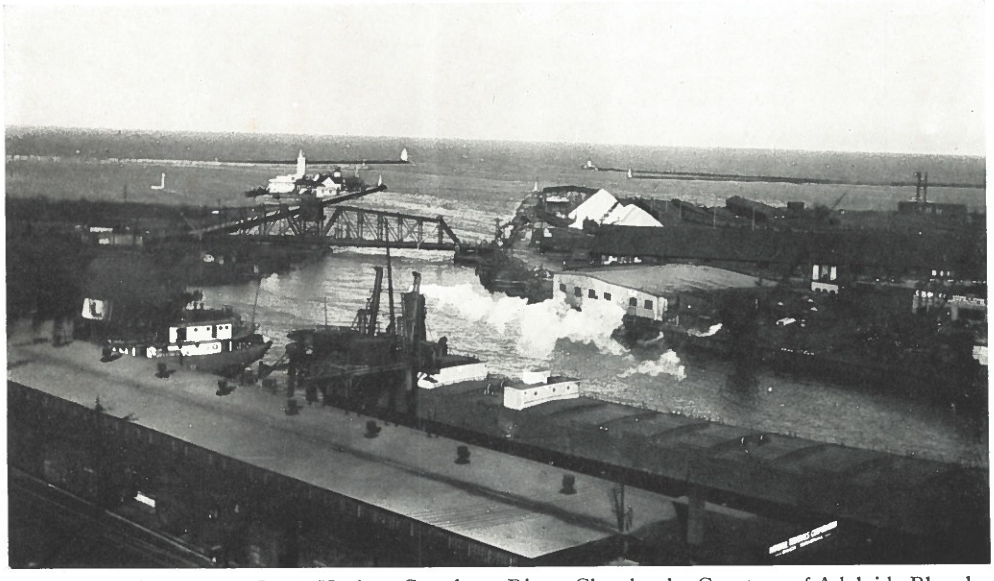

FIGURE 5.—Entrance to Inner Harbor, Cuyahoga River, Cleveland. Courtesy of Adelaide Blouch.

lake ports are more important in this respect. General freight and passenger traffic is also notable, especially traffic between Cleveland and the terminals of Buffalo and Detroit. Although a product of the Western Reserve the Cleveland Metropolitan District owes its significance largely to its situation and thus becomes a functioning unit of regions of greater magnitude.

AKRON METROPOLITAN DISTRICT

In magnitude, the second urban area is the Akron Metropolitan District (Figure 2). Unlike its neighbor, commerce is of secondary importance, whereas industry is the dominant note in its personality. That the Akron Metropolitan District is the center of rubber manufacturing is a well known fact. Neither location nor the presence of abundant resources are important factors in the Akron development.

Situated on the watershed between the Tuscarawas and Cuyahoga valleys the Akron district has had ample room to expand in all directions, although it has tended to elongate its pattern in a northeast-southwest manner. The core of the city, occupying the highest part of the watershed, centers at the point of the metropolitan district where highways tend to focus from all points of the compass (Figure 3). In characteristic manner the core is the retail commercial center. Surrounding the core in roughly a concentric ring is a secondary district of residences, wholesale commercial activities, and industry. It is in this district on the south and east that the rubber factories are located. Since they are largely dependent on railroad transportation, the railroad pattern focuses on the immediate zone just east of the core. Although rubber manufacturing is the outstanding industry, a host of others including the making of cereal foods, wood products, farm machinery, and the like are distributed through the intermediate zone, especially in the area east of the core.

Beyond the intermediate zone is a well-marked periphery composed of a variety of cultural features. On the south is an extensive industrial district including several of the new rubber

factories and the municipal airport where the famous zeppelin hangar is located. The west is largely residential and is one of the newer and better areas in which parks and golf courses have been widely developed. Likewise the northern portion of the periphery is residential. The east, to a great degree, consists of older and poorer residential areas. The outer portion of the Akron Metropolitan District is elongated towards the northeast beyond the city of Cuyahoga Falls to the towns of Kent and Ravenna. Southeastward the outer zone follows the Tuscarawas Valley and its associated railroads through the town of Barberton. Thus the southern portion of the extra-periphery is largely industrial in nature, whereas the northeast, except for the war industries of Ravenna, is residential. Like the towns in the Cleveland Metropolitan District these latter likewise possess their own urban individuality.

As the two metropolitan districts have grown in area the outer zones have approached each other by way of the Cuyahoga Valley until at the present time it is rather difficult to discern the separation. Thus the two districts, although strikingly different in many respects, constitute a well-marked urban alignment. Cleveland is the commercial capital, whereas Akron is a specialized member. Because of the nature of the Akron industry, one depending upon raw materials imported from abroad and skilled labor, location anywhere within the heart of a great nation is suitable. The circumstances that developed the rubber industry in Akron are responsible for the addition of this unique note in the urban patterns of the Western Reserve.

MAHONING VALLEY METROPOLITAN DISTRICT

Although dominated by the city of Youngstown, the Mahoning Valley Metropolitan District consists of a riverine alignment of cities and towns lacking the customary zonal arrangement (Figure 2). All are alike, however, in that the making of iron and steel is by far the most important activity. Warren, the most northerly of the group,

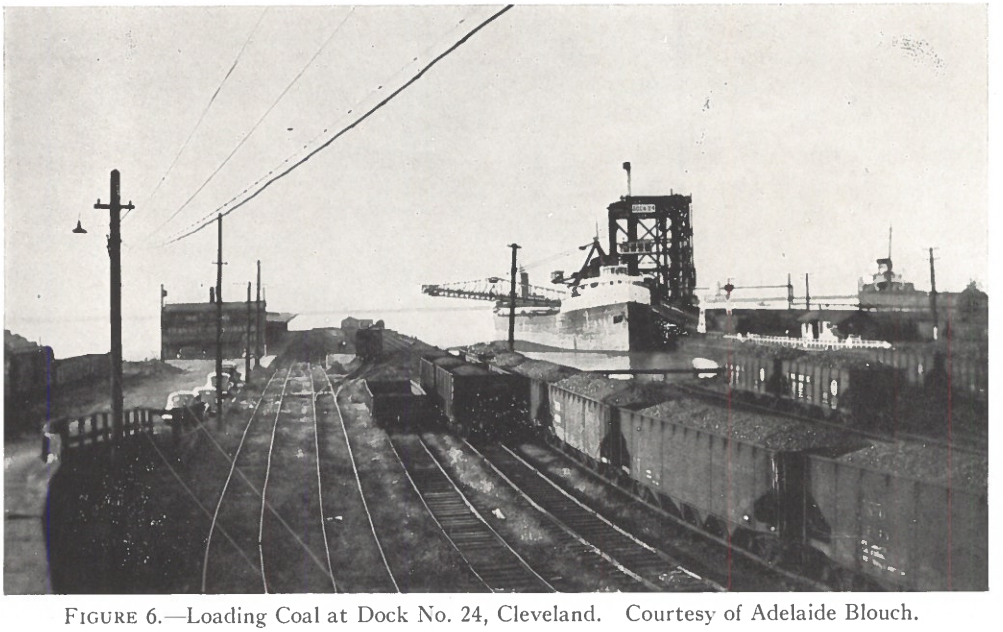

FIGURE 6.—Loading Coal at Dock No. 24, Cleveland. Courtesy of Adelaide Blouch.

lies near the head of the valley where railroads from Cleveland, Fairport, and Ashtabula focus (Figure 3). Youngstown dominates the group and occupies the site where railroads from Conneaut as well as from the Shenango Valley join the Mahoning Valley group. Girard and Niles occupy the narrow valley between Warren and Youngstown, whereas other villages and towns occupy positions beyond Youngstown. In this valley coal from the Appalachian fields meets iron ore from the Upper Great Lakes. The floor of the valley is the site of the heavy industries; thus the unusual condition of heavy industries adjacent to the core of a city. This is true of both Youngstown and Warren. The cores of these cities occupy the highland just above the river valley and the industries the adjacent lowland. Because of the dominance of the manufacturing of iron and steel in the valley foreign populations are large, and the cities are characteristically mill towns. Residential areas, especially those near the industrial sections, are poor. It is only in the outer districts of the cities that better living conditions are found. Youngstown, especially, lacks the residential quality of the extra-periphery so characteristic of the Cleveland Metropolitan District.

Although a portion of the Western Reserve, the Mahoning Valley is definitely inter-regional in character since it is a portion of the much larger Upper Ohio Industrial Region.

STAGE OF URBAN DEVELOPMENT

The three Western Reserve urban districts contrast sharply in pattern, form, and function. The Cleveland Metropolitan District, a regional capital, displays a marked adjustment to the lake plain and adjacent uplands. As such it is asymmetrical in pattern and reflects the focus of land, water, and air routes as a regional capital should. The Akron Metropolitan District on its interior site reflects the development of an urban area dependent upon specialized industry in which bulk transportation and nearness to special markets are not critical factors. This district is representative of the con-

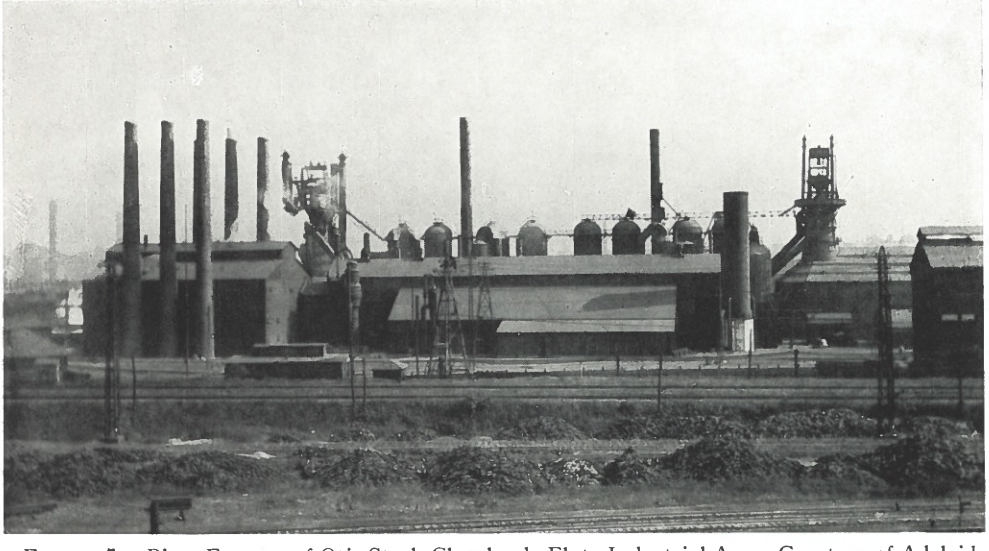

FIGURE 7.—Blast-Furnace of Otis Steel, Cleveland. Flats Industrial Area. Courtesy of Adelaide Blouch.

FIGURE 8.—Coke Ovens—Quenching Tower—Republic Steel Company. Cleveland flats industrial area. Courtesy of Adelaide Blouch.

centrically developed pattern on flat land. The Mahoning Valley Metropolitan District in contrast is attenuated in pattern expressing sharp adjustment to a riverine site in which location in relation to bulky commodities is an outstanding requisite. The Mahoning Valley is likewise a specialized industrial district, in this case heavy industry.

Although exhibiting marked contrasts the three metropolitan districts have several qualities in common. Situation in relation to the commercial and industrial structure of the nation is more important than position within the Western Reserve, for locally produced materials are of minor importance to their commercial and industrial functions. The opportunity of working in industry in each metropolitan district has attracted a foreign-born population, especially from southern, central, and southeastern Europe, which has done much to obliterate the New England origin of each district. It has been the influx of the foreign-born that counted heavily in the expansion of the urban areas to their present stage of development. A well-established group of industries localized in relation to definite natural environmental advantages, a pool of labor both skilled and unskilled, and a nation-wide or even world-wide reputation are characteristics common to all three urban districts. Well-developed commercial activities, especially retail establishments, maximum residential areas in relation to those of other functions, and a wide variety of social organizations, both private and public, are further evidences of the ability of the districts to support the greatest number of people on the highest standard of living. A rising standard of living and a rapidly increasing population are characteristic of a boom town and are indicative of a youthful stage of development. Whereas an urban population increasing at a decreasing rate at the same time maintaining the high living standard which is characteristic of the Western Reserve urban districts, is further indication of urban maturity.

FIGURE 9.—Montana Milling Co., adjacent to the core of Cleveland. Courtesy of Adelaide Blouch.

RURAL OCCUPANCE

Outside of the urban districts the Western Reserve is divided into two parts, the Eastern and Western Rural Districts (Figure 2). The line of demarcation is quite clearly drawn along what has been called the Cleveland-Akron alignment. Thus the eastern portion is associated with the Allegheny Upland and the narrow lacustrine plain, whereas the western portion occupies the Interior Lowland (Figure 10). Although the same township and village pattern with its marked New England origin is characteristic of both districts, sharp contrasts give to each their own individuality. The east grew slowly and steadily to its present development, whereas the west reached its peak about the time of the Civil War and has since declined. The east tends to partake of the qualities of agriculture of eastern United States, whereas the culture of the west resembles that of the Corn Belt. Thus the personalities of the rural districts quite clearly reflect the relationships of their New England culture to the contrasting elements of the natural environment of the Western Reserve.

EASTERN RURAL DISTRICT

Towns and Villages—One of the conspicuous features of the Eastern Rural District is the arrangement of the villages, towns, and cities. Most of the large towns and cities are concentrated on the narrow lacustrine plain in two well-marked alignments; one on the landward side and one on the lake side (Figure 3). The lake-side towns and cities are for the most part lake ports and resorts, whereas the second group are railway towns which are located on the well-graded lacustrine plain. The economic functions of the former group are largely concerned with lake shipping for interior cities, whereas the latter tend to be market towns for the intensified agriculture of the immediate areas.

On the upland there are few large towns or cities, and population tends to be evenly spread. Small villages, the majority of which are unincorporated, are spaced at fairly regular intervals in relation to a pattern of highways which tend to be oriented with the cardinal directions of the compass (Figure 10). These villages function chiefly as rural agricultural market towns, and, since the railroad pattern is not well developed in the eastern upland, the county seats tend to be the only ones assuming prominence. The railroads in this portion are largely north-south lines and are designed to transport iron ore from the several lake ports to the industrial sections of the Mahoning Valley. Several of the villages are served by these routes and therefore have increased a little in importance.

It is in the pattern of these villages that the New England origin is most apparent. The village squares, surrounded by stores and colonial churches, are the conspicuous elements. Although largely agricultural market towns, a few have taken on an extra note in their personality. Maple sugar camps, a small rubber factory, creameries, lumber mills, and a few grist mills add diversity to the market center quality. The Eastern Rural District is definitely

old and presents a stable though not wealthy agricultural economy. Agricultural market towns, unincorporated villages, lake-side towns, and farms dominate the scene. Farms of medium size, many of which are still operated by descendants of the original owners, are mainly concerned with general mixed agriculture in which the feeding of livestock and the producing of dairy products assumes an important place. Hay and fodder are important agricultural crops. Corn is less significant, and small grains, especially wheat, are not outstanding. Although a considerable portion of the area is under cultivation, woodlands, pastures, and meadows are conspicuous. The rolling nature of the upland and the mediocre quality of upland soil give some insight to this type of utilization. Nearness to the several urban districts is also a factor in explaining the importance of the dairy industry. The fact that the Eastern Rural District has never been a wealthy agricultural land, but has grown slowly and maintained its position in a stable manner, is in keeping with its upland environment and its present contact with urban districts.

Agricultural Patterns—Almost three-fourths of the land of the Eastern Rural District is occupied by farms. Farm occupance varies from place to place reaching a maximum of four-fifths in the northeast. The crop combination consists of hay and forage, corn, and small grains. In this respect, together with a wide distribution of small woodland plots, the Eastern Rural District exhibits the general agricultural qualities of the Appalachian Upland.

Acreage in small grains is nowhere very great. In the south, where less than three-quarters of the total area is devoted to farms, small grains are most important, but even there they rarely exceed 13 per cent of the farm area. Over the rest of the district small grains are grown on one-tenth or less of the farm area. Corn lands assume much the same pattern. The northeast is the least important. There corn land amounts to approximately eight per cent of the total farm areas. The south, however, is somewhat more important, but even there corn acreage does not exceed ten per cent. Thus, the Eastern Rural District consists of two parts in so far as the general crops are concerned. The northeast, although more completely utilized by farms, tends to be less completely cropped, whereas the south, occupied to a less extent by farms, has a larger proportion of farm area in crops. Forage and woodland are important in the agricultural economy of the northeast and probably express the true nature of the Eastern Rural District, whereas the south grades imperceptibly into the agriculture of the Western Rural District, which in turn partakes somewhat of Corn Belt qualities.

Tilled Crops—Although the largest proportion of cropped farm land is utilized for corn, the proportion of total area is relatively small. In no place is more than six per cent of the total area so used, the southwest being highest in this respect. Most of the corn in the southeast is harvested for grain, whereas in the north it is utilized for other purposes. Production per acre is higher in the central part of the district than in the rest of the area. There it is more than 40 bushels to the acre. This is due in part to a wide post-glacial valley that has been partially filled with alluvial materials through which now meanders the Grand River (Figure 10). The deep soil and the flat terrain here contrast sharply with the thinner soils of the remainder of the rolling upland.

The total area in wheat, both spring and winter, is somewhat less than corn.

Spring wheat acreage is insignificant in comparison with that of winter wheat. Throughout the entire district winter wheat tends to be spread in about the same fashion as is corn, with about twice as much acreage in wheat in the south as in the north. However, no more than four per cent of the total area is used in this manner. Productivity is not especially high. In the Grand River Valley, where between 15 and 20 bushels per acre are produced, a peak is reached for both spring and winter wheat on the lacustrine plain in the lower course of the river. On the upland, especially to the east, acreage is lowest. Other small grains follow about the same pattern. Approximately five per cent of the area is utilized for oats and about one per cent of the area for rye. Production per acre for both small grains is relatively small, being about 13 bushels per acre for rye and 25 for oats.

A variety of other tilled crops is produced in the Eastern Rural District of which potatoes are most important. It is in the valley of the Grand River where potato cropping is most concentrated. Here about two per cent of the total area is used for potatoes, although in the adjoining northeastern uplands one per cent of the total area is utilized in this fashion. Production is high, averaging better than 150 bushels to the acre over most of the producing area. In the same locality, especially on the lacustrine plain, are greenhouses and nurseries. The lacustrine plain at the mouth of the Grand River is notable for nurseries, whereas farther east on the lacustrine plain, especially in the vicinity of Ashtabula, greenhouses are important.

Hay and Forage—Hay and fodder crops are especially outstanding. Sorghums, legumes, small grains, timothy, clover, alfalfa, and other tame and wild grasses constitute the bulk of this group. Timothy, clover, and sorghums are most outstanding in amount of total area utilized. The three combined occupy in some places more than 13 per cent of the total area. Although fodder

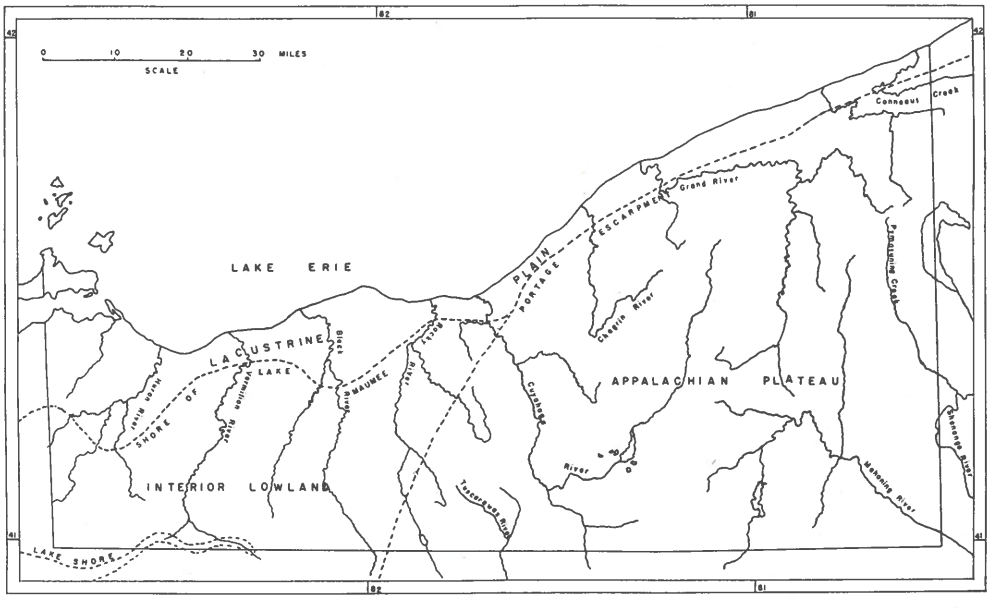

FIGURE 10.—Physiographic Patterns of the Western Reserve.

crops are important everywhere, the extreme northeastern upland is outstanding for all with the exception of alfalfa. Alfalfa, like corn, is more important in the valley of the Grand River, especially in the lower portion of the valley. In production, however, areas differ. Legumes are outstanding in the uplands, whereas clover is important in the lower Grand River Valley. Small grains and sorghums are most productive in the southwest in which most agricultural commodities, especially corn, wheat, and other small grains are important. This section is composed of the valleys of the Grand and Cuyahoga rivers (Figure 10).

Pasture and Woodland—Over most of the district 20 per cent or more of the farm land is occupied by pastures, woodlands, and waste land. This type of utilization reaches a climax of approximately one-third of the farm area in the uplands between the Grand and Chagrin rivers in Geauga County, famous for its maple sugar. Woodlands are most notable on the aforementioned upland lake bluffs, and adjacent plain where they occupy more than 15 per cent of the farm land. There are numerous orchards on the northern edge of the Appalachian Plateau where the Portage Escarpment faces the lake, and at various places on the lacustrine plain below, where air drainage from the upland reinforced by lake influences retards the frost hazards. The mouth of the preglacial Grand Valley as well as its associated lake plain is especially noteworthy in this respect. A second area is associated with the bluffs of the Chagrin Valley and a third with those of the Conneaut. The remainder, however, is not devoid of forests, for more than ten per cent of all farm area is in woodlands. Pastures are second in importance ranging from a high of 21 per cent of the farm land in the valley of the Pimatuning River to a low of eight per cent in the wooded divide between the Chagrin and Grand river valleys (Figure 10).

Livestock and Dairying—In this setting of forage and tilled crops, woodland, and pasture which are associated with the rolling surface of the Appalachian Plateau, livestock raising and dairying have become important. The Eastern Rural District is the dairy section of the Western Reserve, having as its center the upper valleys of the Grand and Chagrin rivers and the associated divide. Here for each acre in crop and pasture there is at least one dairy animal, whereas in the remainder of the district as well as in the rest of the entire Western Reserve the density of dairy animals is considerably lower. The nearness of the district to the several urban centers as well as the comparative disadvantages for tilled crops are outstanding factors of importance to dairying. Other animals, however, are relatively unimportant. This is especially true of hogs and sheep. Since tilled crops are not important, the need for draft animals is not great, and, therefore, mules and horses are of little importance. An exception, however, is the small section of intensive agriculture, especially the nurseries and orchards, on the lacustrine plain and morainic ridges at the mouth of the Grand River. Here draft animals are most numerous.

Thus the Eastern Rural District is an area of dairying in which pasture, woodland, and forage crops are dominant, and corn, small grains, and other tilled crops are of less significance. This personality is the outcome of a slow but steady growth to its present state of maturity. In it are reflected the less desirable qualities of the Appalachian Upland as an agricultural land as well

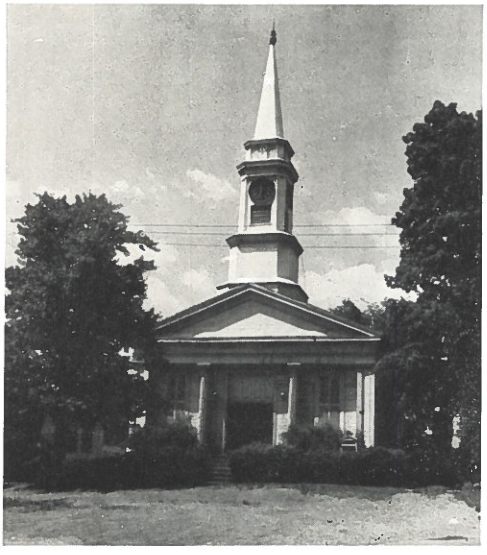

FIGURE 11.—Congregational Church, Twinsburg, Ohio. Courtesy of Finley Foster.

as the advantages that nearness to urban markets provide.

Rural Industries—A variety of rural industries have developed from the products of agriculture. Saw mills are widely distributed although the largest number are found in the extreme northeast. Seasonal industries based on perishable agricultural commodities and forested products are concentrated in the upland between the Grand and Chagrin valleys. Usable clays are widely scattered, although the greatest concentration of ceramic industries, especially brick making, is found in the southeast near the Mahoning Valley Urban District. Some coal deposits also are worked in the south. Related to the salt deposits on the lake plain at the mouth of the Grand River is a large chemical industry. Thus, a variety of non-agricultural activities gives a note of diversity to the agricultural personality of the stable Eastern Rural District.

WESTERN RURAL DISTRICT

The Western Rural District occupies the till plain of the Interior Lowland. The soil here is deep and more productive than that of the Appalachian Upland, and, largely for this reason, the district reached its maximum development before the Civil War. The agricultural villages, which are here spaced regularly at five-mile intervals, are characteristically New England in pattern but now have smaller populations than they had 80 years ago. A few railroad towns in which industries have developed have increased in population. The wood-working industry of Norwalk, the railroad machine shops of Willard, the machine shop industries of New London and Wellington, and the trucking interests of Monroeville are examples of this type (Figure 2). Sandusky is the only city of over 10,000 population. Its significance is due, in part, to its position on Sandusky Bay where roads and railroads from all directions meet the lake.

As in the Eastern Rural District corn, small grains, and hay dominate the agricultural landscape although production per acre and the proportion of land in crops is considerably higher. Livestock, especially hogs and sheep, are more important, whereas dairying is less so. Secondary agriculture, such as truck farms and vineyards, is also important on limited sites, notably the beach ridges and the peninsula of Marblehead.

Fishing villages and summer resorts line the lake front. Sandstone is quarried in the vicinity of Amherst, and limestone from Marblehead is shipped to the cement factories across the bay and to the steel industries farther east. The Marblehead peninsula is dotted with orchards and vineyards, and there are wineries and distilleries in the Sandusky district.

Over the flat lands of the till plain a series of short streams pursue parallel courses to Lake Erie. The Huron,

Vermilion, and Black rivers are the three most important ones (Figure 10). Their lower courses cross the level surface of the lacustrine plain interrupted only by low sandy beach ridges. The upper courses drain the undulating surface of the till plain. Upon these two types of land have been developed the several agricultural economies. The early importance of agriculture to this district is indicated by the place once held by wheat. The village of Milan on the Huron River a few miles north of Norwalk (Figure 2) in pre-railroad days was an outstanding shipping center for wheat, which was stored in great warehouses and shipped by boat down the Huron River to Lake Erie and thence to more eastern markets. The development of railroads and highways as well as the opening of richer agricultural land to the west has checked the importance of agriculture and helped to change the personality of this portion of the Western Reserve.

Tilled Crops—The southwest corner, chiefly on the Interior Lowland, is most important agriculturally. It is here that farms are largest, owner operators fewest, and the acreage of harvested crops largest. The two leading crops, corn and wheat, reach their greatest importance here. Other small grains, especially oats, barley, and rye, are minor. Rye is of greater importance on the rougher land farther east, especially on the rolling lands where the Appalachian Plateau meets the Interior Lowland. Oats, since they are produced for animal feed, conform to the general agricultural pattern.

Hay and Forage—Timothy and clover are the most important hay crops. In the southwest over ten per cent of the total area is used for a combination of these two. Alfalfa and sorghums are the next most important forage crops, although they are minor since less than one per cent of the total area is devoted to either. On the lacustrine plain south of Sandusky other forage crops such as sweet clover and tame and wild grasses are important. Small grains cut for forage, however, are distributed much the same as alfalfa, timothy, and clover and therefore are most important in the better lands of the Interior Lowland.

Pasture and Woodland—Pasture is relatively unimportant in the Western Rural District. The area of greatest importance in which over 18 per cent of the farm land is so used is found on the Interior Lowland between the Vermilion and Black rivers. This area, however, is not as significant as the pasture lands of the Eastern Rural District. Pasture in rotation, since this is a till crop district, is much more significant. Woodlands, although not lacking, are least important of all general types of utilization. The only section in which the percentage of farm land in woodland reaches as much as 15 per cent is a small area in the south at the headwaters of the Black and Vermilion rivers. The lacustrine plain is least important since only five to ten per cent of the farm land is wooded.

Livestock and Dairying—To the general pattern of till crops, forage, and pasture is related the pattern of livestock raising. Cattle raising and dairying are relatively minor over the entire district, whereas hogs and sheep are outstanding. The ratio of hogs to crop and pasture land is one animal to 15 acres, whereas one animal to ten acres is true of sheep and lambs. Although hogs are most numerous in the west, both on the lacustrine plain and the Interior Lowland, sheep are more than twice as numerous on the Interior Lowland as they are on the lacustrine plain. Since the Western Rural District, especially the southern part, is a land of general

mixed agriculture in which till crops are important, horses and mules are most outstanding here since they are used for draft purposes.

Special Crops—Two types of special crops, fruits and vegetables, are characteristic of the Western Rural District. The orchards and vineyards are concentrated on the peninsula of Marblehead and nearby Bass Island and a small section of the lacustrine plain adjacent to Sandusky Bay where frost protection is afforded both by air drainage and the warming effects of Lake Erie. On the rolling edge of the Interior Lowland and the beach ridges of the lacustrine plain between the Black and Vermilion rivers is another orchard and vineyard district. Greenhouses are likewise concentrated in the same section on the beach ridges of the lacustrine plain and the northern edge of the Interior Lowland. The city of Elyria is approximately centered in the greenhouse vegetable district. Potatoes are an important agricultural crop on the lacustrine plain and on the poorer lands farther east. The marsh lands of the lake embayment on the southern edge of the district are important in a few spots for market produce.

AGRICULTURAL CONTRASTS

The Western Rural District surpasses the Eastern in most functions. No place in the Eastern Rural District, except in the Grand River Valley, does the amount of land in farms approach that of the Western. Farms occupy more than 80 per cent of the total area of the Western Rural District and in a few places reach as much as 90 per cent. The size of farms also is larger here for farms of over 100 acres are the rule as compared with those between 70 to 80 acres in the Eastern Rural District. In one respect, however, the latter dominates and that is in owner-operated farms. A much higher proportion of tenants live upon the farms of the Western Rural District. This is in part due to the fact that the land, being more productive, had a ready market and therefore has changed hands more often. Absentee ownership has therefore developed. Again since the area is largely the rolling terrain of the Interior Lowland a larger proportion of the total area is arable. As much as 65 per cent of the total area is available for crops, whereas no place in the east is as high as 50 per cent. Farm lands in harvested crops are likewise greatest in the west. As much as 60 per cent is used for harvested crops, whereas about 40 per cent is the best in the east.

FIGURE 12.—Chagrin Falls, Ohio. Courtesy of Finley Foster.

Corn, small grains, and hay dominate the agricultural economy as they do in the east. However, about twice as much area is utilized for corn. There is little difference in the productivity of the two agricultural sections. In both, bushels per acre are between 35 and 40. Wheat is second in importance to corn. In the Western Rural District wheat and corn are about equal in the proportion of land utilized, whereas in the Eastern Rural District about twice as much area is used for corn as for wheat. The spring and winter proportions are approximately the same in both districts, with a slight increase in

spring wheat in the western part of the Western Rural District. In productivity, however, both spring and winter wheat varieties are outstanding in two sections. Whereas approximately 15 bushels per acre is the average production for the Western Reserve, the lacustrine plain of the Sandusky area and the mouth of the Grand River are the two areas where production is between 20 and 25 bushels per acre.

FIGURE 13.—The Bronson House, Peninsula, Ohio. Courtesy of Finley Foster.

STAGE AND RURAL DEVELOPMENT

Through the entire rural area of the Western Reserve runs a note of solidarity, of completeness of utilization without congestion, of comfortable rural living. The well-built old New England farm houses and the regularly spaced villages together with their Anglo-Saxon names on most of the mail boxes—names of the original owners—contribute directly to this quality. Long ago the population ceased to show signs of rapid increase, for the rural economies have long since reached a point where they are supporting a capacity population on the highest living standards. The original New England impression remains, with minor alterations of modern technology. Stable maturity characterizes the rural districts of the Western Reserve.

AREAL MATURITY AND GEOGRAPHIC STABILITY

The Western Reserve, a region in the sense that obsolete political boundaries give it areal delimitations and the cultural forms and patterns of an early occupance help to color its personality, clearly presents evidences of maturity. The ratio of population to the sum total of natural environmental resources, the general standard of living, and the qualities of stability are the basic criteria of its present state of geographic development. The urban districts, stimulated by industrial development several decades ago, increased rapidly but have since leveled off to a slow but steady increase measured in terms of the general ability of the districts to support those people. World War I did much to accelerate the urban districts. The rural sections display the same balance in a different manner. The Eastern Rural District in relation to the poorer lands of the Appalachian Upland has experienced a slow but steady increase of population throughout its entire existence, whereas the Western Rural District grew rapidly as the better lands of the Interior Lowlands were brought under production. Competition with better lands farther west caused an actual decrease until a final mature balance of people and supporting natural environmental resources was reached.

The ability of maintaining the highest standard of living commensurate with the sum total advantages and disadvantages of the area is a second significant quality of maturity. The urban districts as well as the rural display this quality. True, they are not all equal in wealthy living; each displays a general level of living in keeping with the balance of advantages and disadvantages attendant upon the conditions of site and situation of each area. In the rural districts the proportion of tenant operated farms is indicative of an agricultural land rich enough to support tenants and absentee owners.

To the general observer the condition of the farmsteads, the fences, the crops in the field, the quality of the livestock, the highways, and the little commercial villages are evidences of comfortable, profitable rural living. Tenant-operated farms are much more numerous in the Western Rural District, a fact which adds evidence in favor of a slightly higher standard of rural living in that district. As has been already pointed out each of the three metropolitan districts presents a distinctive personality, no small part of which is evidenced by the standard of urban living maintained in each. Thus it appears that maturity from a geographic sense is that stage in areal development in which the greatest number of people is supported on the highest standard of living. In other words, a climax development has been reached. The endurance of that climax, the permanency of that maturity, however, depends largely upon a quality that may be expressed as stability—the ability to return to a functioning state of maturity when forces disrupting the economies upon which that maturity is based are removed. This quality in the final analysis goes back to the very fundamentals of the geographic concept—the wisdom with which the human elements have utilized the natural environmental resources, singly and collectively, to further their cultural pursuits. Obviously, unwise utilization, although it may produce high living standards immediately, is an instable condition, and will eventually lead to permanent decline. A good measure of stability is the ratio of the total weight of tenable economic, social, and political adjustment to natural environmental resources over maladjustments. The weighing and evaluating of the utilization of natural environmental resources is no simple task. The personality of each district, however, seems to substantiate the qualities of stability and justify the characterization of the Western Reserve as an area of stable geographic maturity.

World War II has released the forces that will test the stable qualities of the structure of the area. The nature of the industries of the three urban districts is such that the disruptive forces fall directly on them. To say that iron and steel, rubber, and machine tool industries have increased so rapidly that they have placed a heavy drain on the immediate labor supply is a mild understatement. The unprecedented increase in industry, especially in the production of war goods, is causing a profound change in the entire geographic structure. Rapid plant expansion is most characteristic. In the rural as well as in the urban districts new factories have sprung up and old ones have enlarged in record time. In each metropolitan district as well as in numerous towns and villages of the rural districts private industries are enlarging and are being taken over wholly for war work. The arsenal north of Ravenna and the ordnance plant south of Sandusky are government activities. War goods dominate the industrial economy.

In response to the rapid change in industry several other sharp disruptive forces have set in. The need for labor of all types and the attraction of high wages have drawn people from other activities and areas to the industrial sections of the cities. This tendency, along with the selection of men for military service, has put a heavy drain on the structure of the rural districts. Since the newcomers are not only from the rural districts of the Western Reserve but from areas as far away as West Virginia and Kentucky, an even greater strain has been placed upon the urban districts. The lack of adequate

housing was the first evidence of the disruption. Trailer camps, housing projects, and the control of rents by the declaration of defense housing areas were direct results. Further evidences of disruptive forces are the crowding of public schools in the defense plant districts, the rising cost and scarcity of consumers' goods, and the rationing program. The rationing of gasoline is especially significant in those outlying residential districts depending almost entirely upon private automobiles for transportation. The Cleveland Metropolitan District with its extensive residential areas scattered far and wide beyond the limits of public transportation feels the effect of transportation curtailment very keenly.

In the rural districts the disruptive forces have been felt in a different manner. Except in the areas where war plants have been introduced, the problem of too few, rather than too many people has been the pressing one. Available labor has been greatly reduced both by the armed forces and by industries. Agricultural production, especially in certain commodities, has fallen due to insufficient labor at critical times. Orchards, vineyards, truck and market gardens, and greenhouses have had to curtail their production in part due to the lack of sufficient labor at harvest time. Dairying also has been affected by the labor shortage. The size of dairy herds is decreasing by the sale of animals due to insufficient help to care for the number of animals characteristically supported by the Eastern Rural District. The county commissioners of agriculture are attempting to meet this problem by advising the careful planning and budgeting of the time of available farm labor throughout the year. Curtailment of agricultural production is reflected in both rural and urban districts. Although the depleted stocks of food reflect the war trends of the entire nation, a curtailment of milk is a local problem since most of the dairy products of the urban districts come directly from the Eastern Rural District. In the rural districts seasonal industries, especially those based upon perishable fruits and vegetables suffer from a depleted source of supply.

Thus in innumerable ways World War II is disrupting the economies of the Western Reserve as well as those of all the rest of the nation, in fact, of the world. If the mature stage of geographic development was one of stability, as ample evidence seems to indicate it was, at the beginning of the war, it would be logical to expect it to return to the same stage after a victorious termination of the war. It need not follow that identical activities will be pursued in the same manner as before, but that the sum total of economies in relation to the composite advantages and disadvantages of natural environmental resources will be such that the greatest number of people will continue to live on the highest standard of living in the Western Reserve.

EDITORIAL

POST-WAR GEOGRAPHY

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IT is part of the American way of life that the individual initiative and intelligence of our people should be fully utilized to solve their own problems. There will be a great challenge to all interested in geography and its place in school and college curricula when this war is over. The utmost intelligence and initiative of American geographers will be necessary to meet the crisis in American education. Such compelling challenge should arouse their determination and their resolve that in all the decades to come the study of "the earth as the home of man" shall be accorded the great importance that is its due.

World War II, with its planet-wide battlefields, its emphasis on "global strategy," its unprecedented use of maps, and above all, perhaps, the growth of air mindedness of all the armed services, has turned the attention of the public to world geography as all articles, papers, and appeals of all geographers in the world could not possibly have done. Geographic training as a real war asset has been recognized. Can, and will, geographers see to it that this great interest and appreciation are not lost? Will they collectively, the nation over, guarantee that real and scientific programs of geography teaching are imbedded in the curricula of every school in the country down to primary grades and up to and including senior classes in the high schools? Will universities and colleges accept the challenge and perform their part? (One might almost say their duty.) Their part must of necessity be the training of teachers properly grounded in the basic principles of one of the most difficult of disciplines—this of earth-man relationships. For it must be recognized that geographic concepts, and even mere content of geographic knowledge, can only be attained by long and intensive study analogous to that pursued by the geologist or the historian. Geographers must insist that ill-prepared teachers be replaced by others thoroughly trained, with at least an A.B. in the science.

The war has definitely shown the need for more and for better trained geographers. Even before Pearl Harbor, the General Staff were calling in officers who had had geographic training. At the present time over a score of officers or civilians are engaged on geographic intelligence in the War Department and the available supply is practically exhausted; for the Army Map Service, the Air Corps, and the Navy have all dipped into the dwindling reservoir of geographers until it has been depleted. Especially is this true since the civilian branches of the government, having equal need of geographers, have likewise drawn from the same shrinking source. Among the agencies that have recognized and called for more and more men and women with specialized geographic training, have been the Department of State, the United States Board of Geographic Names, the Office of Economic Warfare, and particularly the Office of Strategic Services. At a conservative estimate, half the professional geographers of the country are either now permanently in government service or are periodically called in for temporary duty. The truth is