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Summary: This paper seeks to interpret by means of features of the physical environment why thousands of people passed across Nebraska for three decades (1840-1870); why the river valleys were settled first in preference to the interfluves; and why the latter were so rapidly occupied during the decade and a half following 1870 whereas up to this time they had been avoided.

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SETTLEMENT OF NEBRASKA INTERFLUVES AS EXEMPLARY BY THE HASTINGS INTERFLUVE

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The primary object in writing this paper is to interpret by means of features of the physical environment why thousands of people passed across Nebraska for three decades (1840-1870); why the river valleys were settled first in preference to the interfluves; and why the latter were so rapidly occupied during the decade and a half following 1870 whereas up to this time they had been avoided. It is believed that the development of the Hastings Interfluve is in many respects representative of others in Nebraska and the Great Plains.

Early Reports

Discouraging reports by American explorers concerning the utilization of this area by white man began coming in as early as the beginning of the nineteenth century. And as late as 1860, land survey reports apparently justified the prediction by saying that the best utilization of the area would be grazing. Most of these early explorers and government investigators believed that it could never be placed under cultivation. They based this conclusion upon the features of the physical environment, the possible means of transportation, and their own experiences.

The early government investigators who reported unfavorably concerning the possible utilization of the Great Plains were given strict orders to observe conditions as they existed, and to notice particularly the quality and quantity of timber, water, navigable streams, fuel, game, and other natural resources. As we have seen, they reported that the area was deficient in every respect. Accordingly, these men did not advocate agricultural utilization here. But then, they had not been instructed to base their conclusion upon the possibilities of railroad transportation, deep well water, and barbed-wire fencing, since at that time it was hardly conceivable that these factors were to

1Interfluve is the upland or divide between streams flowing in the same direction.
2The Hastings Interfluve is a term applied to the area lying between the Little Blue and the Platte rivers. The Platte river on the north and the Little Blue on the south bound the area in these two directions. This area extends as far west as Minden, Nebraska, and east to the headwaters of the Big Blue river. This term avoids the monotony otherwise produced by unnecessary repetition of the words Little-Blue-Platte river interfluvial area.
play an important part in transforming a grazing land into a crop producing region.

Dr. James who accompanied Long’s expedition in 1818-1820 writes about the Great Plains:

“We have little apprehension of giving too unfavorable an account of this portion of the country. Though the soil is in some places fertile, the want of timber, of navigable streams, and of water for the necessities of life, render it an unfit residence for any but a nomad population.”

By observing Dr. James’ conclusion concerning the features of the physical environment, it is not difficult to understand why the Pawnee adjustment to this area was efficient to a surprising degree. Being a grass land with a variable climate, and lacking timber and navigable streams to aid settlement, it could only be used as grazing land.

Major Long in his final estimate of the area wrote:

“In regard to this extensive section of country (the Great Plains), I do not hesitate in giving the opinion that it is almost wholly unfit for cultivation, and, of course, uninhabitable by a people depending upon agriculture for their subsistence. Although tracts of fertile land of considerable extent are occasionally to be met with, yet the scarcity of wood and water, almost uniformly absent, will prove an insuperable obstacle in the way of settling the country.”

Thus we see that Dr. James was of the same opinion as Major Long and members of his expedition—that it would be impossible for agriculture to be developed in the Great Plains area.

The Interfluve as a Barrier

Just as the Great Plains presented a barrier to people traveling east of the Mississippi river to the Rocky Mountains, so this interfluve offered many handicaps to those crossing from the Little Blue to the Platte valley. Especially did this upland prove an obstacle to those traveling over the route later known as the Oregon Trail. A member of Fremont’s expedition describing this region wrote:

“In about five miles we reached a fork of the Little Blue where the road leaves the river and crosses over to the Platte. No water was found on the dividing ridge, and the casks were filled, and the animals were allowed to repose by the Little Blue. The road led across a high and level prairie ridge. . . . Squalls of rain with thunder and lightning were around us in every direction, and while we were enveloped in one of them, a flash which seemed to scorch our eyes as it passed, struck in the prairie . . .”

Thus we see that people crossing this area were handicapped by its lack of water, shade, fresh food for their animals, and protection:

4Ibid.
5Fremont, Brevet Captain J. C., Report of the Exploring Expedition to the Rocky Mountains and to Oregon and North California, 1845, p. 174.
from storms. Obviously, it was necessary to make careful preparations before braving the hazards of this twenty-mile stretch.

Because of its deficiency in those things deemed necessary to travelers, namely, food, fuel, water, and animal feed, the interfluve, or interstream area as it is often called, was branded along with other parts of the Great Plains as the "Great American Desert." This misconception is exemplified in a report of R. F. Burton:

"We then resumed our journey over a desert, a waterless area save after a rain... it is the divide between the Little Blue and Platte rivers."

Early Pioneers Pass By

The site of the Hastings Interfluve was part of an area which formed the crotch of two overland routes. One, the Oregon Trail, extended in a northwesterly direction from Leavenworth, Atchison, and St. Joseph, crossed the Blue river at Marysville and Oketo, Kansas, and then continued along the Little Blue valley staying on the upland but within close range of the river. The other, the northern route, known as the Nebraska City Cut-off extended across from Nebraska City to the Platte river. Forty miles east of Fort Kearny it started to parallel this river, and ten miles east of the Fort it joined the Oregon Trail.

The following statements give us an idea of the tremendous traffic that must have passed over these routes with each successive wave of migration:

"By 1843 it (the Oregon Trail) had become a well-defined route for trade and other traffic between a great base, St. Louis,

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6This term was applied to an area varying in a size and location as the knowledge of the Great Plains increased. Kollmorgen, Walter, Some Geographic Misconceptions of the Climate of Nebraska and The Great Plains, Master's Thesis, University of Nebraska, Department of Geography, 1933.

7Burton, Richard, F., The City of the Saints, and Across the Rocky Mountains to California, 1862, p. 47.


"The myth of the American Desert, so long a part of the American's stock of ideas about his country, had its origin as much in the impression resulting from such solitary vastness as in any evidence of the sterility of the soil or the rigors of the climate. Men accustomed to the companionship of woods and streams, of green meadows and uplands, of familiar hills and limited horizons, found nothing hospitable in the leagues of brown grass, nothing familiar in the monotony of rolling plain..."


9Krouch, Mildred. The Geography of the Oregon Trail in Nebraska, Master's Thesis, University of Nebraska, Department of Geography, 1933, p. 171.

10Steele, O. Sharp, The Geography of the Mormon Trail Across Nebraska, Master's Thesis, University of Nebraska, Department of Geography, 1933, pp. 169-170.

and a great objective point, the mouth of the Columbia river." According to F. L. Paxson, by 1843 there were, at one movement, over a thousand actual homeseekers starting across the "Indian Country" to Oregon. Yet, the interflue, passed on the north, south, and east by thousands of these homeseekers who from 1840 to 1869 crossed this region, did not look tempting enough to encourage people to stop and settle here.

Almost as soon as the Oregon Trail became a busy thoroughfare in 1847-1848, the beginnings of the Great Mormon migration to the Salt Lake country took place. Coincident with this movement came hundreds of caravans taking similar routes to California where the adventurers hoped to become rich in the Pacific gold fields. This rush had hardly abated when the discovery of gold in the Pike's Peak country stimulated another great migration across the Great Plains. The significance of these "rushes" is that the trails consequently continued to develop as important thoroughfares up to the advent of the railroad.

Of the many people in the migratory bands setting out with some definite goal in view, only a few thoroughly understood the handicaps they were to encounter crossing the Great Plains. Some discouraged "stragglers" dropped off along the way at various points either to till the soil or to establish an outfitting and supply town like Grand Island, Nebraska City, Kearney, and others, but no such settlement appeared on the Hastings Interflue. Had this area offered opportunities for settlement there can be no doubt that many discouraged travelers would have stopped here.

But the pioneer, usually a practical man, realized that certain important requisites necessary for settlement such as, (1) timber (2) springs and permanent streams, (3) appropriable natural resources other than timber, and, (4) adequate means of transportation, were either lacking or present only in small amounts on the interflue.

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12 Paxson, Frederic L., Nebraska, Its Advantages, Resources and Drawbacks, 1876, p. 193.
13 "Stragglers" is a term applied to emigrants who, starting out towards some definite place, drop out of the party and settle along the trail.
14 Osgood, op. cit., p. 7.

"When the emigrant bound for Oregon or California turned his back on the Missouri settlements and struck out along the westward trail, his condition was not unlike that of the traveler sailing out of an eastern seaport on a transatlantic journey. Beyond the narrow wagon track a vast waste stretched away on every side to the far horizon, its swells and hollows as lacking in identity as the crests and troughs of the Atlantic rollers. Herds of buffalo and great bands of antelopes seemingly as multitudinous as the fish of the sea moved over the face of the great solitudes. It seemed unlikely that man would ever be more than a wayfarer in these wastes."
(1) Timber. The area lacked a timber supply. Lumber was necessary to repair wagons and other agricultural implements. Homes and shelter for stock were needed. The furniture left at home or discarded along the way to lighten the load or to make room for a larger quantity of provisions had to be replaced. Lacking coal, wood was needed for fuel. In these and many other ways timber resources were necessary.

(2) Springs and permanent streams. The absence of springs and permanent streams proved another serious handicap. On the interstream area springs were seldom found; it was doubtful whether enough water for domestic and personal use could be obtained here. The Indians had not been able to get a steady supply on the interfluve, they relied upon the Platte or Little Blue rivers for their water. It is true that in the spring or after rains water stood in lagoons, but only for a short time. The lack of streams eliminated any fancy dream a person may have had of developing the smallest type of industry necessitating water power.

(3) Appropriable resources. Another disadvantage of this area was a lack of appropriable resources. Here, there were no opportunities whereby early pioneers might appropriate some valuable product which could be disposed of for cash. Other regions in the United States provided valuable timber or furs, still others offered other types of products or minerals representing concentrated wealth, but the interfluve offered only its soil. Most of the valuable fur bearing animals live in a forest habitat. It is true that over the interfluve herds of buffalo migrated, but they were not killed for their skins. The green hides were too bulky in proportion to their value to be worth collecting before railroads served the area.

The Hastings Interfluve, in fact all of Nebraska, because the surface deposits resting upon a "structural slope of marine-rock sheets" are of aeolian and fluvial origin, lacks valuable minerals.

Therefore, pioneers who would settle on the interstream must live for a time from stored up wealth (supplies) until the first crops could be marketed. Unfortunately most of the travelers possessed little, their wealth consisted chiefly of oxen, wagons, and a small amount of supplies. So these migratory people had to look for areas where they might appropriate and sell part of the natural resources and with the money start farms, buy the necessary supplies and equipment to tide them over until crops proved profitable.

(4) Adequate means of transportation. If the pioneers had stopped to till the soil on the interfluve, the problem of marketing the products would have presented itself. Wagon freighting of cheap bulky products was not economical. The only navigable stream in Nebraska was then as it is today, over a hundred and fifty miles east of Hastings. Railway transportation had not yet been developed.

Land Survey Reports

The general description of the four townships of which Hastings is now a part in a survey made during the earlier part of 1860 and indicating that the interstream area would not rapidly be placed under cultivation read as follows:

"Township 7 N Range 10 West—The township is about the common average soil 2nd rate. The surface is more rolling than the adjoining country; in some places the bluffs overhanging the streams are sixty feet high. There are a few scattery trees on Thirty-Two Mile Creek in the southern part of the township. There are no improvements on this township."

"Township 7 N Range 9 West—The soil in the township is above the common average being good 2nd rate soil. The land is level in the east and rolling in the northwest portion. There is neither wood, water, or stone in the township."

"Township 8 N Range 10 West—The quality of the land in this township is second rate, it being mostly high rolling prairie. There is no timber, water or stone in the township."

"Township 8 N Range 9 West—The land in this township is of average quality, being nearly all second rate level or gently rolling prairie—in the southeast part of the township it is somewhat broken—there are a few trees along the banks of a creek running through the southeast part of the township where water is found in pools. There are no settlements in this township."

This description of the four townships in Adams County is typical of other townships in Adams, Clay, and Nuckolls Counties. These reports verify the general descriptions of the Great Plains made by Fremont, Long, James, and others. The region did lack an adequate water and timber supply, and navigable streams. As suggested by Dr. James, the most apparent practical utilization of the area would be ranching.

In short, the trapper, explorer, government investigator and early pioneers did not see opportunities in the Hastings Interfluve warranting agricultural development. The area differed in many respects from the country they were familiar with back home. The interfluvial areas of Nebraska and particularly that of Hastings were dry. The dry area with some of its land extending miles from permanent streams, and with an annual precipitation sufficient only to produce a grass cover, was a striking contrast to the extensive network of streams in the woodland country east of the Mississippi. Moreover, to settle on the prairie meant one must brave hazards like devastating prairie fires, biting blizzards, and desiccating hot winds. Drought, tornadoes, and hail also visited the area at irregular intervals.

Here, nature supplied only two physical resources: game and soil. The former could be appropriated only in small quantities, and inade-
quate means of transportation prevented the immediate exploitation of the latter.\textsuperscript{17}

**Settlement Along the Oregon Trail**

Settlements began to develop along the Oregon Trail when traffic over this famous route between 1840 and 1870 was very heavy. The trail, following the Little Blue river and Thirty-Two Mile Creek before crossing the upland to the Platte valley, influenced the development of the Little Blue valley. By 1858 a few pioneers had settled in this valley south of the interflue. Gradually, ranches and stage stations appeared along the trail.\textsuperscript{18}

Over this trail migratory adventurers soon found, every ten or twelve miles, isolated settlements appearing like beads on a string. Between these stations were the ranches. Almost every ranch was a store and "Pilgrim Quarters" where travelers could find lodging. The stations differed from the ranches in that the latter were farm houses whose owners tried to make money on the side by accommodating travelers. The former, on the other hand, were small clusters of houses and stores where the people devoted their time almost entirely to meeting the needs of the travelers.\textsuperscript{19}

These settlements along the trail developed for two major reasons. First, ranches and other establishments were constructed in part by stragglers who perhaps breaking an axle or becoming discouraged abandoned any dream of reaching a goal further west. Part of these were settlers who, dropping off from the recessional wave of emigrants after schemes to "get-rich-quick" out west had failed, believed that they now saw opportunities in a valley they had carelessly passed by on the westward journey.

Second, opportunities for trade along the Oregon Trail gradually increased. Each year as more and more traffic crossed the route, it became more and more difficult to obtain food for man and beast.\textsuperscript{20}

Moreover, those engaged in freighting goods across the plains or in transporting passengers did not have time to stop and perform services such as making a wagon tongue or shoeing oxen for themselves. Consequently, sedentary dwellers took advantage of the opportunity to perform these services. Demands for goods and services varied. Some oxen had to be shod, others due to some ailment had to be

\textsuperscript{17}It should be mentioned here that part of the people who passed judgment upon the utilization of the Hastings Interflue believed that soil not rich enough to produce trees would not contain sufficient fertility to be cultivated. See Shimek, Bohumil, "The Pioneer and the Forests," *Mississippi Valley Historical Association, 1909-1910*, Vol. 3, p. 98, and Bogart, Ernest Ludlow, *Economic History of the American People*, 1931, p. 298.

\textsuperscript{18}Hagerty, Leroy W., *Indian Raids Along the Platte and Little Blue Rivers*, 1864-1865, Master's Thesis, University of Nebraska, Department of History, 1927.

\textsuperscript{19}Bowles, Samuel, *Our New West*, 1869, p. 37.

\textsuperscript{20}Osgood, op. cit., pp. 10-11.
disposed of and replaced. Hay and other feed were needed. Repairs for wagon and harness were necessary. Besides general supplies and lodging, the ranches and service stations also furnished first aid.

**Advantages of Valley Sites**

These ranches and service stations usually occupied valley sites because in contrast to the barren Hastings Interfluve to the north, the valley contained a rich soil, abundant grass, timber, a high ground water table (insuring adequate water supply), some grass, and a permanent stream where mills could be built at dam sites. The tall grass could be cut for hay. The timber and water could be used in numerous ways. The game helped supply the larder.

Settlement structures showed an adjustment to the physical environment. In areas where the trail followed along the rim or was in the valley, the houses, barns, fences, and forts were made of logs, but on the interfluves when they were occupied later corresponding structures were built of prairie sod.\(^{21}\)

**Indians**

The number of ranches in the valley was not large, but they represented the forerunners of a new civilization, one which could not peacefully occupy the same area with the older and distinctly different civilization of the Indians. White man represented a sedentary order depending primarily upon agriculture. He wanted only a quarter section of land for his house, buildings and fields. But the semi-nomadic hunting and cultivating economy of the Indians required a much larger piece of land per family. As white man brought more and more of the area under cultivation in the eastern part of the state, the Indians seemed to realize that sooner or later these finger-like projections of settlement which were filling the river valleys west across the state would soon spread out over the interfluves and that their food resource, the buffalo, would be killed or driven away.

The Indians could not become sedentary in one generation; they preferred to follow the established custom of tilling small acreages along the rivers and using the interfluves for hunting grounds. The white man, on the other hand, by settling and cultivating in the valleys shut off water courses to the buffalo. Thus, we have two different civilizations and economies trying to utilize the same land at the same time for two different purposes. Since the property rights of the original owners were not recognized by the invaders, clashes between the two people became inevitable.

Despite the Indian menace, the population along the Little Blue continued to increase steadily after 1858 up to the severe Indian raids along the Platte and Little Blue rivers in 1864-1865. On August 7, 1864, the Indians attacked, simultaneously, stage coaches, em-

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\(^{21}\) Bowles, Samuel, op. cit., 1869, p. 37.
migrant trains, freight wagon trains, stations and ranches. The line of attack extended from near Old Julesburg on the South Platte to Kiowa station.\textsuperscript{22} The attacks along the Little Blue were more serious than those along the Platte because the latter lacked a telegraph line by which they could be warned of the impending danger. Massacres took place. The raids caused a panic on the Nebraska frontier. Immediately, the settlers along the Little Blue began to flee south and east.\textsuperscript{23}

In 1870, the population of Adams County of which Hastings is now a part, numbered only nineteen whereas before the raids in 1864-1865, it was larger.\textsuperscript{24} The remaining population was found in a few ranches scattered along the Little Blue river. The Hastings Interfluve still remained unoccupied.

**Railroad Transportation**

During the fifteen years after 1870, thousands of homeseekers from eastern states came pouring into Nebraska. The land along the rivers being mostly settled, the pioneers spread out over the upland. Consequently, the Hastings Interfluve was also occupied. Now, the question arises, how is it that this area becomes suitable for cultivation where formerly it had been avoided? The change is not to be found in the physical environment. The same soil, the same undulating terrain, treeless and sod covered, existed in 1875 as in 1845. There had been no definite change in the appropriable resources, springs, or permanent streams.

The key which opened the Hastings Interfluve to settlement and agriculture was the railroad. This change revolutionized settlement in the Great Plains. Heretofore, the Hastings Interfluve lacked an adequate means of transportation, one that could bring it economically the supplies needed to overcome the handicaps of the area. The railroad brought in lumber, barbed wire, and coal. It brought in drilling machines, well casings, and windmills, and with these implements man was able to tap nature's water resources at a depth of over one hundred feet. Newly invented machines such as the mower, the rake, and the reaper could now be shipped in economically and heavy bulky products could be shipped out at a small cost.

Prior to the railroad the only means of transportation was "freighting,"\textsuperscript{25} and this proved very expensive for heavy bulky pro-

\textsuperscript{22}Kiowa station along the Little Blue river, a distance of about two hundred and fifty miles from Julesburg, was located near the present town of Kiowa, in the western part of Thayer county.

\textsuperscript{23}Hagerty, Leroy W., *Indian Raids Along the Platte and Little Blue Rivers*, 1864-1865, Master's Thesis, University of Nebraska, Department of History, 1927.

\textsuperscript{24}Johnson, Harrison, *Johnson's History of Nebraska*, 1880, p. 195.

\textsuperscript{25}"Freighting" is a term to designate a method of hauling freight in wagons. These were often grouped together in units of ten or more in order that drivers might help each other whenever it should become necessary.
ducts of relatively low value. Mr. Eugene Munn writes concerning freighting and its costs:

“At this point I might cite one instance in 1875. I commanded a large train bound for Utah, and among the articles hauled were two ‘Pitts’ separators (threshers), for which we received twenty-five cents per pound, freight, gross weight. These machines were not on trucks, there were no extra carriers, and the cost laid down in Utah was $3,000 to $3,500 each. We also had twelve combine ‘Buckeye’ harvesters and mowers which cost laid down in Salt Lake City $1,000 each.”

Other articles written on this subject substantiate the high cost of freighting.27

While the railroads were being constructed across the Great Plains, current changes created a demand for land in this region of which the Hastings Interfluve is a part:

1. The adventurous and those dissatisfied with conditions at home were eager to try a new area.

2. The United States government reached a new agreement with the Indians thus removing this menace. Moreover, the fears of the pioneers in this respect were somewhat mitigated since the railroad could transport soldiers more rapidly from place to place.

3. Rising land values accompanying settlement and improvements attracted speculators and promoters.

4. Railroads encouraged settlement by offering low freight rates to those who would move into the Great Plains, and by flooding the eastern part of United States and some parts of Europe with pamphlets praising the new area in glowing terms, likening it to a Second Promised Land.

5. After the Civil War unemployed soldiers went west to seek employment either on railroad construction lines or on cheap land.

6. The panic of 1873 caused many desolate people east of the Mississippi to move west and start all over again.

7. The Homestead, Pre-emption and Tree Claim acts made it easy for people to obtain land.

8. The Industrial Revolution made available barbed wire, well drills, well casings, and labor-saving machinery, which enabled the pioneers to overcome the handicaps of the interfluvial area.

9. During the 1870’s, eastern Nebraska, which had been classified as part of the Great American Desert, produced good crops. Consequently, pioneers believed that if good crops could be grown in east-


ern Nebraska, what was there to prevent it a little farther west? The Great American Desert was to them a myth.

10. A wet cycle in the rainfall regime of Nebraska starting in the 1870's and lasting until 1887, and false prophets led people to believe that the climate was changing and that the increased amount of rainfall would be permanent.

These changes and introduction of the railroad revolutionized the area. Following this change we see the Hastings Interfluve develop rapidly.

The Burlington railroad was the first to cross the area. In the early 1870's it extended across south central Nebraska nearly bisecting the Hastings Interfluve. It was soon followed by other lines cutting across the state and concentrating on a central point which later became the city of Hastings.

Lumber, coal, farm machinery, groceries and merchandise could now be shipped into the region in large quantities. Buildings of wood, deep wells, barbed-wire-fenced fields, and modern machinery disclosed the fact that industrious people were adjusting themselves to, or overcoming the handicaps of their local environment. The settlers on the interfluve soon looked to the crossroads of the Chicago, Burlington and Quincy railroad and the Grand Island and St. Joseph line as their trade center and town site—this later became the city of Hastings.28