A Geographic Sketch of Early Utah Settlement

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A GEOGRAPHIC SKETCH OF EARLY UTAH SETTLEMENT

A Thesis
Presented to the
Department of Geography
Brigham Young University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
John T. Blake
August 1974
This thesis, by John T. Blake, is accepted in its present form by the Department of Geography of Brigham Young University as satisfying the thesis requirement for the degree of Master of Science.

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June 10, 1974

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Typed by Robert and Sondra Jones
ACKNOWLEDGEMENTS

The writer gratefully acknowledges the assistance of the following key people who made possible the successful completion of this project. Dr. Richard Jackson, advisory chairman, whose scholarly method significantly influenced the research design and presentation format. Professor Thomas Hinckley provided guidance on cartographic design and made possible the reproduction of maps. Mr. James Blake graciously produced the figure drawings which complement several of the maps. Other staff members of the Department of Geography at Brigham Young University have also offered valuable suggestions and assistance.

This thesis is dedicated to Lucille, whose personal sacrifice greatly contributed to the completion of this work.
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CHAPTER I

INTRODUCTION

The chronicle of Utah begins in 1776 when Spanish Missionaries journeyed through the area. The next seventy years saw a procession of traders, trappers, and explorers throughout the West. Heavy settlement was initiated in Utah with the coming of the Mormons in 1847. The fifty years which followed were a period of intense settlement activity which resulted in the creation of many villages. The student of Utah settlement may better perceive this episode with the aid of maps. Maps show areal patterns, both qualitative and quantitative. They serve to illustrate countless facts which the reader can quickly grasp. The information portrayed on maps would require thousands of words of narrative. Maps are also useful for showing comparisons and relationships of various facts. A map focuses the reader's attention upon a subject and enables him to better conceive events through their setting.

This thesis portrays selected topics of Utah settlement through maps which more closely examine the man-land relationship. Maps depicting Utah settlement are noticeably lacking in historical works. It is in the tradition of historical geography to use maps as a tool for graphically portraying information concerning settlement. Many excellent works have been produced which portray the
historical geography of the United States in atlas form. Some historical atlases deal with the United States as a whole while others are concerned only with individual states. Such an atlas is absent, however, for the state of Utah. The purpose of this study is to initiate an atlas of Utah settlement. It is hoped that the project may be continued and expanded in the future to create a comprehensive historical atlas of Utah.

This thesis is not intended as a history of Utah. It rather treats selected topics of Utah settlement from a geographic viewpoint. Pattison has identified four traditions of geography which have dominated the discipline in this century. A brief statement of these traditions may enable the reader to better understand what a geographic viewpoint is. The "man-land tradition" is concerned with Man's interaction with the physical landscape. Physical environment greatly effects Man's settlement activities. His environmental perceptions are a significant factor directing evolution of the cultural landscape. The "earth-science tradition" is concerned directly with the physical landscape. It studies climate, landforms, vegetation, soils, and other phenomenon of Man's physical environment. The "area-studies tradition" is concerned with delineation and analysis of regions. The concept of Region enables one to focus on a particular area and better understand the centripetal and centrifugal forces acting upon it. The "spatial-analysis tradition" is concerned with 

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with areal distributions and relationships. It is this latter tradition which is most emphasized by the present thesis. The writer hopes to portray the distribution of settlement features in early Utah and examine their relationships through a series of maps.

The maps were produced by conventional cartographic methods. They were drafted at double size on mylar and reduced photographically. The color maps were created by preparing an overlay of each color used. Photographic plates were made for each negative and the maps were printed by offset press.

This thesis presents a thematic overview of early Utah settlement. The information covers a time span from 1776 to 1896. The year 1776 represents the first recorded encounter of European culture with the area of present Utah. From that time to the achievement of statehood, in 1896, may be considered the era of early Utah settlement. Abundant settlement, however, did not occur until the Mormons arrived. The period from 1847 to 1887 was one of intense Mormon settlement which significantly affected Utah's cultural landscape. The topics discussed and illustrated by maps in this thesis were selected on basis of their relevance to Utah settlement and historical geography. Routes of travel, location of settlement, and distribution of economic activity are among the themes emphasized. Chapter Two contains two maps dealing with Utah's physical setting and discusses the relevance of physical geography to settlement. The third chapter is an account of the initial movement of occidental culture into Utah. Three maps are used to show the routes taken by explorers and immigrants. Chapter Four utilizes three maps to illustrate the formation of boundaries and the pattern of colonization.
within Utah. The fifth chapter includes one dozen maps which portray various cultural and economic developments. It is believed that the topics covered will give the reader an essential understanding of some major factors in Utah settlement. They will help him to comprehend the important contribution which historical geography makes to his understanding of the cultural landscape. Most important, the maps will enable the reader to realize that Utah's landscape was not created in a vacuum.

The writer feels that an historical atlas of Utah will be of tremendous value to teachers, researchers, students, and the interested public. It is hoped that the maps of this thesis may prove helpful in this regard. An expansion on this work may include additional topics such as international boundaries, irrigation, trade routes, regional studies, river navigation, and numerous economic developments. A true account of Utah's settlement geography is difficult because of the lack of accurate source information. Diaries, old maps, census records, and other documents are often scanty and contain incongruities which indicate a misrepresentation of facts. Time was a prohibiting factor in doing primary research for the information presented in this thesis. As a result, secondary sources were heavily relied upon for the history of Utah. Any expansion of this work must re-evaluate such sources of information to investigate their correctness.
CHAPTER II

UTAH'S PHYSICAL SETTING

The physical geography of a region significantly affects any settlement activity which occurs within it. Climate, landforms, water resources, natural vegetation and soils all interact to establish both good and poor settlement locations. A brief survey of Utah's physical setting reveals some of the environmental factors contributing to present settlement patterns.

Physical Regions

Utah contains a diversity of physical landscape. Figure 1, on page 6, illustrates landforms and drainage systems in Utah. The State comprises three major physiographic regions: the Great Basin Region, the Rocky Mountain Region, and the Colorado Plateau Region. Each region presents a distinct topography which consequently effected the settlement process.

The Great Basin Region

The Great Basin Region is a fault-block landscape and comprises a series of mountain ranges running north and south and interspersed by small rift valleys. The Great Basin covers a large portion of the western United States but only its eastern edge lies

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1 Many of the labeled features in figure 1 will be referred to throughout the text and should be carefully studied.
Utah's Physiographic Setting

Figure 1
within present Utah. Great Basin valleys which lie adjacent to the Rocky Mountains and Colorado Plateau contain fertile alluvium which made them logical for settlement by early agricultural colonists. The mountain ranges are sparsely vegetated, dry, and rocky. They offered little inducement to farmers but played an important role in Utah's mining industry.

Great Salt Lake is the center of attraction in the Great Basin. It is the result of interior drainage and its high salt content (23%) is exceeded only by that of the Dead Sea. Great Salt Lake presently measures about seventy miles long by thirty miles wide, covering an area of approximately 1,500 square miles. The average depth is only thirteen feet, however, and the lake's area fluctuates greatly with climatic change. It covered an area of approximately 2,300 miles and measured about seventy five miles long and fifty miles wide during the period of early Utah settlement. Figure 1 pictures Great Salt Lake around 1860 but the lake's recession has since left many settlements lying farther from the shore than when originally established.

Sevier Lake was once a salt water body but has mostly dried up leaving heavy salt deposits. The Sevier Lake Basin is a natural sink and spring fed marshs occupy large tracts near the mouth of the Sevier River. Saline soils and marshland discouraged settlement in this area.

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2Ibid.
Utah Lake is a fresh water body fed by mountain streams. It drains into the Great Salt Lake through the Jordon River. The Lake is about twenty three miles long and eight miles wide; covering a significant portion of the valley in which it lies. Utah Valley was a favorite location of early settlers who farmed and grazed livestock on the Lake's fringe.\(^1\)

These lakes are all remnants of ancient Lake Bonneville which covered much of the region during Wisconsinian times.\(^2\) The emptying and gradual drying up of Lake Bonneville left many salt deserts throughout the area. The Great Salt Lake Desert was an impressive barrier to travelers and such areas remained void of settlement. Valleys on the eastern margin of the Great Basin, in contrast to desert tracts on the west, were made salubrious by numerous streams running from the Rocky Mountain and Colorado Plateau Regions. These valleys of the physiographic border area possessed many conditions favorable to settlement and will be discussed in detail in subsequent pages.

The Rocky Mountain Region

A portion of the Rocky Mountain Cordillera crosses through northeastern Utah and two principle mountain ranges constitute the Region. The Uintah Range, running east-west, is quite rugged with elevations exceeding thirteen thousand feet. It is little suited for agricultural settlement but has proved valuable for its lumber.

\(^1\)Milton R. Hunter, Brigham Young the Colonizer (Salt Lake City: Peregrine Smith Inc., 1973), p. 228.

\(^2\)The Wisconsinian era lasted from approximately 70,000 to 8,000 years before the present.
resources. The Wasatch Range, running north-south, contains numerous intermontaine valleys which provide fertile grazing land for settlement. Stream carved corridors made useful passageways through the mountains for explorers and immigrants. The western edge of the Rocky Mountain Region is a fault-scarp with peaks rising eight thousand feet above the Great Basin Valleys which lie adjacent to it. This area, known as the Wasatch Front, provides a natural fall line which produces abundant water power to operate mills and irrigation systems.

The numerous streams running from these mountains are the life line in an otherwise semi-arid environment. The Rocky Mountain Region provided settlers with a generous supply of wood and stone for building purposes. The fresh water streams and lakes, and the abundance of wildlife, were significant factors attracting early trappers and explorers who paved the way for later settlement.

The Colorado Plateau Region

The Colorado Plateau constitutes a large fragment of south-eastern Utah. It is an extensive stratigraphic upland which has been acutely dissected by rejuvenation. The Colorado and Green Rivers are principle fluvial agents while tributaries have dissected the region into a myriad of mesas and buttes. The Colorado River presented an appalling barrier to early travelers but later served as a highway of exploration. Elevations range from over twelve thousand feet in the high plateaus to near three thousand feet on the Colorado River.

The rugged and dry nature of the Plateau Region discouraged
settlement there for a time but colonists eventually turned flood-plain to field and began grazing on the plateaus. The Wasatch, Pavant, Markagunt, and other plateaus at the western edge of the Region form a segment of the upland wall surrounding the Great Basin. The natural fall line of the Wasatch Front continues southward along the Colorado Plateau Front and creates fertile valleys adjacent to the plateaus. Settlers were thus attracted southward along the fall line.

Precipitation, Natural Vegetation, and Soils

Landforms greatly effected patterns of precipitation, natural vegetation, and soils in Utah. Figure 2, on page 11, visually illustrates correlations between these features. The physical landscape which emerged as a result of interaction between these features greatly effected settlement and the development of the cultural landscape.

Precipitation

Utah lies within a mid-latitude dry-climate zone. Figure 2, however, indicates that precipitation is relatively heavy over the Rocky Mountains and high plateaus southward.\(^1\) Orographic precipitation provides runoff to streams which flow from the mountains and supply water to valleys.\(^2\) Valleys receiving these streams were most


\(^2\)Orographic precipitation is caused by mountains standing in the path of moisture-laden air; this air is forced to rise and thereby sufficiently cools to intensify condensation and trigger rainfall.
Figure 2

Precipitation

- under 8 in.
- 8 in. - 16 in.
- 16 in. - 30 in.
- over 30 in.

Natural Vegetation

- Forest Land
- Grass Land
- Grass/Shrub
- Desert Shrub

Soils

- Mollisols
- Eutisols
- Aridisols
- Salt Flats
fertile and attractive to early colonists.

Precipitation decreases toward the low lying Great Basin area, to the west, and over the degradated Colorado Plateau, to the east. These areas are typical of the dry-climate zone and have not attracted dense settlement to the present day. The effect of orographic precipitation is vividly emphasized through recorded rainfall over the valleys which lie adjacent to the Wasatch Front. Rainfall in Utah Valley during the first quarter of the twentieth century averaged 20.18 inches at Maplewood, located on the east side of the valley, but averaged only 10.17 inches at Mosida, located on the west side of the valley.\(^1\) Rainfall in Salt Lake Valley during the same period averaged 26.98 inches at High Lane, located on the east side of the valley, and 14.02 inches at Saltair, located farther to the west in the valley.\(^2\) Orographic precipitation causes valleys along the edge of the Great Basin to receive almost twice as much rainfall on their east side as is received on the west side. Vegetation, soils, and subsequently settlement is thus more opulent on the east side of these valleys as a result of the rainfall pattern.

Natural Vegetation

Figure 2 illustrates that a little over one fourth of Utah is forest land.\(^3\)


\(^2\)Ibid., pp. 15, 26.

Forest land ranges in elevation from 5,500 to over 11,000 feet.\(^1\)
About sixty per cent of the trees are pinyon and juniper, with aspen, Douglas fir, fir spruce, ponderosa pine, and lodgepole pine comprising the other 40 per cent.\(^2\) Forest and shrub provided adequate fuel resources and were heavily exploited by early settlers.

The Kolob Terrace, in southwestern Utah, contains the only extensive tract of meadowland in the State and was used for intensive grazing by colonists in that area. The remainder of Utah is dominated by grasses and shrub.

The Mormon Pioneers found luxuriant grasses growing on the floodplains and foothills of the east side of Salt Lake Valley. As they moved westward across the valley, however, lack of moisture was evident in the lack of grasses and the sterile appearance of soils.\(^3\) Grasses grow abundantly in the fertile soils along river banks and in the shadow of orographic precipitation but decrease toward the desert where shrubs predominate. The most common shrubs in the area designated as grass/shrub are cottonwood, maple, and oak. The grass/shrub provided good agricultural land to early settlers.

Sagebrush is characteristic of the desert shrub area. It is indicative of fertile soil while greasewood occupies dry land having poor soil.\(^4\) Sagebrush is useful for grazing and was heavily

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\(^1\)Ward J. Roylance, *Utah's Geography and Counties*, p. 36.

\(^2\)Ibid., p. 35.


\(^4\)Roylance, *Utah's Geography and Counties*, p. 34.
exploited by early settlers.

Soils

Soil patterns in Utah are modeled after precipitation, vegetation and landform distributions, as indicated by Figure 2. Mol-lisols are soils consisting of rich organic and mineral matter. They are dark in color, basic, and have a well developed structure. Mollisols from in conjunction with abundant moisture and rich vegetative covering. These soils are excellent for farming and provided good location for settlement. In some places the mollisols were dry at the time of settlement but needed only the miracle of irrigation to make them productive.

Entisols are soils having high mineral and organic content but are poorly structured due to high mobility. They are found along floodplains where rivers keep surfaces constantly churning. Entisols are also good for agriculture but streams must be controlled by levees or canals to prevent flooding of the soil.

Aridsols have well established horizons but are low in organic matter. These soils occur over deserts where precipitation and vegetative covering is limited. Aridsols have little to offer for agriculture and have remained void of settlement to the present.

The Salt Flats are an anomolie in soil classification. The Salt Flats area contains little soil and is rather a vast expanse of

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2. Soil descriptions used in this thesis are based on the 7th Approximation Soil Classification, 1960, devised by the U. S. Department of Agriculture.
salt deposits on the surface. It is representative of the Great Salt Lake Desert. The Salt Flats were not suitable for settlement but the deposits were valuable resource for the manufacturing of salt.

**Environment and Settlement**

Environment played a significant role in Utah settlement. Colonists were attracted to valleys having available culinary and irrigation water, promise of successful plant growth, and fertile soils. They avoided dry regions having sparse vegetation and sterile soils. Settlement patterns were guided by the location of favorable valleys produced by the interaction of various phenomenon of the area's physical geography. Colonization was thus initiated and made successful in valleys along the physiographic border of the Great Basin Region in Utah and but slowly penetrated outward to more hostile areas.

Although environment is a guiding force in settlement, it must work hand in hand with culture. Early settlers to Utah were agriculturalists and thus favored the valleys as location for settlement. Had the State's first immigrants been miners, however, settlement would likely have originated in the mountains. Culture is equally important to environment in determining settlement location. It is hoped that the inseparability of the man-land relationship becomes even more apparent in subsequent chapters.
CHAPTER III

WESTWARD MOVEMENT

The way for Utah settlement was prepared by frontiersmen who traveled the area extensively. They became familiar with landforms, lakes, rivers, climate, soils, and vegetation of the region. They were forerunners in America's westward expansion which eventually engulfed the continent. A great number of pioneer settlers followed the explorers westward and many of them came to settle in the area of present Utah.

Explorers

Utah was once part of Spain's Terra Incognita, or unexplored new world. It remained unsettled as a Spanish borderland but was explored and colonized by Americans as the Anglo frontier expanded westward.

A Spanish Borderland

Fray Francisco Antasio Domínguez, in 1776, led a group of Spaniards in search of a route from Santa Fe to Monterrey. Their journey is popularly know as the Escalante expedition, named after Fray Silvestre Valez de Escalante who kept the ventures journal. The Cardenas expedition had been dispatched from Cibola by Coronado in 1540 and had returned with reports of an impassible chasm to the northwest. This fact coupled with rumors of the presence of cannibal
indians in that vicinity had persuaded Dominquez to seek a route northeastward and around the Grand Canyon. Spaniards had likely been to the Great Basin before 1776. This is suggested by the fact that a member of the Escalante expedition was taken along as a Yuta interpreter to communicate with indigenous peoples with which the party expected to come in contact.¹ The Escalante expedition of 1776 is the first chronicled visit of white men to Utah. Figure 3, on page 18, illustrates that Escalante entered Utah near the present site of Jensen on the State's eastern border. The party crossed Green River, proceeded up the Duchesne River, and entered Utah Valley through Spanish Fork Canyon. Escalante was well received by the Indians of Utah Valley and spent several days proselytizing among them.² The Spaniards promised to return and establish missions within a year but political events caused a change of course.

The Jesuits were a militant order of Catholic priests who acquired much power and influence during the eighteenth century. European monarchs felt a threat to their sovereignty and began purging their kingdoms of Jesuits. In 1767 the Blackrobes were expelled from New Spain and the burden of their missions fell upon other orders of priests. Dominican and Franciscan missionaries were spread thin to cover the Jesuit missions and expansion activity was thus retarded.³ As a result, the Franciscans never achieved sufficient

³ Bannon, Bolton and the Spanish Borderlands, p. 192.
manpower to establish the promised missions in Utah.

The Escalante chronicler remarks that the Indians were burning extensive pasture land in the valleys of Utah. He supposed it was to discourage the Spaniards from staying in Utah but was likely just observing a tradition. Indians throughout the continent were in a habit of annually burning off grasses and shrub to stimulate new growth. Utah Indians probably followed this practice and were in the act of doing so that autumn as the Spaniards travelled through Utah.

Escalante's journal gives a descriptive account of the physical landscape of Utah Valley:

Throughout the valley there is much good pasture and in some places flax and hemp grow in such abundance that it seems as though they had been planted deliberately. The climate is also good here because, after suffering from the cold from the time we left San Bueneventura, now, night and day, throughout the valley, we feel very warm. Besides these excellent natural features the surrounding mountains contain pasture lands to raise cattle and horses. All this is true of the north, north-east, east, and southeast parts.

It is apparent that Utah Valley offered fertile land for Spanish settlement and Franciscans might well have established missions had the Jesuit expulsion of 1767 not prevented expansionist activity. Had these missions materialized, Mormon immigrants would have found Spanish settlement in Utah and Brigham Young might have been forced to look elsewhere for the isolation which he sought.

1 Creer, The Founding of an Empire, p. 11.
After leaving Utah Valley, Escalante headed southward along the fall line and into Arizona. The early onset of winter forced a decision to return to Santa Fe but the formidable Grand Canyon lay between the party and its baseland. The search for a crossing through the gorge led the expedition back into Utah where they discovered an established Indian trail through the cliffs. The group was in familiar territory after crossing the Colorado and hastily completed their journey back to Santa Fe. The Escalante expedition failed to reach Monterrey but it provides our first descriptive account of the Utah landscape.

Trappers

Utah was subject to exploitation throughout the 1820's by trappers anxious to profit from the lucrative fur trade which existed. The Rocky Mountain Fur Company was formed by William Ashley and Major Henry, in 1822, and came to dominate Utah's fur industry. Most famous of the company's employees were Etienne Provot, Jim Bridger, and Jedediah Smith. Provot led the company's first expedition into Utah in 1824. He founded a passage through the Rocky Mountains; making South Pass the famous gateway into the land beyond. Figure 3 indicates that Provot descended the Weber River and explored the Wasatch Front. He made a hasty retreat through Provo Canyon when set upon by hostiles in Utah Valley.

Jim Bridger accompanied Provot as the expedition neared Utah but led a faction off northward and descended the Bear River into Cache Valley. There was some contention among these trappers concerning the final course of Bear River and Bridger made wager to
follow the River to its mouth. He reached the shore of Great Salt Lake in 1824 and is generally recognized as the discoverer of the Lake. 1

Ashley himself entered Utah in 1825. He navigated the Green River to the site of the present town of Green River, Utah. He then explored the Uintah Basin and trekked northward across the Uintah Range. Upon coming in contact with the Green River again he instituted the area's first rendezvous, in 1825, as shown in Figure 3. The rendezvous became an annual affair during which trappers and friendly Indians from throughout the area met to have games, swap lies, and drink whiskey. The first rendezvous site was called Henry's Fork while the 1826 rendezvous was near present Ogden, Utah. A third rendezvous was held at Bear Lake in 1827. Rendezvous were the antecedent of permanent white settlement in Utah as these sites became location for supply caches and trading posts.

The trapper who most extensively explored Utah was Jedediah Smith. Figure 3 indicates that he entered Utah from the north in 1825. He led a trapping expedition toward California after the rendezvous of 1826. The expedition traveled southward along the Great Basin's edge in Utah and discovered many valleys, rivers, and tribes. He reached the mission of San Gabriel in 1826 and requested permission of the Mexican governor to trap and trade in California. Newly independent Mexico was in no mood to encourage American encroachment, however, and the intruders were promptly expelled. Smith's return route to Utah led northward along the California coast and then

1Creer, The Founding of an Empire, p. 11.
turned eastward, crossing the Sierra-Nevada Range. He crossed the Great Basin during the summer months and reached Utah in time for the rendezvous of 1827. Jedediah Smith learned much about the nature of southern Utah but most important was his demonstration that the Great Basin could be crossed.

The Convention of 1818 resolved that the United States and British America would jointly exploit the Oregon territory but territorial imperative existed between individual groups of trappers. Peter Skene Ogden represented the British Hudson Bay Company and entered Cache Valley in 1825. He received an antagonistic welcome from American trappers who robbed and drove him from the area. Ogden returned to Utah, in 1828, and trapped along the Wasatch Front. He established Ogden's Hole which proved to be the first permanent settlement in Salt Lake Valley.

Captain Benjamin Bonneville led a trapping expedition westward in 1831. He dispatched his chief assistant, Joseph Walker, to reconnoiter the Great Basin. Walker crossed the northwestern edge of Utah many times in his exploration which revealed the Great Basin's nature of interior drainage. Walker's accounts were the basis for maps and further exploration which disclosed the dimensions of the Basin.  

Diminishing markets and over exploitation of fur bearing animals let to a decline in the fur trade during the 1830's and a new surge of exploration activity began as government survey explorations were sent westward.

Surveyors

The Louisiana Purchase, of 1815, and the Mexican Cession, of 1848, brought vast new territories into the American Republic. Several governmental expeditions were sent out to survey routes and record landscapes. Utah was crossed by numerous surveyors and became a focus of study for some.

Captain John C. Fremont was commissioned to examine South Pass as a possible immigrant route through the Rockies. His 1842 expedition returned with favorable reports which greatly stimulated the Oregon immigrations. Fremont was sent west again, in 1843, to further investigate the Oregon route. Figure 4, on page 24, shows that he descended the Bear River to Great Salt Lake where he conducted a study of that valley. He recorded pressure, winds, soils, and vegetation of the area. Fremont's impression of the valley was favorable for settlement.

In the eastern part of the basin containing Sevier, Utah, and the Great Salt Lakes and the rivers and creeks falling into them, we know there is good soil and good grass, adapted to civilized settlements. Fremont's report was an important factor in the Mormons' decision to settle in the Salt Lake Valley.

Fremont entered Utah a third time, in 1844, upon return from exploration of Oregon and California. He came from the southwest and continued northward to Utah Valley. An exit through Spanish Fork.

1Creer, The Founding of an Empire, p. 110.
Early Surveyors

Figure 4
Canyon led the expedition eastward past Ft. Robidoux and out of Utah.

Fremont's next commission was to explore several headwaters located in the Rocky Mountains, examine the Great Salt Lake, and survey a route across the Sierra-Nevada Range. He entered Utah from the east, in 1845, and proceeded to the Great Salt Lake. Fremont spent several weeks sketching landscapes, making astronomical observations, and taking geologic samples. Fremont crossed the Great Salt Lake Desert and pioneered Hastings' Cutoff, which later became an important shortcut on the California Trail.

Fremont entered Utah a final time, in 1853, in search of a route for the transcontinental railroad which Congress was planning. Coming again from the east, he followed the Grand River Valley across Green River, traveled through the canyon lands of southern Utah, and emerged at the Mormon settlement of Parowan.

Fremont was the first to extensively traverse the Colorado Plateau and explored Utah more thoroughly than anyone to that time. The scientific quality of his surveys provided much useful information concerning the true nature of Utah. This information provided routes to immigrants, confidence to settlers, and precedence for other surveys.

Captain Howard Stansbury made the first official railroad survey through Utah, in 1849. He was guided through Ogden Canyon by Jim Bridger and then continued to Salt Lake City. Stansbury made an intensive survey of the Great Salt Lake, as shown by his route in Figure 4. His maps indicate the Lake's shoreline fluctuation when

1Creer, The Founding of an Empire, p. 119.
compared with modern maps. Stansbury's survey around the north end of Great Salt Lake was basis for the route of the transcontinental railroad across Salt Lake Valley.

Captain John W. Gunnison was commissioned to survey a railroad route across the Colorado Plateau in 1853. His expedition entered Utah through Grand Valley, skirted the Tavaputs Plateau, and rounded the San Rafael Swell. The party then cut through the Wasatch and Pavant Plateaus and descended into the Pavant Valley. Gunnison gives a grim description of the Plateau Region, ascribing it to barren sandstone ridges and alkalai fields.\(^1\) The route which Gunnison outlined was perceived as a new mail and military road connecting the southern states with California. Gunnison never finished his survey, however, as his party was killed by Indians near present Hinckley, Utah. A most important aspect of Gunnison's report is his suggestion that Stansbury's northern route was probably superior to the Plateau Region for passage of the railroad.\(^2\)

Lieutenant E. B. Beckwith was dispatched by Gunnison to survey a railroad route through Provo Canyon and west across the Salt Flats. Beckwith reported that Provo Canyon had to steep of a grade, and that the south end around Great Salt Lake offered little building material for the railroad.\(^3\) Brigham Young favored Beckwith's route around the Lake but railroad officials heeded the surveyor's advice and built around the north end of Great Salt Lake.

Two principle routes had been established across the Great Basin by 1859. The northern route took Hastings' Cutoff across

\(^1\)Ibid., p. 141. \(^2\)Ibid., p. 142. \(^3\)Ibid., p. 148.
Salt Lake Valley and descended the Humboldt River in Nevada. The southern route skirted the Basin along the Virgin River. Officials sent Captain J. H. Simpson to find a more direct route linking Salt Lake City with Carson Valley, Nevada. Simpson headed westward from Camp Floyd in 1859, and established a wagon road which substantially reduced travel time across the Basin.\(^1\) Simpson's route was later used by the Pony Express and transcontinental telegraph.

Major John W. Powell, in 1869, descended the Green and Colorado Rivers. He traveled from Green River, Wyoming, to the mouth of the Virgin River in Nevada. His expedition located the mouths of many tributaries in the Plateau Region and enabled map makers to complete the picture of Utah.\(^2\) Powell conducted several more surveys of the Great Basin in succeeding years and stimulated much interest in the geology and ethnology of Utah.

**Westward Migration**

The first trails into the west were merely trade routes, but thousands of immigrants soon beat paths into highways of westward migration. Mormons joined in the westward movement, in 1847, and began building their Great Basin Kingdom.

**Borderland Trails**

Other Spaniards came to Utah after the Escalante expedition of 1776. They were not sent by church or state, however, but came

\(^1\)Ibid., p. 154.

as slave traders. Tribes throughout the Great Basin raided one another for captives to be sold as slaves to the Spaniards. A regular trade route known as the Old Spanish Trail was established between Santa Fe and Los Angeles. Figure 5, on page 29, indicates that the Trail entered Utah near present Moab, crossed the Plateau Region, and headed southwest toward California. Journals of trappers and Mormon colonist in Utah tell that Mexicans were slave trading as late as 1860. The Old Spanish Trail had been abandoned, however, when traveled over by a Mormon reconnaissance in 1847. The slave trade had apparently found a different route by that time. Nevertheless, the Old Spanish Trail was the first established route into Utah, and was later used by Mormon colonists.

Spaniards became alarmed at American movement into the Mississippi Valley during the later eighteenth century. Pierre Vial de Lyon was sent, in 1792, to establish a route from Santa Fe to St. Louis in hopes of strengthening the Spanish hold on the area. This route boomed with trade following Mexican Independence in 1821, and became known as the Santa Fe Trail. It resulted in lucrative markets which encouraged America's westward expansion. The Trail was later used by American immigrants settling in the Southwest. It connected with the Old Spanish Trail at Santa Fe to provide a southern route into Utah.

1 Creer, The Founding of an Empire, p. 35.
2 Hunter, Brigham Young the Colonizer, p. 73.
Northern Trails

Oregon was characterized as the land of promise by American diplomats anxious to encourage settlement there during the first half of the nineteenth century. The establishment of American towns and farms in the northwest would greatly strengthen America's hand in boundary disputes with the British. Oregon was propagandized as the finest grazing and farming land in all of the continent.¹ Thousands of immigrants flocked to the promised land and a regular trail was established between Independence, Missouri, and Oregon's Willamette Valley. The Oregon Trail, as illustrated in Figure 5, followed the south side of the Platte River through Nebraska and crossed over after passing Fort Laramie.² It negotiated the Rocky Mountains through South Pass and led northward from Fort Bridger to the Snake River near Fort Hall. It then paralleled the Snake to Fort Boise and crossed through northern Oregon. The route from South Pass to Soda Springs varied greatly and many shortcuts such as Sublette's cutoff bypassed Fort Bridger.

The Oregon episode was repeated in California during the 1840's. John C. Fremont, Samuel Brannon, Lansford Hastings, and others were determined to make California independent from Mexico and drew much of the Oregon immigration off to California. The California Trail left the Oregon Trail at Soda Springs, crossed the northwestern corner of present Utah, and followed the Humbolt River

¹Ralph H. Brown, Historical Geography of the United States, p. 469.

²Fort Laramie is not the same settlement as the present city of Laramie, Wyoming.
through Nevada. It then crossed the Sierra–Nevada Range and descended into the Sacramento Valley. Thousands flocked to California following the gold discovery at Fort Sutter, in 1848.

Lansford Hastings followed Fremont's 1845 route across Salt Lake Valley, in 1846, and established Hastings' Cutoff. This short-cut left the Oregon Trail near Fort Bridger, crossed the Wasatch Range into Salt Lake Valley, and headed for Pilot Peak on the present Utah–Nevada state line. Hastings' Cutoff considerably shortened the distance from Fort Bridger to the Humboldt, but difficult mountain passes and desert posed obstacles to those who chose this route. The first immigrant parties to take Hastings' Cutoff were unprepared to meet these barriers and met with great hardship. Most remembered is the tragic Donner party. They left Independence, Missouri, late in the fall, lost a months time cutting through dense undergrowth in mountain passes, lost most of their supplies crossing the Great Salt Lake Desert, and were caught in early snows at the base of the Sierre–Nevada Mountains. The trails which these early parties blazed through the Wasatch Range greatly eased the Mormon trek into Utah a year later, in 1847.¹

The bulk of Oregon Trail immigrants bypassed Utah, but the route which they had established guided the Mormons from Fort Kearney to Fort Bridger. The California Trail was not extensively used by Utah immigrants either, but it guided the Mormon Battalion from Fort Sutter to Salt Lake Valley.

¹Creer, The Founding of an Empire, p. 183.
Mormon Routes

The Church of Jesus Christ of Latter-day Saints was organized at Fayette, New York, in 1830. The movement had its origin several years earlier when its founder, Joseph Smith Jr., claimed to have received divine calling to restore the Church of Jesus Christ in its fullness.¹ The Mormons, as followers of Smith were called, were persecuted for their religious beliefs and practices and were driven westward with the frontier.² They were industrious and established a prosperous city named Nauvoo, on the Illinois bank of the Mississippi. As early as 1842 Smith was planning to remove his following to the Rocky Mountains.³ Increasing persecution led to the martyrdom of the Mormon prophet, in 1844, and Brigham Young assumed the role of leader of the Church. Mormon leaders continued to plan an exodus westward; examining the reports of Fremont and others who had explored the area. By January of 1846 the decision was final; the Mormons would migrate to the Great Basin.⁴ Mob violence hastened the Church's departure from Nauvoo, in 1846, and the Mormons crossed Iowa to establish Winter Quarters near present Council Bluffs. Winter Quarters became an important outfitting station for Mormons preparing to emigrate to the Great Basin. In the spring of 1847,

¹Roberts, A Comprehensive History of the Church, Vol. 1, p. 54.
²The term Mormon comes from The Book of Mormon, an ancient scriptural record which Smith allegedly received from an angel.
³Jackson, "Myth and Reality: Environmental Perception of the Mormons, 1840-1865; An Historical Geosophy," p. 90.
⁴Ibid., p. 96.
Brigham Young led the first group of Mormon immigrants to the Salt Lake Valley. Figure 5 illustrates that the pioneers traveled the north side of the Platte River from Council Bluffs to Fort Laramie, thus avoiding the Oregon Trail on the River's south side. The numerous parties which had preceded the Mormons westward had left the Oregon Trail overgrazed and void of range feed. The Mormons crossed over the Platte at Fort Laramie and followed the Oregon Trail to Fort Bridger. They followed the Donner route into Salt Lake Valley, arriving on July 24, 1847. Salt Lake City was established and the Mormons began their colonization of the Great Basin.

The Mexican-American war of 1846-1848 provided the Mormons an opportunity to prove their loyalty to the United States, and also to acquire funds with which to finance their move to the Great Basin. A Mormon battalion was recruited and was outfitted at Fort Leavenworth, Kansas. The Battalion headed southwest on the Santa Fe trail, leaving on August 12, 1846, and took the Cimarron Cutoff to Santa Fe, as shown in Figure 5. They met no resistance from their opponents and the small Mexican outpost of Tucson was abandoned by its troops upon approach of the larger American force. The Mormon Battalion reached its destination of San Diego in January, 1847, and was discharged from service. A few of the Mormons re-enlisted for garrison duty at San Diego but the majority traveled to Salt Lake and were reunited with the body of the Church. Those returning to Utah traveled northward from San Diego and found temporary employment at Fort Sutter. Several remained to participate in the gold strike but the remainder

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followed the California Trail to Utah and arrived in Salt Lake during October, 1847. They apparently had not heard of Hastings' Cutoff, or perhaps they heard of the Donner's fate in taking it, and followed the California Trail far northward around Great Salt Lake.

The Mormon immigration marks the beginning of heavy settlement in Utah. The American frontier had skipped from Missouri to the West Coast, but was now creeping back eastward as Mormons occupied the Great Basin.
CHAPTER IV

SETTLEMENT

Brigham Young at first claimed almost the entire Great Basin and Colorado drainage for the Mormons. The boundary which he drew was substantially altered, however, by the official creation of Utah Territory. Subsequent reductions shaped the present State of Utah. Brigham Young instituted a program of colonization in Utah as the Mormon empire began taking form.

Boundaries

The Mormons established a provisional state known as Deseret to provide law and order and lay claim to their western expanse. The United States had gained acquisition of the area following the Mexican-American war, however, and soon carved the entire area into new territories of which Utah was one. Utah's boundaries were gradually reduced to the State's present form as political regions in the West were subsequently re-organized. The provisional government of Deseret created several counties from the valleys being settled in Utah. Many more counties were established after Utah became a territory. Utah counties underwent numerous alterations until the time of Statehood, in 1896.

The State of Deseret

The Treaty of Guadalupe-Hidalgo, in 1848, brought an end to
the Mexican-American War and resulted in the cession of the remaining Spanish Borderlands Region to the United States.\(^1\) The Mormons had received little protection from the American Government during their persecutions in the East. Nevertheless, they maintained allegiance to the Constitution of the United States and intended to petition for territorial status upon arrival in the Great Basin.\(^2\) Refusal of the petition caused Mormon leaders to formulate a provisional government to establish law and order over the Great Basin.\(^3\) A civil convention was held in Salt Lake City on February 2, 1849, and the State of Deseret was created.\(^4\) A constitution was drawn up, and Brigham Young was elected governor. Deseret encompassed a vast area and was delineated by natural features as shown in Figure 6, on page 37. The Gila River was the State's southern limit while drainage divides bounded elsewhere. The Continental Divide and Wind River Mountains were borders on the east, the Great Basin Drainage Divide was border on the north, and the Sierra-Nevada Range formed the western border.\(^5\) The Convention showed wisdom in including the Pacific coastline from Los Angeles to San Diego within the bounds of Deseret. They apparently realized the predicament of landlocked states and desired an access

\(^1\) The Spanish Borderlands Region may be broadly defined as the southern portion of the western United States.


\(^3\) Ibid., p. 422.

\(^4\) The word Deseret is a Book of Mormon word meaning honey bee. It is used as a symbol of industry and frugality.

Development of Utah State

State of Deseret — 1849
Utah Territory — 1850

- Ceded to Nevada — 1861
- Ceded to Colorado — 1861
- Ceded to Nebraska — 1861
- Ceded to Nevada — 1864
- Ceded to Nebraska — 1861
- Ceded to Wyoming — 1868

Figure 6
to the sea.

Utah Territory

Congressional interest in Mexican Cession lands was stimulated by the California gold rush of 1849. Congress quickly moved to organize the West and as a result, the unofficial State of Deseret was dissolved. California was organized as a State, and the southern portion of Deseret was given to New Mexico Territory. Utah Territory was created from the northern portion of Deseret on September 9, 1850. It lay between the 37th and 42nd parallels, and was bounded on the west by the 120th meridian, and on the east by the Rocky Mountains summit. ¹ Brigham Young maintained the governor's chair but several federal appointees came from outside of Utah.

The California mining boom had extended over onto the east side of the Sierra-Nevadas by 1860 and gentiles far outnumbered Mormon colonists in that area. ² The gentiles detested Mormonism and its jurisdiction over the western portion of the Great Basin from a distant capital in Salt Lake City. ³ They petitioned congress for the creation of a territory separate from Utah. The Sierra-Nevada's rich mineral potential prompted congressional action and the Territory of Nevada was created from the western side of Utah Territory

²The term gentile is used in reference to anyone not of the Mormon faith.
in 1861. It lay between the 116th and 120th meridians.\(^1\) Nevada was a small territory in 1861, but had big ideas of achieving statehood. The Nevadans petitioned congress for additional Utah land as miners moved eastward and discovered lodes in the mountains of the Great Basin. Figure 6 shows that Utah made additional cessions to Nevada in 1862 and 1866. The first addition extended Nevada to the 115th meridian and the latter addition carried it to the 114th meridian where the present Utah-Nevada line is established.\(^2\)

The story of Utah's territorial reduction on the east is similar to that of reductions on the west. Denver was already an important stop on the overland stage route, in 1858, when the discovery of gold at Cherry creek drew hordes of miners into the area.\(^3\) In 1861 there was a general reorganization of territories of the Great Plains. Colorado was composed from portions of Kansas, New Mexico, Nebraska, and Utah territories.\(^4\) Dakota Territory was created and Nebraska was extended into Utah.\(^5\)

Utah suffered a final reduction with the creation of Wyoming Territory in 1868. The western portion of Dakota had been clamoring for independence since 1864. The building of the transcontinental railroad through present Wyoming brought the development

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\(^2\)Ibid.

\(^3\)Brown, *Historical Geography of the United States*, p. 444.


prerequisite for establishment of a territory.\textsuperscript{1} The creation of Wyoming Territory, in 1868, extracted a piece of land from Utah's northeastern corner and gave Utah its final form.

Utah occupied only about one third of its original area following territorial reductions. She began petitioning for statehood in 1850 but was not admitted until January 4, 1896. Following almost fifty years of settlement, Utah finally became the Nation's forty-fifth state.

**Utah Counties**

The first attempt to create counties in Utah was made by the State of Deseret, in 1850.\textsuperscript{2} Seven valleys into which Mormon settlement had spread were established as counties. The counties of Weber, Davis, Great Salt Lake, Tooele, Utah, and San Pete all lay along the Wasatch Front, while Little Salt Lake County represented colonization to the south. Figure 7, on page 41, shows the irregular shape of these first counties where mountains enclosing the valleys formed natural boundaries.\textsuperscript{3}

Settlement expansion prompted the territorial legislature to reorganize territories in 1852.\textsuperscript{4} New county lines were based on the

\begin{enumerate}
\item Natural Boundaries are features of the physical landscape which are used to delimit regions.
\item Allen, "The Evolution of County Boundaries in Utah," p. 264.
\end{enumerate}
Development of Utah Counties

1850

1852

1870

1896

Figure 7
latitude-longitude grid system. Figure 7 shows that the original seven counties were expanded and five new counties were added, as the entire territory was divided into areas of jurisdiction.

Territorial reduction and intensified settlement along the Wasatch and Colorado Plateau Fronts caused numerous county changes in succeeding years. Iron County was split along the thirty-eight and one-half degree parallel to from Beaver County in 1856. Portions of Green and Salt Lake Counties were used to form the counties of Summit, Cache, Morgan, and Rich in the respective years 1854, 1856, 1862, and 1864. These counties were a result of the spread of settlement into the Wasatch Range. County lines began to deviate from the grid pattern as drainage divides were used as boundaries for these counties. Utah reacted to the extension of Nebraska into its territory by creating Wasatch county, in 1862, to guard against further intrusions. The great east-west lateral expanse of counties was significantly reduced by Utah's land cessions to Colorado and Nevada. Counties were further reduced by re-organization as settlement spread out to either side of the Wasatch and Colorado Plateau Fronts. Kane county was created from Washington County, in 1864, while San Pete was split to form Sevier, and Piute was formed from part of Beaver. Figure 7 illustrates that in 1870, following final territorial reductions, there existed twenty counties in Utah. Boundaries consisted of both drainage divides and grid lines.

Several more counties were formed in Utah as population

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1Ibid., p. 264.

2Larson, Outline History of Territorial Utah, p. 293.
increased and settlement spread out across the Colorado Plateau, during the 1880's and 1890's. Emery, San Juan, and Uintah counties were created in 1880 and rivers were extensively used as boundaries in Utah for the first time. Garfield County was created from Iron County, in 1882, and Wayne County was created from Piute County, in 1892. Grand and Carbon Counties were both created from Emery County; the first in 1890 and the latter in 1894. Counties began to stabilize following the settlement of the Colorado Plateau Region and Utah entered the Union with twenty-seven counties, in 1896. Figure 7 indicates that two more alterations were yet to occur. Duchesne County was carved out of Wasatch County, in 1914, as settlers made a final push onto Indian lands. Daggett County was created, in 1917, as a result of settlement isolation on the northern slopes of the Uintah Range in Uintah County.¹

Mention should perhaps be made of one additional county in Utah's past. The Rio Virgin County was created in the southwestern corner of Utah in 1868. It was later found to lie mostly in Nevada, however, and the small portion lying within Utah reverted back to Washington County in 1872. The final form of Utah's county lines was an agglomeration of both natural and geometric boundaries.

Colonization

The Mormons began reconnoitering the Great Basin in search of settlement locations immediately after their arrival in Salt Lake Valley. They established numerous colonies along the eastern edge of the Great Basin, and several more were located along the fringes

¹Allen, "The Evolution of County Boundaries in Utah," p. 274.
of Deseret. Neff devised a scheme which conceived the colonies of interior Utah as forming an inner cordon of settlement while the outlying colonies formed an outer cordon of settlement. He asserted that the Outer Gordon was strategically created to appropriate key agricultural points and form a ring of security around Utah's heartland.¹ Recent reappraisal of Neff's concept by Campbell, however, points out its fallacies.² Campbell concludes that the Outer Cordon merely exists in the mind of historians and was not a systematic plan of colonization. The Inner and Outer Cordons will be referred to in this thesis only to designate geographic regions of Mormon settlement.

Another fallaceous concept is that of the Mormon Corridor. Hunter portrays the Mormon Corridor as a highway of immigration and communication between Salt Lake City and the West Coast.³ Although Brigham Young may have intended it to serve as such, the scheme never successfully materialized.

**Inner Cordon Settlement**

The Inner Cordon of settlement consists of those colonies established along the eastern edge of the Great Basin in Utah. Its formation was a result of settlement expansion into the fertile valleys which line the Wasatch and Colorado Plateau Fronts.

The Mormons had thoroughly studied the reports of early

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³Hunter, *Brigham Young the Colonizer*, pp. 68-91.
explorers to Utah and had received both positive and negative impressions for settlement. Fremont spoke of the eastern side of Salt Lake Valley as an oasis in the desert and highly recommended it for settlement. His statement regarding the scarcity of timber, however, was corroborated by Major Harris and dampened the hopes held by some Mormon leaders for a prosperous colony near the Great Salt Lake. ¹

Nevertheless, Brigham Young made the final decision to settle there and Salt Lake City was established as the first Mormon settlement in Utah.

Numerous other colonies were established along the Inner Cordon in rapid succession, as indicated in Figure 8, on page 46. Bountiful was founded just north of Salt Lake City, in 1847, as the pioneers searched for winter grazing range. Miles Goodyear was a rancher living near Ogden's Hole when the Mormons came to Utah. He sold out to them in 1848 and the village of Ogden was established. Ogden and Ogden's Hole (North Ogden) grew rapidly as a popular area of Mormon settlement. Brigham City was founded in 1851 and settlement soon spilled over into Cache Valley to create the town of Logan, in 1859.

Settlement also spread southward from Salt Lake City. Utah Valley seemed favorable for settlement and Fort Utah was built near Utah Lake in 1849. It was soon discovered that the site was unsuited for settlement, however, due to annual flooding by the Provo River. The village was finally moved farther upstream and out of the floodplain to become the town of Provo. ² Settlements were often relocated

¹Ibid., p. 31. ²Ibid., p. 233.
Mormon Colonization

Outer Cordon Settlements

Inner Cordon Settlements

Figure 8
to better ground after colonists became more familiar with the area they were in.

A local tribe of Ute Indians were desirous of acquiring the White Man's relatively comfortable way of living and invited the Mormons to colonize among them in San Pitch Valley. The Mormons accomodated by establishing Manti, in 1849, and Ephriam, in 1852. The settlement arm created by these villages was later linked by telegraph and railroad to become an integral part of the Inner Cordon.

Brigham Young dispatched a southern exploring party, in 1849, to locate sites for settlement in southern Utah. The party traveled along the Colorado Plateau Front and was impressed with much of the area it encountered. The description of Little Salt Lake Valley is typical of the locations chosen for settlement in southern Utah.

... a handsome expansive plain of very rich land, consisting partly of overflowed wire grass meadows, all of which it is judged might be drained and cultivated, ... other portions of this plain were dry and level, delightful for the plow and clothed with rich meadow grass, rabbit weed, and etc. The soil was mostly a rich black loam ... thousands of acres of cedar, constituting an almost inexhaustible supply of fuel ...\(^1\)

Parowan, Cedar City, and Fillmore were all founded in 1851, and the colony of Beaver was established in 1856. Fillmore was an artificial capital of Utah from its founding to 1856.\(^2\) It was designated as capital for its central location in the Territory, but Salt Lake City was firmly entrenched as the natural capital.\(^3\) The momentum created by precedence of settlement at the latter location

\(^1\)Ibid., p. 47.

\(^2\)An artificial capital is one which is built all at once to fill a role of administration.

\(^3\)A natural capital is one which evolves through its acquired momentum.
finally returned the seat of government to Salt Lake City. This area developed as Utah's core region with Salt Lake City being the cultural center of gravity.¹

The Inner Cordon was extended farther southward with the establishment of St. George, in 1861. Settlement became more random following Young's death in 1877. Colonists began moving deeper into the Great Basin and Colorado Plateau Regions, but the Inner Cordon pattern is reflected even today in the present population distribution.

Outer Cordon Settlement

The Outer Cordon of settlement consists of those colonies established on the fringes of the Great Basin. Some of them were economic in nature while others were the result of missionary zeal.

The Carson valley settlement originated as a supply station for travelers bound for the California goldfields.² The trade was taken over by Mormon colonists in 1851 and the continued influx of settlers resulted in the city of Genoa, in 1856. Mormon prosperity was interrupted in 1857 by the Utah War. Colonists returning to Utah during the conflict were forced to abandon their settlement to the gentiles.

Rumors of California wealth tempted many Mormon settlers in Utah. A group of colonists left Utah for California in 1851, against

¹A Core Region is the settlement area in which is located the principle institutions of economic, political, and social life.

Brigham Young's better judgement, and founded the colony of San Bernardino. Roberts and others have written that the colony prospered and defaulted only as a result of the Utah War. Research by Wood, however, indicates that the settlement had already failed as a Mormon colony prior to 1857 as a result of apostasy from the Church.

Jim Bridger and his associates early established a post along the Oregon Trail to profit from trade with immigrants. Several Mormon businessmen sensed the lucrative market and began intercepting immigrant parties bound for Fort Bridger. The Mountainmen suffered substantial loss in business and retaliated by inciting Indians against the Mormons. This led to a warrant for Bridger's arrest and he fled the Territory. The Mormons built Fort Supply near Fort Bridger in 1853. This was a final blow to Fort Bridger trade and the remaining Mountainmen sold out to the Mormons for $8,000. Both Forts were burned by the Mormons as a defensive measure during the Utah War.

The site of Las Vegas became an important watering hole on the Road to California as early as 1847. Brigham Young decided to establish a permanent colony there, in 1855, to settle the Indians of the area. Another group was called by Brigham Young to go to Las Vegas to mine lead ore, in 1856. Neither missionary nor miner met

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1Roberts, A Comprehensive History of the Church, Vol. 4, p. 245; Hunter, Brigham Young the Colonizer, p. 85.


3Hunter, Brigham Young the Colonizer, p. 300.

4Ibid., p. 345.

5Arrington, Great Basin Kingdom, p. 127.
with much success, however, and the colony was finally liquidated in 1868.

Fort Limhi and the Elk Mountain Mission were also established to settle Indians of the region, in 1855. Fort Limhi was located far to the north of Salt Lake on the Salmon River. It experienced successive crop failure and had trouble getting supplies past hostile Indians of the area.1 Elk Mountain was isolated on the Colorado Plateau and also experienced severe harassment from Indians. Both missions were finally abandoned during the Utah War, in 1858.

The Outer Cordon represents efforts to establish colonies away from the heartland of Mormon settlement. Whether established by economic venture or millenial missionary fervor, most of the colonies were eventually abandoned by Mormons. Territorial reductions, apostasy, economic failure, hostile Indians, and the Utah War were all factors which compounded to limit Mormon expansion outside of Utah proper.

The Mormon Corridor

Brigham Young was intent upon building a strong, self-sufficient Mormon settlement area in the Great Basin. To do so would require a large Mormon population and proselytizing activity was stepped up accordingly. Missionaries were sent to numerous foreign countries and regions within the United States between 1849 and 1852. Those who embraced the new faith were encouraged to, "... immigrate as speedily as possible. ..."2 The Oregon Trail

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1 Hunter, Brigham Young the Colonizer, p. 359.

route which was followed by Utah's first Mormon immigrants had many disadvantages. It was impassible during the winter, and outfitters charged excessively high prices for wagons and teams. On the other hand, the road from California to Utah was open year around and the distance and cost were less than that of the Oregon Trail. Brigham Young, in 1851, recorded his desire to establish a route from California to Utah.

Amasa M. Lyman and Charles C. Rich left this place ... for the purpose of establishing a settlement in California, at no great distance from San Diego ... between which and Iron County we design to establish settlements as speedily as possible ... to have a continued line of stations and places of refreshment between this point and the Pacific.

Hunter speculates that the Mormon Corridor, as shown in Figure 8, was intended to funnel immigration from the port of San Diego to Salt Lake City. San Bernardino was to be the principle outfitting station and Las Vegas was to serve as the half way station along the route.

The port for immigrant ships prior to 1854 was at New Orleans. From there the Mormon immigrants traveled up the Mississippi to St. Louis. They then traveled overland to one of the many outfitting stations in Iowa and prepared to cross the plains to Utah. The immigrant port was shifted to New York City following the 1854 outbreak of malaria and cholera epidemics on the rivers.

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1 Hunter, Brigham Young the Colonizer, p. 72.  
2 Ibid.  
3 Ibid., p. 77.  
4 Ibid.  
5 Arrington, Great Basin Kingdom, p. 104.  
6 Ibid.
Brigham Young pleaded in vain for shippers to land the immigrants at San Diego so that the Mormon Corridor route could be utilized.\textsuperscript{1} San Diego served as port for immigrants coming from the South Seas, but their numbers were insignificant when compared with the tens of thousands of European immigrants landing at Eastern ports.\textsuperscript{2} The mainstream of Mormon immigrants passed through Eastern outfitting stations and traveled the Great Plains route to Utah. The Mormon Corridor principally functioned as a supply route to import seed, animals, and manufactured goods from California. It was never heavily used for immigration.

\textsuperscript{1}Hunter, Brigham Young the Colonizer, p. 78.

\textsuperscript{2}Ibid., p. 106.
CHAPTER V

DEVELOPMENT

Cultural and economic patterns became firmly entrenched in Utah's landscape during the latter nineteenth century period of development. The Wasatch Front strengthened its position as Core Region, while foreign immigration created a cultural melting pot. Efforts were made to tame the Indians, and a federal army was sent against the Mormons. Many functional towns came and went, while the Mormon village provided the basic form of settlement. Isolation was vanquished as the nation was united by telegraph, railroad, and industry. Utah's mining boom stimulated manufacturing and agricultural markets within the State. New methods of farming resulted in increased production, while grazing also became an important part of the economy. All of these developments prepared Utah for the age of modernization which followed.

Population

Utah was meagerly occupied by trappers and Indians prior to 1847. Then came the Mormons and 2,095 of them were settled along the Wasatch Front by the end of the year.¹ Many more immigrants followed and by 1850 there was a population of 11,380 listed for Utah

Territory in the U. S. Census. Most of the settlers were attracted to the fertile valleys along the Wasatch and Colorado Plateau Fronts. Figure 9, on page 55, illustrates that the bulk of population was living in Utah's seven original counties, in 1852. This initial settlement pattern established the precedent for future population distribution.

The Perpetual Immigration Fund was established to aid Mormon immigrants in the expense of traveling to Utah. It was organized in 1849 and gave aid to over 100,000 immigrants during its thirty-eight years of operation. The decade between 1850 and 1860 was one of vigorous missionary activity and Utah's population increased fourfold during this period. The population growth rate as a percentage decreased in succeeding years. Nevertheless, the number of people in Utah doubled from 1860 to 1870, and doubled again between 1870 and 1890.

Immigrants coming to Utah after the period of initial colonization were attracted to settlements where friends or relatives had preceded them. Population thus continued to accumulate along the Wasatch Front where initial colonies were located. Settlers began occupying the Plateau Region, in the 1880's, after valleys along the Wasatch and Colorado Plateau Fronts had become crowded. Their numbers remained insignificant, however, when compared with the population concentration along the Wasatch Front. Salt Lake City remained the cultural, economic, and political center of gravity in

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1 Arrington, Great Basin Kingdom, p. 382.
2 U. S. Census of Population, 1890.
Population Growth

Figure 9
Utah and continued to attract population to the Wasatch Front throughout the early settlement period. This is indicated by the population distribution in 1890 as shown in Figure 9. This trend has continued to the present with seventy-eight percent of the State's population located in Weber, Davis, Utah, and Salt Lake Counties.¹

Utah's population pattern is the result of a strong core region with outlying areas entering a downward transitional trend. A principle reason for the development of this strong core region is its role as the capital of Mormonism.

Immigration

The Great Basin was a vast area and the Mormons sought strength in numbers to develop all of its resources and occupy all of its fertile valleys. The Mormons numbered only about 57,000, in 1846, as they were making preparation for their exodus to the Great Basin.² Upon arriving in Utah they estimated that one valley alone could hold that many people.³ A massive missionary effort was mounted in 1847 and converts were encouraged to emigrate to Utah and help build the kingdom. Thousands responded and Utah soon began to swell with immigrants.

About one-fourth of the Territory's population was of foreign extraction as late as 1890.⁴ The majority of foreign immigrants came

¹Roylance, Utah's Geography and Counties, p. 69.
³Hunter, Brigham Young the Colonizer, p. 47.
⁴U. S. Census of Population, 1890.
from Scandanavia, Germany, Switzerland, and the British Isles. They settled throughout the area and significantly effected the cultural landscape. Figure 10, on page 58, indicates that the majority of foreign immigrants were of English stock. In San Pete and Sevier Counties, however, the Scandanavians predominated. They occupied these counties from earliest times and Scandanavians coming to Utah later were continually attracted to that area by friends and relatives. The ethnic heading "Other" in Figure 10 includes Chinese, French and Italian. The large portion of "Other" in Grand County, in 1890, was composed mostly of Chinese. They came into that area as a labor force building the Denver & Rio Grande Railroad during the 1880's. The ethnic heading of German includes Swiss immigrants. The Swiss were extremely active in helping to shape the economies of Cach and Washington Counties.

The first settlers to Cache Valley suffered greatly from a severe winter in 1857. The Swiss who arrived there in 1859, however, found the climate to their liking. The cool mountain environment of Cache Valley reminded them of their native Switzerland. They corresponded this perception back to their friends in Switzerland and as a result there was a boom of Swiss immigration to Utah in 1860. The Swiss were dairymen by trade and they pioneered several cheese factories in Cache Valley. The Valley's reputation grew in succeeding years and it became a hub of agricultural activity in Utah.

1Ibid.
2Hunter, Brigham Young the Colonizer, p. 270.
3Joel E. Ricks, History of a Valley (Salt Lake City: Deseret Press, 1956), p. 43.
Settlement of Foreign Immigrants — 1890

Figure 10
The Cache Valley Dairy Association was producing more Swiss Cheese than all of Switzerland by 1956.¹

A group of Swiss immigrants was directed to Washington County by Brigham Young in 1861. He had apparently perceived the feasibility of combining Swiss wine technology with the warm climate of southern Utah to produce wine for the Holy Sacrament.²

The Cotton Mission presents still another example of cultural economic adeptness. Brigham Young was aware of the need to produce textiles within the Territory. He planned a cotton mission in southern Utah and sent converts from Texas, Alabama, and Mississippi to assure the ventures success.³ These southerners were experienced cotton growers and their cultural economic ability was used to create a Dixie in Utah.

Indian Relations

The first Mormon settlers into Utah found several different groups of Indians in the area. Utah was occupied by Shoshone to the north, Ute to the east, Goshute to the west, and Paiute to the south. Each group comprised several small bands which subsisted by hunting and gathering. The appearance of white settlers provided the Utah Indians opportunity to trade but they often resented trespasses upon their hunting lands. Utah did not suffer gross Indian warfare as occurred elsewhere on the American frontier, but several minor

¹Ibid., p. 254.

²Arrington, Great Basin Kingdom, p. 216.

disturbances did occur. Both the Walker War (1853-1854), and the
Blackhawk War (1865-1868), resulted in numerous deaths.

The reason for Utah's relatively peaceful settlement may be
attributed to Mormon-Indian policy. A common belief in the last
century was that all mankind had a common origin according to Bibili-
cal account. The Mormons, among other sects, believed that the
American Indian originated from ancient Israel. They felt a sacred
obligation to Christianize the Indian and approached him with an
attitude of friendship. 1 Brigham Young stated that it would be
cheaper to feed the Indians than fight them.

We shoot them down as we would a wild dog. Now this is all
wrong, and not in harmony with the spirit of Christianity. In
only one instance, that of William Penn, has Christian treat-
ment been accorded them. But even aside from the aspect of
Christian duty, I am satisfied it will be cheaper to feed them,
than fight them. 2

Thus the Mormon settlers hoped to peacefully occupy Indian
lands through welfare rather than warfare. Several missions were
organized to teach the Indians a sedentary way of life. Indian
farms were established to teach the natives to live as the White
Man. Figure 11, on page 61, indicates that most of these Indian
farms were located near areas of Mormon settlement along the Wasatch
and Colorado Plateau Fronts. 3 They went hand in hand with the estab-
ishment of Mormon colonies throughout the area. The farms at Deep
Creek, Spanish Fork, San Pete, and Corn Creek were also official

1 Hunter, Brigham Young the Colonizer, p. 312.
2 Ibid., p. 313.
3 Much of the information for this map was derived from
Richard H. Jackson, "The Mormon Indian Farm: A Strategy of Cultural
reservations of the Territory.\textsuperscript{1} Indian farms at first met with moderate success and officials encouraged the settlers to continue working with the Indians.\textsuperscript{2} Farms deteriorated in later years, however, due to poor management and repeated crop failure.\textsuperscript{3} Indians began leaving the farms and turned to stealing and begging to avoid starvation. Rising conflict led to removal of the Indians to the newly created Uintah Reserve, in 1864. Several tribes resisted but the Blackhawk War resulted in their submission. Only the Goshute Tribe preferred extinction to removal and the Deep Creek reservation was created for them on their homeland in 1870. Mormons continued to farm with small groups of Indians in a few places. Most of the native Americans, however, remained on the Uintah Reserve as wards of the federal government.

The Utah War

The first ten years of Mormon settlement was a period of prolific expansion, but a period of conflict followed which retarded colonization. The gentiles of Utah were in constant conflict with Mormons over business and government. They made several accusations which depicted the Mormons as being in a state of rebellion against the United States Government. President Buchanan hastily dispatched an army numbering 2,500 to quell the supposed Mormon rebellion, in 1857. The Mormons perceived the troops as an invading force coming

\textsuperscript{1}Neff, \textit{History of Utah, 1847-1869}, p. 383.
\textsuperscript{2}Hunter, \textit{Brigham Young the Colonizer}, p. 315.
\textsuperscript{3}Neff, \textit{History of Utah, 1847-1869}, p. 388.
to drive them from their lands once again. Figure 12, on page 64, shows that the invading U.S. Army first met Mormon resistance as they approached South Pass. The Mormon army was ordered to pursue a defensive strategy of harassment.

On ascertaining the locality and route of the troops (U.S. troops), proceed at once to annoy them in every possible way. Use every exertion to stampede their animals, and set fire to their trains. Burn the whole country before them and on their flanks. Keep them from sleeping by night surprises. Blockade the road by felling trees, or destroying the fords when you can. Watch for opportunities to set fire to the grass on their windward, so as, if possible, to envelope their trains. Leave no grass before them that can be burned ... The Mormons hoped to defeat their opponents by devastating the environment in a scorched-earth policy. They engaged supply trains emerging from South Pass and the Federal army was forced into winter encampment at Camp Scott, near Fort Bridger. Meanwhile, the Mormons built fortifications along the walls of Echo Canyon in anticipation that the invaders would march on Salt Lake City by that route.

Peaceful negotiations were concluded by spring and it was determined that the new federal appointed Governor would come to Salt Lake City without military escort. The Army was to follow at a later date and establish their residence outside of the Mormon settlement area. Governor Cummings arrived on April 8, 1858, and the Army followed on June 26. The Army marched through a deserted Salt Lake City, however, as the inhabitants had fled southward to

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1 Roberts, A Comprehensive History of the Church, Vol. 4, p. 240.

2 Arrington, Great Basin Kingdom, p. 175.
Provo for fear of reprisal by the troops. The Army marched directly to a valley west of Utah Valley and established Camp Floyd. The Mormons soon returned to their homes and Utah entered a new era of development. The Federal troops provided a lucrative market for agriculture and business and much economic activity resulted. Utah greatly benefited from surplus left behind by the Army when it was called back East during the Civil War, in 1861.

Settlement Expansion

Many other towns were established in Utah aside from those already mentioned in the discussion of colonization. Figure 13, on page 66, shows the location of several and classifies them into three categories. Miscellaneous settlements include railroad towns, military posts, supply depots, lumber camps, and communications centers. Agricultural settlement forms the backbone of the State and reflects the Mormon rural ethic. Mining settlements were associated with ore strikes which provided an important economic stimulus to Utah. Many of the towns shown in Figure 13 echo economic surges while others were simply colonies which failed.

The development of Utah settlement becomes apparent as one notes the dates and functions of various towns. Agricultural settlement first occurred along the edge of the Great Basin during the 1850's. The 1880's witnessed a surge of agricultural expansion as farmers and herders moved onto the Plateau Region. The coming of the railroads led to numerous construction towns which lasted only a few years.

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1Ibid., p. 183.
Boom Towns

- Miscellaneous Settlement
- Agricultural Settlement
- Mining Settlement

Figure 13
An even greater number of boom towns accompanied the mining era. Numerous ore strikes were made in Utah from 1863 through the 1890's and scores of towns were built only to be abandoned when the economically recoverable ore was exhausted.

Corinne, Alta, and Ft. Harmony, indicated by enlarged symbols in Figure 13, present interesting stories which are typical of Utah boom towns.¹

The Mormon Village

Joseph Smith, in 1833, drew up a plat for the City of Zion. It represents his conception of the ideal city and some writers have suggested that Mormon villages in Utah were modeled after it.² Closer

¹Corinne presents a case in land speculation. It was anticipated that the Union Pacific and Central Pacific railroads would join somewhere north of Great Salt Lake and that a town in that vicinity would become Utah's railroad center. Corinne sprang up overnight to fill the role but the anti-Mormon attitude and vice which developed there gave Brigham Young cause to wish the towns dissolution. He persuaded the railroads to locate their terminal at Ogden and Corinne died almost as rapidly as it was born.

Alta exemplifies the mining boom in Utah. This one street town was built high in the Rocky Mountains in 1866. The short tundra growing season at Alta's location prevented agriculture and food had to be imported from the valleys below. Miners stripped the steep canyon walls of trees for use as tunnel buttresses in the mines. As a result, snow accumulation had little vegetative support to hold it on the slopes and avalanches constantly threatened the town. Alta was finally abandoned in 1895, as the mines became exhausted of ores.

Ft. Harmony was built as a Mormon agricultural settlement, in 1854. The principal material used in construction was adobe. A severe storm of several weeks duration occurred during the winter of 1861-1862. The adobe structures dissolved in the heavy, wet, snow. Several deaths resulted from collapse of walls and exposure, and the survivors finally abandoned their town. This incident no doubt taught settlers to respect climate in their choice of building materials in the future.

analysis, however, reveals that such was not the case.

The City of Zion calls for a plat one mile square, divided into ten-acre blocks; each block containing eight lots. The center tier of blocks were to be larger and used for temples and schools. Agricultural activity was to occur outside of the city limits in the surrounding countryside. Lots were oriented such that homes would face an alternate direction of those on adjacent blocks. Structures were to be of brick or stone, and lots were to be beautifully landscaped. Population was to be limited to 20,000 inhabitants.¹

The plat of Salt Lake City in 1870 as shown in Figure 14, on page 69, reveals some similarity to the City of Zion, but many differences should also be noted. The most obvious similarity is in the alternating orientation of lots. A degree of privacy was achieved by having homes facing alternate directions to those of adjacent blocks. City of Zion block and lot sizes were at first adhered to but deviated as Salt Lake City expanded onto the hilly land to the northeast. Commons, such as the Temple Block, were at first located in the center of town but public squares and buildings were created outward as the city expanded. Layton has noted that land-use was not specified in Mormon villages.² Commercial and industrial zones rather evolved naturally. Jackson has further noted that agricultural activity in Mormon villages was carried on within the city limits rather than being confined to outlying areas as called for by the City

¹Roberts, A Comprehensive History of the Church, Vol. 1, p. 311.

of Zion. It is also noted that building materials and city size is not specified in Mormon villages and varies greatly. The wide streets and grid pattern which characterize Mormon villages were likely adopted from the pattern of mid-western cities rather than from the City of Zion plat.

The Mormon Village cannot be characterized as adhering to any rigid plan of development. Several cultural influences are evident but the patterns which emerged are probably a function of physical environment and economic development.

**Vanishing Isolation**

Lines of communication and transportation were advanced with the expanding American Frontier. The Great Basin isolation which Brigham Young had achieved for Mormons vanished as West and East were linked through stage, wire, and rail.

The Overland Stage Line had its origin in 1852 as people and merchandise gravitated toward California. Salt Lake City was an important freight station on the Stage Line as early as 1858. The principle route lay between Atchison, Kansas, and San Francisco as shown in Figure 15, on page 71. The Overland Stage was later driven out of business by the railroad but continued to run until 1895 in some areas.

The Mormons established an alternative to the Overland Stage Line in 1856. They organized the Brigham Young Express to carry

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2 Ibid.
Communication & Transportation

Overland Stage
1852
Brigham Young Express
1856
Transcontinental Telegraph
1861
Desert Telegraph
1867
Transcontinental Railroad
1869

Figure 15
freight, passengers, and mail between Salt Lake City and Independence, Missouri. Several way stations were established along the route. Mail contracts obtained by the company were a principal factor flaring gentile jealousy of Mormons and precipitating the Utah War. Many of the way stations were burned by the Mormons during the Utah War, but others remained intact to serve the Overland Stage, Pony Express, and Transcontinental Telegraph in later years.¹

The Transcontinental Telegraph was pushed to completion upon outbreak of the Civil War, in 1861. From Council Bluffs it followed the Platte River to South Pass, went through Salt Lake City, and cut directly across the Great Basin and Sierra–Nevada Range to California. Many Mormons found employment supplying the telegraph Line with poles as it crossed Utah.

The Mormons built a telegraph line of their own in 1867. As illustrated in Figure 15, it ran along the Wasatch and Colorado Plateau Fronts from Logan to St. George and had a branch extending into San Pitch Valley. The Deseret Telegraph served to consolidate Mormon settlement through effective communications. It joined the Transcontinental Line at Salt Lake City to link Utah with the rest of the Nation.

The most monumental achievement during this era was completion of the Transcontinental Railroad, in 1869. The railroad built a direct line passage between Cheyenne, Wyoming, and Ogden rather than following the Oregon Trail route. It skirted the north end of Great Salt Lake and followed the California Trail to Sacramento.

¹Arrington, Great Basin Kingdom, p. 170.
The railroad provided an effective means of rapidly transporting freight and passengers across the country.

**Railroads**

The railroad was the most powerful single initiator of economic growth in Utah.\(^1\) The Union Pacific act of 1862 provided for the construction of a transcontinental railroad. The Union Pacific Railroad built westward from Council Bluffs while the Central Pacific Railroad built eastward from Sacramento. The two rails joined at Promontory Summit, in Utah, on May 10, 1869. Brigham Young desperately wanted the route to go south of Great Salt Lake so that it would go through Salt Lake City.\(^2\) Railroad officials decided that a northern route around the Lake provided more timber and water, however, and the Mormon capital was thus excluded.\(^3\) The Central Pacific entered Utah near Pilot Peak, as shown in Figure 16, on page 74, while the Union Pacific forged into Utah through the Wasatch Range. A third major railroad into Utah was the Denver & Rio Grande. It completed its line through eastern Utah, in 1883, and connected with the Union Pacific at Ogden. The building of these railroads into Utah gave the State access to markets in the East and on the West coast. The next step was to extend the tracks throughout Utah to tap abundant natural resources.

Immediately following the joining of the rails at Promontory,


\(^3\)Ibid.
Mormons began building a line to link Salt Lake City with the railhead at Ogden. The Utah Central Railroad was completed within a year and provided daily freight and passenger service between the two towns. The Utah Southern Railroad was merely an extension of the Utah Central and was intended to link southern settlements with Salt Lake City. It was anticipated that the Utah Southern would provided transportation of ores from Beaver and Iron Counties.\(^1\) The line reached Nephi by 1879. Meanwhile, the Utah Northern Railroad was built to tap the rich agricultural produce of Cache Valley. It eventually went into Idaho Territory and carried supplies to Montana mines.\(^2\) In addition to these three principal Mormon railroads, the Church also had part in several smaller extension lines.

Officials began looking to coal as a fuel resource after the timber supply in Utah had been exhausted. Mormons built the Summit County Railroad to ship Coalville coal to the main Union Pacific line at Echo. The Union Pacific had a lucrative business importing Wyoming coal, however, and forced the Mormon line to close by charging excessively to tranship the Mormon coal from Echo to the valley. The Mormons continued to resist the Union Pacific's monopoly and started the Utah Eastern Railroad, in 1880, to extend the railhead to Park City where mines were booming. The Union Pacific again foiled the Mormons by gaining control of stock in both the Summit County and Utah Eastern Railroads. The Union Pacific co-operated with the Mormons, however, to tap the mines in Rush Valley. The Utah Western Railroad provided for the transportation of ores from Stockton.

\(^1\)Ibid., p. 277.  \(^2\)Ibid., p. 283.
to Salt Lake City. The mines of southern Utah additionally motivated railroad expansion. The Utah Southern Extension Line was built from Nephi to Frisco between 1879 and 1881. Numerous smaller extension lines were built throughout Utah in succeeding years.

The railroads provided markets for Utah goods, reduced travel times, enabled factories to locate near resources, made possible the importation of heavy machinery for industry, flooded the Territory with manufactured goods, and provided many jobs and much new capital to the State. The most important industry to be stimulated by the railroads was that of mining. Mining activity in Utah lay dormant for lack of adequate transportation preceding the railroad and only obtained full development after 1869.

Mining

A contingent of U.S. Troops were stationed near Salt Lake City during the Civil War. Colonel Patrick Connor used his soldiers to search Utah's mountains for precious ores. The first mines in Utah were opened by Mormons at the Cedar City Iron Mission in 1850. The discovery of Galena by Connor's men, in Bingham Canyon, in 1863, encouraged further prospecting and several mining districts soon came into existance. Figure 17, on page 77, reveals the location of several of these mining districts in 1875. They are noticeably absent from the Plateau Region, where stratigraphic formations constitute much of the physical landscape. Most ores deposits were found associated with batholiths of the Rocky Mountain and Great Basin Regions.¹

¹A batholith is a large igneous mass and its nature favors the formation of ores about it.
Most of the mines produced a combination of ores including silver, gold, copper, iron, lead, and zinc. The principal ore mined is indicated for several of the Districts in Figure 17 by use of chemical symbols. Coal was mined on the Plateau Region and later became a much more important industry in Utah. Salt and phosphate deposits were also mined at an early time. The climax of mining in Utah occurred during the 1870's and 1880's.\(^1\) Surface deposits were exhausted by 1885 and only the larger companies remained in business by digging deep shafts into the Earth. One may gain greater appreciation for the railroad's stimulus to Utah mining by examining some production statistics. Silver production jumped from 1,750 ounces in 1869, preceeding the railroad, to 473,182 ounces in 1871, after the railroad was in operation. The value of ore exports rose from $200,000 in 1869 to $3,000,000 in 1871, and to $7,000,000 in 1875.\(^2\)

The mining industry brought much growth and development to Utah. It provided income from export of ores and supplied the State with raw materials for manufacturing.

Manufacturing

Mountain streams flowing into the valleys of Mormon settlement provided adequate power for the establishment of mills. The two principal types of mills during the period of early settlement were


grist mills and saw mills.\textsuperscript{1} Several mills were operating in each of the valleys of settlement as early as 1851.\textsuperscript{2} Milling activity had greatly expanded by 1870 as both stream and water were utilized for power.\textsuperscript{3} Figure 18, on page 80, indicates that lumber milling exceeded flour milling in most of the counties of Utah, in 1870. This reflects the flurry of building activity which accompanied both railroad and mining. Other manufacturing activities during this period were leather tanning, woolen mills, distilling liquors, crushing quartz, producing molasses, and machining metal.\textsuperscript{4}

The Mormons began an independent campaign of industrial development in 1851. Brigham Young was concerned for the loss of money from the Territory through importing manufactured goods. He therefore urged the people to produce their own goods through home industry.\textsuperscript{5} The doctrine of self sufficiency also motivated the Mormons to establish manufactories for iron products, wine, cotton, sugar, poetry, and paper. In this manner they hoped to eliminate their dependance upon gentile goods and services.\textsuperscript{6} The Mormon ethic of self sufficiency is evident even today in a massive Church program which urges families to maintain a stored supply of food and necessities.

\textsuperscript{1}Grist mills pulverized grains to manufacture flour, and saw mills cut logs into lumber to be used for building.

\textsuperscript{2}Larson, Outline History of Territorial Utah, p. 176.

\textsuperscript{3}U.S. Census of Manufacturing, 1870.

\textsuperscript{4}Ibid.

\textsuperscript{5}Arrington, Great Basin Kingdom, p. 113.

\textsuperscript{6}Ibid.
Figure 18

Value of Manufacturing — 1870

Principal Manufacturing Industries

Lumber Milling

Flour Milling
Agriculture

The Mormon pioneers planted seed immediately upon arriving in Salt Lake Valley, in 1847. A great contribution which Mormon farmers made to Great Basin agriculture was the propagation of irrigation. They made reservoirs in the mountains and built canals to carry the water onto fields in the valleys. They channeled mountain streams onto their fields. Most of the canals were co-operatively built and by 1865 there were 1,043 miles of canal in Utah providing irrigation for 150,000 acres of land.\(^1\) The area to be farmed was further expanded by dry-farming techniques. Figure 19, on page 82, shows the amount of wheat yielded in Utah counties at ten year intervals. The tremendous increase in Cache County after 1870 may be attributed directly to the success of dry-farming.\(^2\) Wheat was the most abundant crop in Utah but other products were also harvested. Maize was heavily planted when the Mormons first arrived in Utah, but it declined in later years, giving way to oats and potatoes.\(^3\) Cropland was mainly confined to valleys along the eastern edge of the Great Basin where soils were most fertile and rainfall most abundant. The Colorado Plateau Region remained relatively void of production, as indicated in Figure 19, for lack of fertile agricultural conditions and population.

Several years were noted for agricultural disaster. Drought was a recurring threat in spite of the irrigation system. Soils dried

\(^1\)Larson, *Outline History of Territorial Utah*, p. 173.

\(^2\)Ricks, *History of a Valley*, p. 207.

\(^3\)U.S. Census of Agriculture, 1870.
out and reservoirs remained small during years of little rainfall. Locusts were another curse to the area. Utah lay only in a temporary breeding ground of the Rocky Mountain Locust, but once the plague came it devastated the entire region.\(^1\) The most severe locust invasion or record occurred in 1855 and was witnessed by many.

They (the locusts) come suddenly, millions of them and eat every green thing in their way; even shawls or sheets thrown over plants or trees to protect them, would be quickly destroyed.\(^2\)

Sheep and cattle grazing were also important in the economy of early Utah. Several accounts attest to the quality of rangelands and grazing activity.

... there are thousands of acres which produce in great abundance, nutritious grasses, upon which cattle, horses, and mules can subsist and thrive the year round .... Some of the finest breeds can be found in Utah; and this business is beginning to be appreciated, as the most lucrative in which the inhabitants can be engaged.\(^3\)

Figure 20, on page 84, shows the pattern of grazing activity in Utah. Grazing was most intense to the north of Salt Lake City, in 1850, as settlement was moving northward. Settlement began moving into southwestern Utah in 1860, and, Washington County heavily engaged grazing activity. Grazing decreased in northern Utah during the 1870's, with the exception of Weber and Morgan Counties, which established dairy industries. Some outside businessmen noticed the quality of Utah ranges during the 1880's and established a large cattle ranch

\(^1\)Brown, *Historical Geography of the United States*, p. 386.

\(^2\)Arrington, *Great Basin Kingdom*, p. 149.

\(^3\)Larson, *Outline History of Territorial Utah*, p. 174.
Cattle Grazing

Relative Grazing Intensity Of Neat Cattle

| Low | | | | | High |

Counties

- B Beaver
- UT Uinta
- AI Arapahoe
- ST Uintah
- JU Juab
- GR Greene
- MA Davis
- SD Salt Lake
- SC Sevier
- LD Lincoln
- VC Wayne
- SU San Juan
- JP Juab
- WI Washington

Figure 20
in Emery County. Overgrazing and drought eventually drove them out of business, however, and Utah's cattle industry shifted southward to the San Juan area.

Sheep herding was also an important activity. Sheep made a duel contribution to the economy. They provided meat for food and wool for clothing. Shepherders received special tax allowances to aid their production as the wool industry increased in importance.  


2Larson, Outline History of Territorial Utah, p. 175.
CHAPTER VI

CONCLUSION

Maps may be used to great advantage to illustrate the settlement geography of a region. A map creates a visual image enabling the reader to better perceive patterns of settlement in the man-land relationship. It stimulates interest and creates greater appreciation for the historical geography involved.

The preceding maps have shown many visual correlations which magnify the inseparability of the man-land relationship. Through maps the reader was afforded a perception of the role of landforms in directing man's movements. Settlers observance of water resources, natural vegetation, and soils is evident in their choice of settlement locations. Maps illustrating routes of movement enabled the reader to understand the extent of exploration and the directions of immigration. Maps dealing with boundaries were significant in visually declaring the evolution of Utah as a Territory and State. The section on colonization has hopefully raised questions concerning spatial patterns and Mormon policies. The location of settlement was perhaps best emphasized through analysis of population distribution in early Utah. The location of foreign immigrant settlement is also important in understanding the evolution of the cultural landscape. A map which has long been absent from literature is the one illustrating Indian farms and reserves in early Utah.
The Utah War is another subject which has been much written about but has remained visually obscure. The map of boom towns is significant in portraying the extent of settlement and the functional aspect of town. The plat of Salt Lake City was another map intended to raise questions concerning traditional literature on Mormon settlement. Patterns of communication and transportation illustrated Utah's role as crossroad of the West, while the railroad map accentuated internal development. A noticeable correlation between physical landscape and economic activity was shown by the distribution of mining districts in early Utah. The maps on manufacturing and wheat production both reflect the intensity of settlement activity along the Wasatch Front. The map on cattle grazing is a final illustration showing the location and diffusion of economic activity. All of these maps together present a visual interpretation which has hopefully brought the reader to a greater understanding of early Utah settlement.

To the writer this project has been an exercise in cartographic design. It has hinted at the enormous task involved in compiling an atlas, and of the intricacies to systematic production. A most important lesson learned is the tremendous need for planning. The assurance of consistancy in a series of maps can only be achieved through complete planning from the broadest overview to the smallest detail. A mature cartographic design must be the cartographers foremost objective.
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APPENDIX

REFERENCE NOTES ON MAPS

1. Landforms and rivers shown in Figure 1 were identified with reference to Ward J. Roylance, Utah's Geography and Counties (Salt Lake City: By the author, 1967), pp. 13, 15.

The lakes in Figure 1 are dimensionally represented as they appeared during the time of early Mormon settlement. The size and shape of the lakes were approximated with reference to the U.S. Army Corps of Engineers, "Map of Great Salt Lake and adjacent country in the Territory of Utah," 1850.

2. The precipitation diagram in Figure 2 is based upon Roylance, Utah's Geography and Counties, p. 30. The soils and natural vegetation diagrams in Figure 2 are based upon the U.S. Department of the Interior, The National Atlas of the United States (Washington, D.C.: U.S. Government Printing Office, 1970).

The diagrams in Figure 2 are very general and give only a broad representation of these aspects of Utah's physical geography to better orient the reader.

3. The Explorer's trails in Figure 3 were drawn with respect to physical features of the landscape, along the explorer's routes, as described by Leland H. Creer, The Founding of an Empire (Salt Lake City: Bookcraft, 1948). Reference was also made to the "Historical Trails Map of Utah" (Salt Lake City: Utah Department of Publicity and Industrial Development, 1948).

4. The Surveyor trails in Figure 4 were drawn with reference to the following sources: Leland H. Creer, The Founding of an Empire, p. 109; and "Historical Trails Map of Utah."


6. Figure 6 was drawn with reference to the following sources: Leroy H. Hafen, Colorado: The Story of a Western Commonwealth (Denver: Peerless Publishing, 1933; James W. Hulse, The Nevada Adventure (Reno: University of Nevada Press, 1972); Gustive O. Larson, Outline History

Larson, Miller and others have expressed Utah's Nebraska Cession, shown in Figure 6, as being part of the cession to Colorado in 1861. Research by the writer, however, indicates that Colorado's boundaries have remained unchanged since 1861 when that state was first organized as a territory. The northeastern area of the original Territory of Utah was actually ceded to Nebraska rather than to Colorado in 1861.

7. Figure 7 was drawn with reference to the following sources: James B. Allen, "The Evolution of County Boundaries in Utah," Utah Historical Quarterly XXXI (July, 1955); and Roylance, Utah's Geography and Counties.

Much has been written concerning the historical establishment of Utah counties. Historians, however, have not dealt with the evolution of boundary forms. The writer has included, within the text of this thesis, a brief discussion of the development of Utah county boundaries in the geographical context of natural vs. geometrical boundaries.

8. Colonies represented in Figure 8 were located with reference to the following sources: Milton R. Hunter, Brigham Young the Colonizer (Salt Lake City: Peregrine Smith Inc., 1973), pp. 379-383; Larson, Outline History of Territorial Utah, p. 74; and Roylance, Utah's Geography and Counties, p. 89.

9. Population statistics for Figure 9 were extracted from the U.S. Census of Population of 1850 and of 1890.

The population symbolic scheme was derived by first computing areas of circles. The largest circle used was determined by the size of Salt Lake County on the map, because that county has the largest population. Population values were then assigned to various size circles on basis of the array of population figures. Such a visual representation of population in early Utah is an original contribution by the writer.

10. Data used for the foreign immigrant diagrams in Figure 10 was derived from the U.S. Census of Population for 1890.

This graphic representation of foreign immigrant settlement is an original contribution to the study of Utah.

11. The locations of Indian Farms shown in Figure 11 were attained from the following sources: Richard H. Jackson, "The Mormon Indian Farm: A Strategy of Cultural Interaction," (Unpublished paper, Brigham Young University, 1973); and Department of the Interior, "Map of the Territory of Utah" (Washington D.C.: General Land Office, 1866).

Figure 11 of this thesis shows the location of more Indian farms than has any previous work on the subject.
12. Information in Figure 12 regarding the Utah War was attained from the following sources: Leonard J. Arrington, Great Basin Kingdom (Lincoln: University of Nebraska Press, 1958); and Roberts, A Comprehensive History of the Church, IV.

13. The locations of boom towns in Figure 13 were derived from Stephen L. Carr, Utah Ghost Towns (Salt Lake City: Western Epics, 1972).

The symbolic representation of boom towns according to their functional aspects is an original contribution by the writer.

14. The 1870 plat of Salt Lake City shown in Figure 14 was drawn with reference to the following sources: Roberts, A Comprehensive History of the Church; B. A. M. Froiseth, "Plat of Salt Lake City," 1870; and Historic Urban Plans, "Salt Lake City, 1870," 1967.

15. The routes of communication and transportation shown in Figure 15 were drawn with reference to the following sources: Arrington, Great Basin Kingdom, p. 166; and Heun, The American Heritage Pictorial Atlas of United States History, p. 254.

16. The railroad routes shown in Figure 16 were drawn with reference to the following sources: Arrington, Great Basin Kingdom, p. 259; Asher and Adams map of, "Utah," 1870; B. A. M. Froiseth, "Froiseth's New Sectional and Mineral Map of Utah," 1875; Larson, Outline History of Territorial Utah, p. 235; and U.S. Army Corps of Engineers, "Restored Outline of Lake Bonneville," 1873.

The location of the Utah Western Railroad is shown in no other contemporary work on the subject.

17. The mining districts shown in Figure 17 were located with reference to B. A. M. Froiseth, "Froiseth's New Sectional and Mineral Map of Utah," 1875.

18. Statistics of manufacturing used in Figure 18 were extracted from the U.S. Census of Manufacturing for 1870.

A graphic comparison of principal manufacturing industries in early Utah is an original contribution of the writer.

19. Statistics of wheat production presented in Figure 19 were extracted from the U.S. Census for the years of 1850, 1860, 1870, 1880, and 1890.

A graphic analysis of the principal food crop grown in early Utah is an original contribution of the writer.

20. Cattle grazing data presented in Figure 20 was extracted from the U.S. Census for the years 1850, 1860, 1870, 1880, and 1890.

A graphic analysis of cattle grazing in early Utah is an original contribution of the writer.
GEOGRAPHIC SKETCH OF EARLY UTAH SETTLEMENT

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ABSTRACT

This thesis depicts in a visual format the settlement geography of early Utah.

Several topics in Utah's historical geography were mapped by conventional cartographic techniques to give an overview of processes and patterns of settlement.

This thesis points to the utility of maps in portraying information concerning settlement activity. It indicates that visual correlations enable the student to better understand settlement through spatial relationships.

Of special interest are the use of color maps, and the creation of physical relief impressions by photographically screening a raised relief map of Utah.

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