

# Kirtland: A Perspective on Time and Place

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In a sense Kirtland, Ohio, 1831 to 1838 is a single tree in a forest of places and events. It is well to study the tree, or even to spend time in analysis of one leaf on one branch of the tree, but neither the tree nor a single leaf thereon can really be understood without reference to the entire forest. Each event in time is unique in its relationship to other events. Each place is unique in its relationship to other places. Each group of people we might study lives at a time and in a place and has a unique perception of its environment, framed in time and place, strongly affected by times past and by its location. The citizens of the Kirtland, Ohio, area in the 1830s, both Mormon and non-Mormon, had to gain a living from day to day. They farmed, manufactured, traveled, bought and sold land, talked of the past, tried to anticipate the future, were rained upon and snowed upon. If we are to judge their way of life, their decisions, it seems valid to suggest a look at their tree in the context of the forest. There is no pretension that this can be accomplished in one short article, but even a brief series of comments may broaden our perspective of place and time in Kirtland.

## KIRTLAND: SITE AND SITUATION

A modern physiography describes the situation of Kirtland as lying on the northern margin of the Allegheny Plateau, overlooking a narrow lake plain.<sup>1</sup> The people in the 1830s used the

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<sup>1</sup>Nevin M. Fenneman, *Physiography of the Eastern United States* (New York: McGraw Hill, 1938), p. 306.

term *plain*, but referred to the plateau as hills, for while the rock structure is essentially horizontal, the surface is almost completely in slope, and *billy* would still remain the most accurate description. The plain between the shore of Lake Erie and the hills to the south is some five miles wide near Kirtland, but widens out to the west. Both plain and hills show the evidences of glaciation. A few observant people even as early as 1835 began to guess concerning the fact that the long low ridges of sand and gravel inland from the present shore were ancient beaches from higher levels of the lake. Even those who cared nothing about how or why these ridges occurred, however, were quick to use them as routes of travel as the forest was cleared away. They were level, well drained, and relatively straight. The glacially disrupted drainage patterns, giving rise to many areas of marsh and swamp, were also an obvious fact of life even to those who knew nothing of later theories on glaciation. Much of the lake plain west of Cleveland was swamp, and travel to Detroit was often difficult or even impossible.<sup>2</sup>

The continental ice sheets altered much of the drainage pattern of Ohio, leaving the divide between the drainage into Lake Erie and drainage into the Ohio River, just a few miles south of the lake. The divide was relatively low and often almost imperceptible. Almost as early as the first settlers there was agitation for construction of canals connecting the lake and river system, often with only the most hazy notion of the actual elevations involved.

Among the short streams flowing off the northern slope of the plateau, two are of major significance in dealing with Kirtland. The East Branch of the Chagrin River makes a sharp bend as it leaves the plateau area and the first settlers of Kirtland saw in this site the opportunity to divert the stream across the bend and set up a mill.<sup>3</sup> The other stream is the Cuyahoga, lying some twenty miles to the west, which became the location of the Ohio Canal, fixed the location of Cleveland,<sup>4</sup> and influenced the entire economy of the region.

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<sup>2</sup>Timothy Flint, *A Condensed Geography and History of the Western States*, Vol. 2 (2 Vols; Cincinnati: William M. Farnsworth, Printer, 1828), p. 293.

<sup>3</sup>Kent R. Fielding, "The Growth of the Mormon Church in Kirtland, Ohio," Unpublished Ph.D. Dissertation, Indiana University, 1957, p. 208.

<sup>4</sup>Harland Hatcher, *The Western Reserve* (Cleveland, Ohio: World Publishing Company, 1949), p. 26.

In broad perspective the landforms in Western New York were also critical in the development of Northern Ohio. The relationship of the Mohawk Valley and the old glacial channels to the west which allowed for construction of the Erie Canal can hardly be overemphasized.

#### CLIMATE

In 1835 climate was still equated with latitude to a large degree, but data was accumulating rapidly and theories being proposed to explain anomalies known to exist. A journalist and promoter named Scott pointed out in about 1841 that the 50° isotherm is exactly the best climate and is that isotherm near which mankind have chosen to congregate in great numbers and build great modern cities.<sup>5</sup> Flint has in his book, *A Condensed Geography and History of the Western States*, tables giving the monthly temperatures and yearly averages for places ranging from Council Bluffs to Pittsburgh.<sup>6</sup> He also gives data on maximum and minimum temperatures, winds, clear, cloudy, rainy, and snowy days. Flint divides the Mississippi Valley region into four major climates; north of 41° latitude, 37° to 41° latitude, 31° to 37° latitude, and south of 31° latitude to the mouth of the river. For each area he discusses the characteristic wild and cultivated vegetation. It is a useful and not inaccurate statement and may be assumed to have been available in most libraries throughout the then western states.

On a day-to-day basis, most contemporary accounts, however, are not so interested in the long-term climate, but rather use the word climate to refer to what we would now call the weather. To the farmer the week-to-week, month-to-month, and year-to-year variations were, as they are today, critical. The length of the period between frosts was critical and those who had moved from Vermont and New Hampshire to western New York or northern Ohio had no questions as to their blessing in regard to growing season and the competitive advantage afforded by the extra days, 180 to 200 days in the lake plain of northern Ohio as compared to 120 to 140 days in Windsor County, Vermont.<sup>7</sup> As the areas of superior climate

<sup>5</sup>Charles N. Glaab, "Jesup W. Scott and A West of Cities," *Ohio History*, Vol. 73, Winter 1964, p. 3.

<sup>6</sup>Flint, *Geography and History*, Vol. 2, p. 482.

<sup>7</sup>United States Department of Agriculture, *Climate and Man, Yearbook of Agriculture*, 1941 (United States Government Printing Office, 1941), pp. 997, 1061.

and soils opened in New York, Ohio, and to the west, many rural parts of Vermont and New Hampshire lost as much as fifty percent of their population. Climate was a major factor in the move of the Smiths from Vermont to New York, and they had a great deal of company as any examination of population data for that part of Vermont will demonstrate.

A major topic of discussion was the influence of forests on climate. Many were firmly convinced that clearing the woods brought a decrease in precipitation, while others were certain that the opposite was true. Winters or summers which seemed hotter or colder than normal were attributed to the effects of clearing the forest. Then, as now, the weather in the Kirtland region fluctuated from year to year. The summer of 1838 was seriously lacking in rain and caused many problems in agriculture, the summer of 1845 even drier. Long-time residents were always certain that the climate had changed since they were young, but memories concerning weather were no more accurate then than now.

#### THE FOREST

It seems doubtful that any of us today can really appreciate the overwhelming impact of the forest in the settlement of America. Forests were both a blessing and a curse. The forest provided lumber, medicines, nuts, dyes, fuel, fencing, wagons, ships, tools, sugar, tannin, and even roads. When the first settlement of Americans reached the grasslands of the west, they were lost without wood. On the other hand the forest was a barrier to road building, a problem to clear for farm land, and often thought to harbor disease, or to change the climate for good or bad if cut away.

Ohio was an area of superb forest. Except for areas of swamp and very limited prairies, or open grass areas, the entire state was covered with oak, maple, black walnut, black locust, walnut, wild cherry, and many other trees and shrubs.<sup>8</sup> The sycamore is noted as the king of the forest, and one contemporary account relates a measurement of fifteen and one-half feet in diameter for one of these trees.<sup>9</sup> Most trees were smaller, but many reached two or three feet in diameter and were difficult to remove. When Governor St. Clair was ordered

<sup>8</sup>Flint, *Geography and History*, Vol. 2, p. 294.

<sup>9</sup>Flint, *Geography and History*, Vol. 1, p. 66.

to cut a thirty-foot road through part of Ohio in 1791, he found it far easier to cut three ten-foot roads and thus avoid the larger trees.<sup>10</sup>

To clear land for agriculture took a man three to four weeks of dawn-till-dark labor for one acre. Once fifteen to twenty acres had been cleared and agriculture begun, many settlers hired a professional slasher to clear additional land.<sup>11</sup> The slasher would study carefully the prevailing winds and the slope of the land, then carefully notch the larger trees over a long strip about thirty feet in width, cutting so the trees would incline toward the center of the strip, and deepening the notches as he moved windward. Upon finishing the strip he waited for a favorable wind, then felled the "starter" tree against the next in line and so felled a number of acres at one time. The trees were then allowed to dry for two or three years, following which they were fired to burn the branches and brush. The large trunks were cut into logs, either with an ax, or by building a fire on and around the fallen trunk and burning through the log. The latter was known as "niggering" and an experienced man by attending a number of fires and by "sawing" the burning poles against the log to remove the charcoal, could obtain logging lengths more rapidly than was possible with an ax. At this point the neighbors would often hold a logging bee, and men and oxen would assemble to remove the logs for later use as lumber or fence rails. Finally there remained the problem of removing the stumps, which were burned as much as possible, and then left to rot. Clearing was a long process requiring years of labor before the land could be plowed without difficulty, but clearing increased the value of the land sufficiently enough that some settlers supported themselves by taking up new land, clearing it, selling to later arrivals, then moving on to repeat the process in newer lands to the west.

#### DISEASES

Disease in the 1830s was attributed to location, changes in the weather, noxious vapors and other such causes. A good picture of the state of affairs may be obtained by reading some

<sup>10</sup>William W. Shideler, "A Geographic Analysis of the Ohio Road System," Unpublished Dissertation, Ohio State University, 1959, p. 253.

<sup>11</sup>Henry Howe, *Historical Collections of Ohio*, 3 Vols. (Columbus, Ohio: Henry Howe and Son, 1891), Vol. 2, p. 53.

comments from Flint. In his introduction concerning the entire Mississippi Valley he noted:<sup>12</sup>

In such a variety of climates and exposures—in a country alternately covered in one point with thick forests, and in another spreading out into grassy plains—and having every shade of temperature, from that of the Arctic regions, to that of the West Indies, there must necessarily be generated all the forms and varieties of disease, that spring simply from climate. Emigrants from the Atlantic country will always find it unsafe, to select their residence near stagnant waters and creeping bayous, on the rich and heavy timbered alluvions . . .

Emigrants have scarcely ever paused long enough, or taken sufficient elements into the calculation, in selecting their residence with a view of its salubrity. When the choice is made they are often encumbered with families, and generally feel stinted both for time and money, and are in a hurry to commence operations for the provision of their families. They are apt to give too little weight to the most important motive of all which ought to determine their selection. A deep bottom, a fertile soil, a position on the margin of a navigable stream; these are apt to be the determining elements of their choice. The heavy forest is leveled. A thousand trees moulder, and putrify about the cabin. The stagnant waters, that, while shielded from the action of the sun by the forest, had remained comparatively innoxious, exposed now to the burning rays of the sun, and rendered more deleterious by being filled with trunks and branches of decaying trees, and all kinds of putrid vegetation, become laboratories of miasma, and emit on every side the seeds of disease . . .

The most dangerous period is after the trees have been leveled a year or two, and while they are still decaying about the dwelling. This well known fact would seem to give plausibility to the doctrine, that these deep and grand forests feed their foliage with an atmosphere, that is adverse to the life of man; and that when the forests are cleared away, the miasma, the noxious air, that used to be absorbed and devoured by the redundant vegetation and foliage of the forests, and incorporated with its growth, thus detached and disengaged, inhaled by the new residents, becomes a source of disease.

Flint recommended further that new residents stay out of the night air, avoid heavy rains, long exposure to sunlight, and abrupt changes of climate. He felt that these preventative measures would avoid the need for taking medicines, of which he

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<sup>12</sup>Flint, *Geography and History*, Vol. 2, p. 53.

had a very low opinion, feeling that the medicine often damaged the patient more than the disease.

Whatever the supposed causes, the inhabitants of early Ohio and other areas suffered considerably from severe colds, diarrhea, "remitting fever" (malaria), rheumatism, "pneumonic affections," and "biliary fevers." They did take some comfort in the low incidence of lung consumption as compared to those living in the Atlantic area.

#### DIVIDING UP THE LAND

Fundamental to understanding any area is a knowledge of the system used to divide the land and obtain title and tenure. Settlement of the New England region proceeded for the most part in an orderly manner with strips or tiers of "towns" being extended at the frontier as those behind were occupied. A "town" was usually about 36 square miles, but it was not necessarily square in shape. Within the "town" a number of villages might exist, some with a rectangular street pattern, but most comprised of a series of houses strung out along a main road. Property boundaries were irregular and surveyed according to the metes and bounds system using landmarks such as a large rock or tree, a pile of stones or a wooden stake at corners. Survey and property division in the western lands by federal authority following the ordinance of 1785 was radically different. The land was surveyed into strips 6 miles in width running north and south known as ranges, crossed at right angles by strips six miles in width known as townships. In Ohio, which was settled during the period of transition, parts of the state are presently surveyed in metes and bounds, parts in 6-mile strips according to the now familiar pattern over most of the United States, and parts in a variety of other systems. The area of Ohio in which Kirtland is located is unique in being surveyed into strips 5 miles in width.<sup>13</sup>

In 1795 the State of Connecticut sold without survey what was guessed to be 3 million acres of land on the southern shore of Lake Erie to a group of investors for the sum of \$1 million.

<sup>13</sup>For a discussion of division of land see: Norman J. Thrower, *Original Survey and Land Subdivision*, Association of American Geographers Monograph Number Four (Chicago: Rand McNally and Company, 1966); Henry Howe, *Historical Collections of Ohio*, 2 Vols. (Cincinnati: State of Ohio, 1908), Vol. 1, pp. 128-136; and Ralph Brown, *Historical Geography of the United States* (New York: Harcourt, Brace and Company, 1948), pp. 212-235.

Representing this group which operated under the name of the Connecticut Land Company, General Moses Cleaveland led a group of surveyors into the area in 1796 and began a systematic survey of the purchase. It is of some interest to note that he paused in his 68-day trip from the East to counsel with the Indians at Buffalo, New York, and arrange purchase of the land which in actuality belonged to the tribes although sold by Connecticut. Purchase and treaty were arranged for a present of \$500, two beef cattle, 100 gallons of whiskey, and a promise from Cleaveland to use his influence to obtain an annuity of \$500 per year from the federal government. With this settled, the survey began from the Pennsylvania line to the Cuyahoga River.<sup>14</sup>

In the initial survey the land was divided into strips of 5 miles across, those running north and south called ranges, those running east and west called townships. Within each 5-mile square or 160,000 acres, there were 42 lots of 380 acres. The lots were numbered from the southwest corner to the north and returning to the south so that lot #12 adjoined #1 and lot #42 was in the northeast corner.<sup>15</sup>

Property within the tract was given out by drawing lots designating which of the investors received a given area because of the erratic value of the plains, hills, and swamps which the surveyors had mapped. A Mr. Andrew Hall received in 1799 as a part of his share, Lot 17 of Tract 1 of the township named after Mr. Turband Kirtland, one of his colleagues. Hall sold the land to a Mr. French for \$300 in 1817 and French proceeded to establish a farm, a brick kiln, and a grist mill. In 1818 French sold some of his land to a William Card for \$1,000, and other land in the area owned by Turband Kirtland was sold at that time for about \$2 or \$3 an acre,<sup>16</sup> a large profit on land that a few years earlier had been purchased for about \$.30 per acre.

The rectangular surveys and sale or distribution of land within these surveys over broad areas had an immediate impact on the pattern of settlement. No longer did the frontier move out in well-defined increments as with another tier of towns in New England; instead individual families scattered over large areas, often many miles from their neighbors. Villages and

<sup>14</sup>Hatcher, *Western Reserve*, p. 18.

<sup>15</sup>Drawing received from clerk of Thompson Township, Geauga County, Ohio.

<sup>16</sup>Fielding, "Mormon Church in Kirtland," p. 208.

towns became central places offering services to the surrounding agricultural population rather than residential sites for farmers who worked the fields surrounding the village.

#### SPECULATION IN LAND

The concept that land could be sold by a government to gain income, which began on a large scale around 1760 in New England, was in full bloom in 1835. There was, however, a great deal of disagreement as to how land should be sold and at what price. Some felt that it was the right of every free citizen to be given free land. Some felt that land sales should be restricted to very large units, thus allowing only the wealthy to obtain lands in the west. The mood of Congress changed from time to time. In 1796 the minimum purchase of government lands was 640 acres at \$2.00 per acre with half the purchase price deferrable for one year. In 1800 the minimum changed to 320 acres and the buyer was permitted to pay  $\frac{1}{2}$  on purchase,  $\frac{1}{4}$  two years later, and the final  $\frac{1}{4}$  four years later. In 1804 the minimum was lowered to 160 acres. In 1820 the minimum was made 80 acres and the price lowered to \$1.25 per acre but no credit was allowed. In 1832 a farmer could purchase 40 acres and thus begin with an investment of only \$50.00.<sup>17</sup> During all of this period, the values and regulations on purchase of land from private land companies fluctuated also, and in some areas land was being given free to veterans of various wars as a compensation for services.

The allowable minimum, and credit provisions, had a great deal to do with how much land was sold. Few people on the frontier had cash on hand in any quantity. With a provision for deferring payment they could clear some of their land, burn the logs for potash, harvest some corn, hire out to an established neighbor perhaps for a few days, and meet their next payment.

If the price of land was seemingly not high, neither were the wages. Common labor in the early 1800s in the Ohio area paid about \$.75 to \$1.00 for a dawn until dark day. In 1828 a laborer on the canal at Dayton recalls being hired at \$12.00 per month and having his pay cut to \$9.00, at which point he quit the job. A bank cashier in Dayton in 1814 was paid \$400.00 per

<sup>17</sup>Ross M. Robertson, *History of the American Economy*, 2nd Ed. (New York: Harcourt, Brace and World, Inc., 1964), p. 105.

annum.<sup>18</sup> In the early 1800s a lucky farmer might pick up extra money from trapping. In 1832 bear skins traded at about \$4.00, muskrat \$.40, mink \$.30, deer from \$.75-\$1.00, wolf \$.25, but silver fox went as high as \$75.00. Beaver were gone by 1837.<sup>19</sup> Income from furs for purchase of land was minor after the 1830s in Ohio. Without credit it was difficult to obtain funds from any source to buy land outright.

Scarcity of cash money was also a major problem, and notes which were issued by all sorts of banks were hazardous. Notes existed from so many sources that banks and larger stores kept a catalog against which to check incoming paper notes for their current status. An interesting aspect here is that some notes which were known to be bogus circulated freely in a given area by local agreement because they were printed nicely and on high quality paper. Among legitimate bank notes, those coming up river from the Bank of New Orleans were highly regarded. Those notes, with Dix printed on the ten denomination were known as "Dixies" and it is thought by some that this is where the term generally applied to the South originated.

#### AGRICULTURE

It is difficult to imagine that there was anyone in the Western States in 1835 who did not believe that a great deal of money could be earned by purchasing and holding land even for a short time. At the end of The Revolutionary War the frontier was located at what is now Rome, New York, or just across the mountains into Kentucky. By 1835, Independence, Missouri, was on the frontier and the line enclosing the region of two to six people per square mile included Illinois, much of Arkansas, and Louisiana. A few in the East thought that expansion would be the downfall of the country, but others were forecasting a population of 800 million by 1946,<sup>20</sup> or 264 million in the Mississippi Valley alone.<sup>21</sup> Agricultural land would do nothing but increase in value and urban land even more so. Rich and poor alike bought and sold land, often on credit, hoping for a rise in value to cover their payment and return a quick profit. Some became wealthy and others bankrupt.

<sup>18</sup>John F. Edgar, *Pioneer Life in Dayton and Vicinity* (Dayton, Ohio: W. J. Shuey, Publisher, 1896), p. 166.

<sup>19</sup>Howe, *Historical Collections of Ohio*, Vol. 1, p. 534.

<sup>20</sup>Brown, *Historical Geography*, p. 92.

<sup>21</sup>Glaab, "Scott and West of Cities," p. 6.

In 1835 agriculture represented practically all of the economy in the Kirtland area. Merchants and manufacturers were few and nearly everyone engaged in serving some aspect of agriculture. Farming, except for plowing and harrowing and drawing loads, was a hand operation dependent on human muscle. Production of one acre of wheat took forty to fifty man hours. The cast iron plow, patented in 1814 by Jethro Wood, was known and in general use in the East but was difficult to use in the West where the soil tended to stick to its pitted surface. The steel plow was not invented by John Deere until 1838. Drill seeding did not come until after 1840, and while the reaper was patented by McCormick in 1834, the machine did not come into general use until about 1845. The horse-drawn hayrack, invented about 1820, was slow in being adopted and the threshing machine first became practical about 1836.<sup>22</sup> Chemical fertilizers were unknown, but the use of manure was well understood and those who did not apply this valuable resource to their fields were looked upon as poor farmers.

Quality of soil was equated with growth of particular trees. Tall trees, nut bearing trees such as oak and beech, were considered indicators of good soil, and the phrase to head for the tall timber meant just that when choosing new land.

Maize, or Indian Corn, was the backbone of agriculture. Corn was an ideal frontier crop. A peck of corn would plant an acre and yield from 50 to 110 bushels an acre.<sup>23</sup> Two bushels of wheat, weighing 120 pounds, were required to plant an acre and the yield was 15 to 20 bushels. Corn could be planted with a hoe or even a sharp stick among the burned stumps and branches. It did not have to be harvested immediately when ripened as did wheat. It stored well and it was nourishing. Made into whiskey, it could be transported long distances at a profit. Converted into pork, it could be driven to market in herds and frequently was. In 1840 corn exceeded all other grains in Ohio, with over 33 million bushels.

There were, however, many other agricultural products. All of the major grains were produced, as well as large quantities of potatoes. Crops such as hops, hemp and flax, tobacco, and even mulberry leaves for production of silk were also important.

<sup>22</sup>Ernest Bogart and Donald Demmerer, *Economic History of the American People* (New York: Longmans Green and Company, 1948), p. 260.

<sup>23</sup>Flint, *Geography and History*, Vol. 2, p. 296.

Horses, cattle, sheep, swine, and poultry were well distributed and improving in quality. Fruits such as apples grew well and orchards were widespread.

#### MANUFACTURING

While centers such as Pittsburgh and Cincinnati were boasting of dozens of mills and factories by 1835, even Cleveland remained unimportant in this respect in northern Ohio, and Kirtland had no more than a few home industries. The United States census of 1840 lists the value of production from home industries in Lake County, Ohio, as \$18,731.00. Tanneries employed ten men, silk manufacture eight males and four females, brick and lime manufacture nine men, etc. The two major activities were production of potash from wood ashes, 153 tons for Lake County in 1840, and maple sugar, 64,931 pounds. Ohio in that year produced over 6 million pounds of sugar, mostly for home consumption.

#### TRANSPORTATION

The key to prosperity for northern Ohio or any other western region in 1835 lay in cheap transportation. It was estimated in that year that the surplus products of the Mississippi Valley were worth \$20 million.<sup>24</sup> Without a cheap way to ship products to the market, wide variations in price existed within a few miles. In 1817, for example, flour was worth \$15 a barrel in Sandusky on Lake Erie, but only worth \$6 a barrel in Columbus near the center of the state where it could not be shipped except by wagon during a few months of good weather.

Prior to completion of the Erie Canal, Ohio was oriented toward New Orleans. The Kirtland area was isolated, and southern Ohio was far advanced in settlement over the north. Some authors were predicting that New Orleans would become the largest city in the world with its control over the trade of the vast valley to the north. Except for the canals and later the railroads, that prediction might well have been correct.

By 1835 trade over the Erie Canal was in full swing and the Ohio Canal connecting Cleveland with the Ohio River to the south was also functioning. The two canals were effectively

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<sup>24</sup>Harold E. Davis, "The Economic Basis of Ohio Politics, 1820-1840," *The Ohio State Archeological and Historical Quarterly*, Vol. 47, 1938, p. 290.

connected by steamboats operating on Lake Erie. The impact of the canals was phenomenal. From July to December of 1827 when the Ohio Canal opened water travel from Cleveland to Akron, 6,059 barrels of flour, 619 barrels of whiskey, 102 tons of tobacco, 50 tons of butter, 28 tons of cheese, and 992 tons of other products moved north, while 3,536 tons of salt, 393 barrels of fish, and 233 tons of other goods moved south. In a two week period during the same year, over 600 settlers arrived in Cleveland to remain or to move to adjacent counties. Exports from Cleveland which totaled just over \$50,000 in 1825 were near \$5 million by 1833.<sup>25</sup>

Highways were still crude or nonexistent in the Kirtland area in 1835. The first settlers came into the area via the lake, some traveling over the ice by sleigh from Buffalo during winter.<sup>26</sup> Trails gradually developed along the township and range lines. Where the surveyors had blazed the trees, the people followed the blazes to ~~it becoming lost in the heavy forest. These trails which fo~~ the major survey divisions were modified somewhat to ~~the~~ steeper slopes as they were widened and used for wagons, but became essentially the skeleton of the transportation net by 1835, along with the routes along the fossil beaches mentioned earlier.

Pioneers entering Ohio more to the south first used buffalo trails. These trails were in some cases wide enough for small wagons. The buffalo were unexcelled in their choice of routes offering the least possible slope. Even today many rail and highway routes in Ohio lie directly on the paths laid out by these animals, no better route having been found.<sup>27</sup>

Moving goods by road in Ohio in 1835 was both difficult and expensive. By canal one mule could tow a barge with as much as twenty tons of cargo. To move twenty tons over land took perhaps twenty wagons and teams under the best conditions and these conditions seldom existed for more than a few weeks each year. Corderoy roads were used in 1835 for crossing local swamp regions, but the first plank road was not made until 1837 near Syracuse, New York. Roads of crushed stone were well known but very expensive, costing around \$10,000 to \$13,000 per mile.<sup>28</sup> Where such roads were built as turnpikes

<sup>25</sup>Davis, "Economic Basis Ohio Politics," p. 303.

<sup>26</sup>Howe, *Historical Collections of Ohio*, Vol. 3, p. 284.

<sup>27</sup>Shideler, "Analysis Ohio Road System," p. 253.

<sup>28</sup>Robertson, *History American Economy*, p. 101.

and a toll charged, they were little used for freight because of the expense which was often as high as or even higher per mile than our modern toll highways. A toll road in Connecticut in about 1800, for example, charged  $12\frac{1}{2}$ c per mile for a loaded wagon and 4c a mile for a man and a horse. Even sheep and hogs were charged  $\frac{1}{2}$ c per mile per animal.<sup>29</sup>

#### LET'S BUILD A CITY

One of the most remarkable aspects of the rapid occupation of the area from the Alleghenies to Missouri within a few brief years was the proliferation of villages, towns, and cities. Jesup W. Scott, an early promoter of Ohio, wrote of "A West of Cities," and proclaimed as early as 1841 that there would be 352 cities of a half million people in the Mississippi Valley alone within a hundred years.<sup>30</sup> He, of course, hoped to own real estate in several of them. But he was hardly alone in his estimates.

Beginning with the surveys of western New York, the surveyors were always on the watch for potential city locations. They and others were well aware of the potential value of urban real estate, and were quite aware of what made for urban growth. A waterfall, a location to bridge an important river, a salt spring, a potential highway route, or later canal or rail route, deep water near the shoreline of one of the great lakes matched perhaps by a natural route inland, and visions of a major urban center with its increasing land values would break forth. Some of these dreams were realized, and some died quietly, taking with them investments of a great deal of money. Scott, who on one occasion envisioned Cincinnati as becoming the largest city in the country, and was certain that Toledo would outdistance Cleveland, nevertheless points out in 1867 that land which he purchased for \$12 an acre in Toledo was then worth \$12,000 an acre, and that lots which sold for \$25 in about 1840 were then selling for \$25,000.<sup>31</sup> In 1840 many were willing to take the risk.

Planning a completely new city seems a relatively rare thing today, particularly for the average individual. In 1835, however, it was not particularly rare, and many settlers entering Ohio

<sup>29</sup>Brown, *Historical Geography*, p. 103.

<sup>30</sup>Glaab, "Scott and West of Cities," p. 6.

<sup>31</sup>Glaab, "Scott and West of Cities," p. 11.

and other parts of the West had participated in planning and opening up several potential cities. By the 1830s most of the city plans of plats were based on a simple grid-iron arrangement. This offered an easily laid out plan with minimum expense in surveying, and was well suited to the laying and selling of town lots for quick return by investors. A common practice was to survey the townsite and the immediate surrounding area into what was called "in lots" and "outlots." Settlers would purchase, or receive through drawing lots, an in lot in the city of about a half acre, and also an outlot of perhaps five acres. This was done, for example, in Dayton, Ohio,<sup>32</sup> and also as early as the settlement at Savanna, Georgia.<sup>33</sup>

When General Moses Cleaveland arrived at the mouth of the Cuyahoga River, he pictured the location as ideal for the capital of the lands being surveyed. Pacing off a 10-acre block for a central square, which seems to have been a very common size for such public squares, he instructed his surveyor to lay out a town plat. The initial plat as mapped in 1796 shows the 10-acre square with major streets of 132 feet in width extending from the four sides of the square. Outlots of 10 acres and up to 100 acres were also surveyed.<sup>34</sup>

The platting of a city at Kirtland was discussed as early as 1833, but an official drawing was not filed until April of 1837. The plat, as filed with the Geauga County courthouse, Chardon, Ohio, was signed by some 68 property owners, including the Prophet Joseph Smith. The city was a grid pattern to consist of some 225 blocks, each 10 acres in size and divided into 20 half-acre lots. The streets are shown as 4 rods (68 feet) in width, oriented to magnetic north. This plat was to be laid out over existing property lines and terrain, with little regard for either, a fact which antagonized many local non-Mormon residents. Some surveying was done and some of the 4,500 platted lots were sold before the saints left Kirtland, but after their departure little or no attention was paid to the plat and today there is little evidence that such a plan ever existed.<sup>35</sup>

It could be said that there is an important difference in stating that the Mormons were there, and stating that the

<sup>32</sup>Edgar, *Life in Dayton*, p. 21.

<sup>33</sup>John W. Reps, *The Making of Urban America* (Princeton, New Jersey: Princeton University Press, 1965), p. 187.

<sup>34</sup>Reps, *Urban America*, p. 231.

<sup>35</sup>Fielding, "Mormon Church in Kirtland," p. 217.

Mormons were there also. In Kirtland they were there also. They came into an area already settled, already altered in physical character to some extent by clearing of forests, opening of roads, and opening of the canals which afforded an access to market for agricultural and manufactured products. It was a familiar environment to most of the saints arriving there, with no major differences in climate or land form such as they encountered to the west in Missouri and more so in the Great Basin. There was no experimentation with new crops or methods of agriculture as was needed later. But there was also no unoccupied land upon which to plat new cities, or which to farm. Land had to be purchased from others with payment for the cost of improvements and be subject to the vagaries of current speculation. The land was all owned. Even to pull off the road with the wagons and camp for the night as the saints left for Missouri required payment of a fee for occupying private land.<sup>36</sup>

In being there also, the Mormons were an integral part of the tree in a forest of places and events. To extract the tree from the forest is to study it out of context. An understanding of the tree within the forest has only just begun.

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<sup>36</sup>Joseph Smith, Jr., *History of The Church of Jesus Christ of Latter-day Saints*, 7 Vols. (Salt Lake City: Deseret News Press, 1948), Vol. 3, p. 109.