

**ALIENATING THE
NORTHERN PACIFIC RAILWAY COMPANY'S LAND GRANT
IN EASTERN MONTANA, 1880-1950**

A "MICROSCOPIC" HISTORICAL GEOGRAPHY

by

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Every historical event must happen, not anywhere, but in some particular place, at some point in space, in some locality or minimal unit of space in which its unique causal factors operate. ... The cardinal point is that, whatever larger unit of space organization may become effective on account of the development of cultural technology, history is still rooted in locality. The exigencies of writing history, and of teaching it in the schools, may impose an emphasis upon generalization about world or national history, but always for the solid foundation the historian must return to the fountainhead—the individual in local space.

—James Malin (1957), 227.

1. Introduction

During the nineteenth century, the U.S. and Canada together granted more than 163 million acres of public land to private companies for the purposes of building railroads.¹ A number of contemporaries believed this policy was a foolish squandering of the public's assets. They viewed the land grants as a policy that created corrupt monopolies and prevented bona fide settlers from acquiring their fair share of the public domain without undue cost. Much of this negative sentiment towards the land grant policy continues today, especially in the Pacific Northwest where over a million acres of land grant property remain in railroad hands. Environmentalists, for example, decry the fact that the Northwest's National Forests contain within their boundaries thousands of square-mile parcels owned by the Northern Pacific's corporate descendants—private land interspersed in a checkerboard pattern with public land. Criticism increased during the 1980s when these debt-strapped companies began to clear cut timber on these properties at rates estimated to be more than three times the sustainable yield. As the cadastral checkerboard underlying the National Forests became a visual checkerboard of forested and cutover lands, the railroad land grant policy once again came under question. In the words of one Portland, Oregon newspaper, the Northern Pacific's land grant is still seen as "Uncle Sam's Big Giveaway".²

¹ Paul W. Gates, History of Public Land Law Development (Washington, D.C.: Government Printing Office, 1968), pp. 384-85. Chester Martin, 'Dominion Lands' Policy, ed. by L. H. Thomas (reprint; Toronto: McClelland and Stewart, 1973), pp. 56-57.

² These words appeared as the headline to a full-page timeline of the NP land grant's legal history

Despite these public concerns, historians have not paid much attention recently to railroad land grants. In fact, the disposal of railroad land grants has long been considered a dead historiographic issue, primarily due to the remarkably consistent interpretations put forward by the handful of scholars who have studied the “colonization” efforts of the various land grant railroads. Contrary to popular sentiment, these historians argue that the land grant railroads were not the evil monopolists and soulless corporations that an outraged general public had made them out to be. While one can cite a number of examples of corruption such as the Credit Mobilier scandal and other violations of the public trust, land grant colonization historians argue that, when viewed as a whole, the railroad land grants were actually a sound use of federal property to foster development of the nation’s transportation network.

In this thesis, I do not attempt to reinterpret the broad geographical legacy of railroad land grants in North America. Instead, I take the issue of railroad land grant disposal and reexamine it at a spatial scale that railroad land grant historians have generally ignored—the “microscopic” or “grass roots” level of individual land parcels.³ Specifically, I analyze the patterns of land alienation that emerged in four sample townships within the Northern Pacific’s land grant along the Yellowstone River in eastern Montana, comparing these patterns to those that developed in a similar sample area in Montana along the Great Northern railroad, which received no comparable land grant.⁴

accompanying a front-page feature story on efforts to return these forest lands to the public domain. Sunday Oregonian, May 23, 1993. For further discussion of the recent fate of the NP’s forested land grant, see New York Times, October 19, 1993.

³ As far as I can determine, Joseph Schafer of the State Historical Society of Wisconsin was the first person to use the term “microscopic” as a label for a method of history which relies heavily on local census and related data. He made this analogy between the physical sciences and history in describing the Society’s famed “Domesday” project to a meeting of the Minnesota Historical Society. See Joseph Schafer, “The Microscopic Method Applied to History,” Minnesota History Bulletin, 4 (1921), pp. 3-20. Subsequent authors have also used the label “grass roots” to identify this local-scale approach. Footnote 35 below provides a slightly fuller discussion of this method.

⁴ As John Rae has pointed out, the Great Northern Railway Company did in fact receive a land grant, a leftover from the road’s early inception as the St. Paul and Pacific. This was a relatively small grant, however, and was primarily located in Minnesota. Therefore, “as a ‘landless’ railroad west of the Red River Valley it can profitably be compared with the Northern Pacific.” John B. Rae, “The Great Northern’s Land Grant,” Journal of Economic History, 12 (1952), p. 143.

Like a G.I.S. specialist verifying remote sensing data with a sampling of the “ground truth” in various localities, I use the parcel-by-parcel land records of the Northern Pacific Railway Company (NP) to examine at a local scale the veracity of the conclusion that the NP was a relatively equitable distributor of its land—as NP land grant historian Ross Cotroneo has suggested.⁵ Instead of assuming that the policies stated in a memorandum between high-level company officials were implemented without modification, as earlier scholars generally have assumed, and instead of relying on aggregate data supplemented by anecdotal examples of individual land cases, I examine all of the land transactions in a handful of sample townships in eastern Montana. Obviously, by focusing on a mere 46,000 acres of the Northern Pacific’s 39-million acre grant, this study cannot make the sweeping, general conclusions regarding the NP’s handling of its grant that earlier studies based on aggregate figures have made. What it does offer, however, is a fresh look at the NP’s land sales—one that is focused upon the same local, personal scale at which settlers experienced them.

In addition to adding an element of ground truth, this approach allows me to compare the Northern Pacific’s land disposal practices with those of the General Land Office (GLO). The assumption that the GLO would have disposed of the public domain more equitably than did the private land grant railroads was implicit in nineteenth-century criticism of the land grant policy. Conversely, the assumption that the GLO would have done no better than the railroads is implicit in more recent arguments supporting the policy. To date, no one has made a direct comparison of the land disposal practices of the two institutions in order to test these assumptions. By systematically examining local land parcel records, therefore, one can ultimately make a more refined evaluation of the railroad land grant policy.

While railroad colonization historians focused their work on the relative malevolence or benevolence of the railroad as a land distributing institution, a “microscopic” study is able

⁵ Ross R. Cotroneo, The History of the Northern Pacific Land Grant, 1900-1952 (New York: Arno Press, 1979). I discuss Cotroneo’s study in more detail below.

to address a variety of geographic questions that railroad land grant scholars generally have ignored. For example, did the checkerboard pattern in which the land grants were awarded—square-mile sections of railroad land alternating with similar sections of government land—create a distinct pattern of land tenure? To what degree were individuals able to obtain adjacent government and railroad land and thus put together properties that crossed section boundaries, often a necessary condition for settlers desiring a property that fit the physical landscape? In other words, did the checkerboard land grant tie people to the gridiron structure of the rectangular land survey, or were they able to escape this gridiron to the same degree that settlers in areas free of land grants had done?⁶

At the most basic level, the enormous land grants awarded to the various Western railroads are geographic phenomena, a transfer of land resources that helped shape the cultural landscape. By systematically examining the readily accessible records of the Northern Pacific's Land Department, one can begin to explore the impact of railroad land grants on the settlement landscapes of Montana and the other northern tier states. With its use of local-level land records, then, this study attempts to be more than a reexamination of old questions; it also provides an initial exploration of the land-tenure (and ultimately land-use) geographies created by the railroad land grants of the nineteenth century.

⁶ Geographer Hildegard Binder Johnson discovered that settlers in southeast Minnesota were able to design homestead and preemption properties that partially fit local topographic conditions by piecing together modular, forty-acre squares (quarter-quarter sections) into non-rectangular shapes. In order to fit these parcels to the physical landscape, settlers often had to cross section lines and thus incorporate land in both even- and odd-numbered sections. Thus, in a checkerboard land grant area, topographically-sensitive parcels which cross section boundaries—such as John Brown's in Winona County, Minnesota—could only be designed if the settler obtained land from both the government and the railroad. See Hildegard Binder Johnson, "Rational and Ecological Aspects of the Quarter Section: An Example from Minnesota," *Geographical Review*, 47 (1957), pp. 330-48.

2. Historians and the Evolving Image of Railroad Land Grants

Novelist Frank Norris based the first volume of his proposed trilogy “The Epic of the Wheat” on the well-publicized Mussel Slough Massacre of 1880 in which seven people were killed in a dispute over the disposal of land that had been granted to the Southern Pacific Railroad in California’s San Joaquin Valley. In The Octopus, Norris presented an interpretation of this affair that was generally consistent with the turn-of-the-century public disdain for railroad land grants. While initially popular, the land grants became increasingly viewed by the American public as a symbol of the enormous wealth and corruption of nineteenth-century robber barons. So, when Frank Norris described the passing of a locomotive belonging to the Pacific & Southwestern Railroad Company—his fictional equivalent of the Southern Pacific—he referred to it as “the symbol of a vast power, huge, terrible, flinging the echo of its thunder over all the reaches of the valley, leaving blood and destruction in its path; the leviathan, with tentacles of steel clutching into the soil, the soulless Force, the iron-hearted Power, the monster, the Colossus, the Octopus.”⁷

When first instituted the land grant policy was largely celebrated as a wise and necessary investment of the nation’s publicly-owned natural resources. Primarily during the period 1850-1871, the U.S. government granted over 94 million acres of public domain directly to private railroad companies, and another 37 million acres to individual states, all for the purposes of stimulating the rapid expansion of the nation’s western railroad network. Initially, there was relatively little controversy over these land grants; even the well-known free-homestead proponent Horace Greeley at one time supported the idea of a land grant for a

⁷ Frank Norris, The Octopus: A Story of California, in Novels and Essays, ed. by Donald Pizer (New York: The Library of America, 1986), book I, chap. i. For a short discussion of the Mussel Slough Massacre and its place in the rise of nineteenth-century Bonanza wheat ranches in California’s Central Valley, see Lawrence J. Jelinek, Harvest Empire: A History of California Agriculture (San Francisco: Boyd and Fraser Publishing Company, 1982), p. 44.

transcontinental route. Most Americans viewed these grants as a relatively low-cost method for the government to provide the stimulus necessary for the development of the West.⁸

By the 1870s, however, many Americans began to believe these land grants had been a grave public mistake, a wasting of the nation's precious land resources which helped capitalists such as Edward H. Harriman and Jay Gould amass powerful empires to the detriment of the honest American pioneer homesteader. In 1870 Congress passed the Holman resolution denouncing the policy, and by 1872, both the Republican and Democratic parties had included anti-land grant statements in their national platforms.⁹ Finally, when the political fallout resulting from the Union Pacific's Credit Mobilier scandal came to bear in 1873, the fate of the land grant policy in the United States had been sealed. As the century wore on, and as the country suffered through the economic depressions of the 1870s and 1890s, the railroad land grants and the companies they helped create became increasingly viewed as symbols of the corrupt and powerful monopolies that had arisen during the "Gilded Age". This public disdain for the policy quickly was manifested in a movement for a "general forfeiture" law which would require the relinquishing of any land remaining in the hands of railroads which had failed to meet the conditions of their respective charters. Such a law finally passed in 1890, but it primarily resulted in extended court battles, and relatively little land was returned to the public domain.¹⁰

⁸ Gates, Public Land Law, pp. 384-85. For Greeley's support of a transcontinental railroad land grant, see Roy M. Robbins, Our Landed Heritage: The Public Domain, 1776-1970 (reprint; Gloucester, Mass.: Peter Smith, 1960), p. 168.

⁹ The Holman Resolution declared "the policy of granting subsidies in public lands to railroads and other public corporations ought to be discontinued." While not binding legislation, it was largely respected, with only one significant land grant made after its passage. See Gates, Public Land Law, p. 385.

In the 1870s, while Americans began to attack the railroad land grant policy, the policy was just emerging in Canada. Somewhat surprisingly given the growing controversy in the U.S., the basic idea of providing land subsidies was accepted in 1871 in Canada "virtually without debate." As was the case in the U.S., however, the railroad land grant in Canada had a short life. By 1896, after 31 million acres of land had been patented to the Canadian Pacific and a handful of "colonization" lines, Canadians ended this increasingly unpopular policy. For a thorough discussion of the evolution of this policy north of the 49th parallel, see James B. Hedges, The Federal Railway Land Subsidy Policy of Canada (Cambridge: Harvard University Press, 1934).

¹⁰ For a brief discussion of the important role played by the "Credit Mobilier" scandal in forever ending U.S. railroad land grants, see Albro Martin, Railroads Triumphant: The Growth, Rejection, & Rebirth of a Vital American Force (New York: Oxford University Press, 1992), p. 287. The most significant forfeiture was of the

This rather sudden turnaround in the public's perception of the wisdom of the land grant policy was driven by a "hostility to 'corporate monopoly' on the one hand, and solicitude for settlers or homesteaders on the other", as well as a belief that federal promotion of railroad development was no longer necessary.¹¹ The growing criticism, central to the rising Grange movement, of the various railroad companies' handling of their grants also fueled late-nineteenth-century anti-land-grant sentiment. As Paul Gates has noted, this criticism centered around five issues. Specifically, the railroads' critics believed: (1) railroad land was priced prohibitively high for the average settler, (2) squatters were being denied their preemption rights within the limits of railroad land grants—of which the Mussel Slough affair popularized by Norris was a prime example, (3) railroad companies were unfairly avoiding property taxes by delaying selection of their land, (4) the railroads withheld land from the market for speculative purposes hindering the process of settlement by artificially limiting the supply of land, and (5) the railroads enjoyed a scandalous "all powerful" influence with the General Land Office. In sum, Americans increasingly believed the railroad land grants were obstructing the legitimate settlement of the frontier, depriving honest family farmers of their rights and contributing to, in the words of historian Roy Robbins, the creation of a "system of landlord-tenant and land concentration ... on American soil, which if not checked would soon approach that of feudal Europe."¹²

After World War I a small group of historians began to challenge this negative view of the land grant railroads. Beginning with James Hedges' work on the Northern Pacific,

Oregon and California Railroad's land grant which came under the control of the Southern Pacific. In 1916, the SP returned 2.9 million acres to the public domain. See David Maldwyn Ellis, "The Oregon and California Railroad Land Grant, 1866 - 1945," *Pacific Northwest Quarterly*, 39 (1948), pp. 255-83; and David M. Ellis, "The Forfeiture of Railroad Land Grants, 1867-1894," *Mississippi Valley Historical Review*, 33 (1946), pp. 27-60.

¹¹ Lewis Henry Haney, *A Congressional History of Railways in the United States, 1850-1887*, Bulletin of the University of Wisconsin, No. 342 (Madison: University of Wisconsin, 1910), p. 21.

¹² Robbins, *Our Landed Heritage*, p. 268. For a general discussion of the nature of the criticism toward railroad land policy, see Gates, *Public Land Law*, pp. 379-86; cf., Paul W. Gates, *Fifty Million Acres: Conflicts over Kansas Land Policy, 1854-1890* (reprint; New York: Arno Press, 1979), p. 293.

these railroad “colonization” historians questioned the validity of the assumption that the railroads had worked against the interests of the honest settler.¹³ They argued that while examples of abuse could be found, the railroads’ handling of their grants was characterized more generally by benevolence towards the average settler—at least to a degree far greater than the reform-minded rhetoric at the turn of the century would lead one to believe.¹⁴

This is not to suggest that the railroad executives were more concerned with the fate of individual settlers than with the profits of their respective companies. Instead, the colonization historians argue that the benevolent policies of the railroad companies and the resulting equitable distribution of their land are the product of a Smithian “invisible hand.” By acting in the long run interests of their profit-minded companies, the railroads were led to treat those buying land along their lines—potential customers—in a generous fashion. Recall that the land grant railroad was a transportation company first, and a land company second. Since large numbers of successful settlers located along the company’s lines meant large volumes of rail traffic, and thus revenue, it was often to the railroad’s advantage to sell its lands cheaply and quickly in small parcels to actual settlers in order to foster the economic development of the regions through which its lines ran. Simply put, the long run gains to the

¹³ Throughout the remainder of the thesis, I will refer to the small group of historians who have made book-length studies of railroad land grant disposal as “colonization” historians. I use this term to distinguish them from their more numerous counterparts who have studied the railroad land grants from the perspective of macroeconomic public policy. This larger group of scholars has examined the role of land grants in stimulating railroad expansion in an attempt to estimate the net costs and benefits of the policy to the American public. A recent example of this work is Lloyd J. Mercer, Railroads and Land Grant Policy: A Study in Government Intervention (New York: Academic Press, 1982).

¹⁴ Hedges was the first historian to defend, at least partially, a railroad’s handling of its land grant. See James B. Hedges, “The Colonization Work of the Northern Pacific Railroad,” Mississippi Valley Historical Review, 13 (1926), pp. 311-42. Hedges later published a much more thorough railroad land grant study—Building the Canadian West: The Land and Colonization Policies of the Canadian Pacific Railway (New York: Macmillan Company, 1939).

The bulk of the colonization histories were produced by students of Hedges’ colleague at Harvard, Frederick Merk. These include three dissertations completed under Merk, all of which were later published: Paul Wallace Gates, The Illinois Central Railroad and Its Colonization Work (Cambridge: Harvard University Press, 1934); Richard C. Overton, Burlington West: A Colonization History of the Burlington Railroad (Cambridge: Harvard University Press, 1941); and William S. Greever, Arid Domain: The Santa Fe Railway and its Western Land Grant (Stanford: Stanford University Press, 1954). The final major study of a railroad’s handling of its land grant—Cotroneo’s history of the NP grant—was completed as a dissertation under Greever at the University of Idaho; Cotroneo, Northern Pacific Land Grant.

company as a transportation provider outweighed any short run profits that could be made as a speculative, monopolistic seller of real estate.

Certainly, the railroads' land sales did not, in practice, match this neat theoretical statement. Various factors, including the failure of some railroad executives to recognize the long-term value of catering to the settler rather than the speculator, led to a number of examples of monopolistic behavior to which contemporary critics of the land grant policy could point in support of their case. Looking back, however, the colonization historians conclude that these examples of abuse were the exception, rather than the rule. They argue that the various land grant railroads were well aware of the long-run benefits which could be achieved with a settler-friendly land policy and dispensed of their land grants accordingly.

In the 1930s, Paul Wallace Gates completed the first book-length study of a railroad's handling of its land grant—a Harvard Ph.D. dissertation under the guidance of Frederick Merk. Believing that American railroad historians had been too caught up in the “glamour and romance” of the story of empire building and the “construction and the battles of the financial giants”, Gates undertook a study of the “colonization work” of the Illinois Central Railroad. Published in 1934, this study was designed to transcend the narrow historiographical view of earlier railroad histories and instead examine the “important social and economic results of the laying down of the railroad net”. Building on the earlier work of Hedges, this study not only reshaped the focus of American railroad history, but also helped revise the standard interpretation of the impact railroad land grant policy had upon the average settler.¹⁵

Congress created the land grant serving as the focus for Gates's study in 1850 for the purposes of building a railroad linking the Illinois and Michigan Canal at La Salle, Illinois

¹⁵ Gates, Illinois Central Railroad, p. vii.. For an example of the enduring prominence of Gates's study in the area of railroad land grant colonization, see Albro Martin's recent praise in Railroads Triumphant.

with Mobile, Alabama. As with previous grants awarded to stimulate canal construction, this first major railroad land grant was awarded to state governments, which then passed on the land to the railroad companies of their choice. In this instance, Illinois, Mississippi, and Alabama each received grants of half the land within a twelve-mile wide strip centered on the proposed route, plus similar strips of land along proposed branch lines to Chicago and Dubuque.¹⁶ Gates studied only the Illinois portion of this grant, which in 1851 was formally handed over by the state legislature to a group headed by David Neal and George Griswold and incorporated as the Illinois Central Railroad Company (IC).¹⁷

Patterned after earlier grants for roads and canals, the IC's grant established a number of precedents for subsequent railroad land grants. First, the IC's grant had a checkerboard design whereby square-mile sections (in this case the even-numbered ones) of granted land alternated with sections remaining in the public domain. In addition, to compensate for any granted sections that had been previously claimed, the IC was allowed to select "lieu" sections within a nine mile strip on each side of the primary grant area. Subsequent railroad land grants followed this pattern of a checkerboard-style primary grant area, ranging from 20-80 miles in width, surrounded by an additional strip of indemnity lands.¹⁸

Gates made a number of conclusions that challenged assumptions made by turn-of-the-century critics of the land grant policy. Foremost for Gates were the enormous "colonization" efforts undertaken by the IC, a program that aggressively promoted settlement

¹⁶ Kentucky and Tennessee, through which the proposed road would pass, did not receive similar land grants because they were not "public land" states; the states, rather than the federal government, already owned all of their non-private territory.

¹⁷ Gates, *Illinois Central Railroad*, pp. 41-42, 61.

¹⁸ The checkerboard-alternation scheme actually dates back to the original Ordinance of May 20, 1785 which created the rectangular township-and-range land survey system. As Johnson notes, this Ordinance "stipulated that townships sold entire be alternated with townships sold by lots." The purpose was to "attract both large and small buyers" to the same regions. The primary rationale for the canal and railroad land grant checkerboards was the widely-held belief that the monetary value of alternating government lands would be increased due to their proximity to government lands—an important concern in an era when the public lands were primarily seen as a source of revenue for the income-tax-less federal government. See Hildegard Binder Johnson, *Order Upon the Land: The U.S. Rectangular Land Survey and the Upper Mississippi Country* (New York: Oxford University Press, 1976), p. 143.

along the IC's route, on government land as well as its own. This promotional activity took many forms. Company agents, for example, were placed in Germany, Norway, and Sweden to drum up immigrants. More prominent, however, was the production of various printed materials, ranging from advertisements in Eastern newspapers to the publishing and distribution of various maps, pamphlets, and handbooks describing the wonders that awaited the settler on the Illinois prairie.¹⁹

Unlike many subsequent scholars, Gates neither praised nor chastised the IC for its active promotion of its territory. On one hand, Gates anticipated future critics of railroad advertising by arguing that IC pamphlets typically “exaggerated conditions by magnifying the good qualities and minimizing the less favorable factors.” As a result, a number of over-trusting Illinois immigrants were undoubtedly duped into settling on land not worthy of farming, while paying extortionate prices for it. On the other hand, Gates also reflected a more favorable view of these promotional efforts. Like most of the colonization historians who would follow, Gates emphasized the role the railroad's advertising played in stimulating immigration to the region and thus the rise of a productive agricultural economy. In short, the benefits of the regional economic growth stimulated by railroad promotional activities at least partially compensated for the extra social costs borne by some settlers in obtaining land.²⁰

Gates made another set of conclusions which are relevant to the present study. He argued that the IC's land sales practices had a generally positive impact on the ordinary, small-scale settler, or that they at least were not as malevolent as one would conclude from

¹⁹ Gates, *Illinois Central Railroad*, chapters 9 and 10. In focusing on this promotional “colonization” work, Gates was following the lead of James Hedges. See Hedges, “Colonization Work”.

²⁰ Gates, *Illinois Central Railroad*, p. 177. For an example of a more extreme version of this latter argument which apologizes for a railroad's overzealous promotion by noting subsequent regional growth, see Cotroneo, *Northern Pacific Land Grant*. In contrast, Joseph Kinsey Howard offers a polemical criticism of the NP's advertising, listing the railroad company as one of a number of “ticks” sucking the blood of the honest, but ignorant, settler; see *Montana: High, Wide, and Handsome* (New Haven: Yale University Press, 1943), pp. 171-72.

the anti-railroad rhetoric of the Grange and others after 1870. Specifically, Gates showed that the land sales of the IC were characterized by: a brisk pace, a general preference for bona fide settlers rather than large-scale speculators, and a very forgiving treatment of land purchasers delinquent on their payments. While the IC's prices were not particularly cheap (they actually were rather high, although not extortionate), most people could afford IC land because of extremely favorable credit terms. The one drawback to this policy was its tendency to produce overpurchasing; all that was needed to secure use of IC land was the advance payment of the first year's interest. Nonetheless, Gates concluded that "on the whole it would seem that most of the policies of the Land Department were wise and were well carried out."²¹

Subsequent railroad colonization histories echoed Gates's conclusions, although they were typically more concerned with assessing the overall wisdom of the land grant policy. The most prominent of these studies, like Gates's, originated as a Harvard Ph.D. dissertation under Professor Merk. Published in 1941, Richard Overton's study of the land grant awarded to the Burlington and Missouri River Railroad (B&M)—later merged with the Chicago, Burlington & Quincy to form the famous "Burlington Route"—challenged the still popular view that the railroad land grants were, in Overton's words, a "swindling system by which the public lands of the government had been given away to corporations regardless of public

²¹ Until 1868, prices averaged \$10-13 per acre; later prices were much lower primarily reflecting the relatively poor quality of the IC's remaining land. Under the standard deferred-payment contract, the purchasers paid the principal in four or five equal annual installments beginning on the second or third anniversary of the sale. In addition, they made annual interest payments of 2-6%. Gates, Illinois Central Railroad, pp. 159, 256, 262, 279. See also the IC advertisement, "Homes for the Industrious in the Garden State of the West", inserted after page 186.

Gates's ambiguous appraisal of the railroad land grant policy continued through his later works. For example, in his study of land alienation in Kansas, Gates criticized the "greedy land policies" of the various railroads and claimed these policies "contributed to an unwholesome pattern of land settlement." However, Gates directed this criticism primarily toward the railroads' massive purchases of American Indian treaty lands. Regarding the railroads' sales of their granted lands, Gates was much less critical, citing examples of such sales at prices "substantially less than the current market value." Later, in his seminal history of American public land policy, Gates continued this latter, more favorable view of the Kansas land grant railroads, claiming they "gave their purchasers generous terms and were the most important source of credit for settlers at this time." Gates, Fifty Million Acres, pp. 191, 249, 289; Gates, Public Land Law, p. 368.

interest.” Instead, Overton argued that the opposite had been the case and the Burlington’s land grant, at least, was an “extremely successful and well-managed business transaction for all concerned.”²²

Overton based these conclusions on many of the same factors cited earlier by Gates, emphasizing the Burlington’s role as a “colonizer”. After an intensive study of the company’s records, Overton found that the Burlington, like the IC, sold the bulk of its land in a manner friendly to the average settler. Prices, which were admittedly higher than the federal government standard of \$1.25 per acre, were well within the bounds of the contemporary land market. In addition, the Burlington provided easy credit terms, and was often lenient in handling its delinquent loans. The Burlington also offered a number of other cost-saving benefits to prospective customers, such as discounted “landseekers” fares and free lodging at its specially built “emigrant homes”. Again, the Burlington was not taking such actions because it was overwhelmed by a surge of philanthropic energy. Instead, these liberal land policies were seen as the best way for the company to maximize its long-term profits as a transportation company. As the Burlington’s special promotional consultant wrote in 1870, “selfishness and benevolence alike dictate the policy it has adopted.”²³

Like Gates had done for the IC, Overton also cited the Burlington’s pivotal role in promoting the economic development of western Iowa and eastern Nebraska. A number of nineteenth-century critics of railroad land grants believed these massive withdrawals of land from the public domain would hinder regional development; they expected the railroads to withhold their land from the market in a quest for speculative profits. Overton argued strongly that this was not the case, at least not for the Burlington. Instead, he argued the Burlington was a stimulus to regional development because it actively promoted immigration

²² Overton, Burlington West, pp. 6, 478.

²³ Professor J. D. Butler quoted in Overton, Burlington West, p. 316. For a detailed description of the Burlington’s land sales policies during its “boom years” under the guidance of George Harris, see Burlington West, chapters 12 and 13.

to the region. Borrowing techniques used earlier by the IC—such as newspaper advertisements, brochure distribution, and overseas agents—the Burlington “played a vital if not dominant role in the growth of southern Iowa and Nebraska.”²⁴

In contrast to the IC and the Burlington—regional railroads serving the continent’s premier agricultural land—the various “transcontinental” railroads received land grants that consisted largely of less valuable grazing, timber, and desert lands. Theoretically, this difference in physical geography should have led to dramatically different land policies, and indeed, historians of these transcontinental land grants found significant differences. But the differences they found were not of a kind that challenged Gates and Overton’s general picture of land-grant-railroad benevolence. Instead, the transcontinental railroads faced the same long-term profit motives as the Burlington and the IC which led them to develop traffic first, and make land sales profits second. The net result was land sales policies that one can fairly label as “settler friendly”.

Studies of the two largest North American railroad land grants—the Northern Pacific’s and the Canadian Pacific’s (CP)—demonstrate this fact. Both the NP and the CP crossed the northern Great Plains, and their land grants comprised a variety of ecological types, ranging from some of the world’s finest grazing, timber, and spring wheat land to heavily-eroded, semi-arid badlands. The challenge of transferring these massive properties over to bona fide, traffic-creating settlers was formidable—made all the more difficult by the public’s not altogether inaccurate perception that these lands were too cold and dry for agricultural settlement. Consequently, both roads at times were forced by financial difficulties to sell large properties at bargain prices to real estate and large agricultural concerns.

²⁴ Overton, Burlington West, p. 452. For a description of how the Illinois Central served as a “noble progenitor” of railroad land grant promotional policies, see Burlington West, pp. 116-188, 290.

This was particularly true for the bankrupt NP during the 1870s, when it sold most of its grant in Minnesota and North Dakota to speculators who bought enormous properties out of which the famous “Bonanza Farms” of the 1880s and 1890s were created. For the NP, large-parcel sales in North Dakota became increasingly the norm as it tried to rid itself of the semi-arid lands in the western half of the state. With this property becoming an ever-troublesome tax burden, the NP sought to rid itself of the land as rapidly as possible. During a five-year period ending in 1903, the NP made 59 sales of properties over 10,000 acres in size—a total of 4.3 million acres at an average of \$1.35 per acre. Considering that the investment companies purchasing this land were able to sell it to individuals at \$3-20 per acre, these sales by the NP were indeed bargains.²⁵

The situation changed for both railroads around the turn of the century when world wheat prices rebounded after twenty years in the doldrums. With land in the fertile midwest selling for over \$100 per acre, the Northern Plains of the U.S. and Canada became a target for massive immigration. Meanwhile, the region received an added boost from the rising popularity and early success stories of Hardy Campbell’s “Dry Farming” methods. In the presence of this final Plains agricultural boom, the NP and CP were finally able to sell their land according to the traffic-creating model of small parcels at fair prices to actual settlers.²⁶

Both Ross Cotroneo, who studied the NP, and James Hedges, who studied the CP, wrote off their respective railroad’s early flirtations with speculators as a learning experience and a financial necessity. They based their conclusions on the twentieth century experience of each road and, like other land grant historians, cited their respective railroad’s later devotion to actual settlers and regional economic development. To be fair, Hedges’ conclusions were not quite so simple, reflecting in part the added complexity of the CP’s land

²⁵ Cotroneo, Northern Pacific Land Grant, p. 132. The early struggles of the CP in attempting to find bona fide settlers to buy its land is discussed in Hedges, Canadian West, pp. 62-93.

²⁶ Mary Wilma M. Hargreaves, Dry Farming in the Northern Great Plains: 1900-1925 (Cambridge: Harvard University Press, 1957), p. 19.

grant. Nonetheless, Hedges still argued that the “most distinctive feature of Canadian Pacific land policy” was its enormous “colonization” work, and he summarized the CP’s experience by calling it the finest example of a “railway’s attempt to administer its landed estate in the interests of sound development of the country.”²⁷

The most unique of all the land grants was the focus of William Greever’s Harvard dissertation, a study of the land grant created in 1866 for the proposed Atlantic & Pacific Railroad between Springfield, Missouri and the Pacific Coast. The fate of the A&P’s grant was complicated, but the bulk of the grant—2.2 million acres in New Mexico and Arizona—was transferred in 1897 via the Atchison, Topeka, and Santa Fe to the newly created Santa Fe Pacific. Because this was mostly mountain and desert land, the Santa Fe never attempted to “colonize” the area with yeoman farmers. Instead, the railroad promoted timber and grazing operations, along with some very limited attempts at irrigation projects. The railroad’s primary goal, though, was to sell and/or lease its property to “interloping ranchers”—as Greever called them—already in place on the open range. In short, the Santa Fe “had to handle its property in a very different way from railroads to the east.”²⁸

²⁷ Hedges, *Canadian West*, pp. 401, 407. There were a number of complexities with the Canadian version of the land grant policy that distinguish the CP from its counterparts in the U.S., and two are particularly significant. First, the CP’s grant did not entirely follow the American practice of a checkerboard distribution of alternating square mile sections of government and railroad land. Originally, none of the CP’s grant was designed like this; instead, it was going to consist of alternating blocks of land, each as large as 240 square miles. Proponents of the large-block approach believed it would encourage compact settlement patterns which would foster the development of strong rural communities. While the land grant act that actually became law in 1879 followed the U.S. approach of alternating square-mile sections, Canada was never as rigid on this idea as was the U.S.. In 1903, for example, the CP was allowed to select a 2.9 million acre “irrigation block” east of Calgary.

The second added complexity of the CP grant was the clause that all of its 25 million acre grant must consist of land that was “fairly fit for settlement.” Because the CP’s main line ran directly across the semi-arid, “unfit” lands labeled as “Palliser’s Triangle”—as well as through the Rocky Mountains and Laurentian Shield—the bulk of the grant was selected as lieu lands from massive reserves set aside in Saskatchewan and Alberta. Consequently, much of the CP’s land was located far north of the mainline and was in fact located closer to the lines of CP rivals than to the mainline of the CP itself. Not surprisingly, the CP was less regional development-minded in its sales of these far northern lands as it had little or nothing to gain from the production of traffic in these areas.

²⁸ Greever, *Arid Domain*, p. 158.

Despite these differences, Greever's larger conclusions do not challenge the positive image of the land grant policy created by Gates and Overton. In fact, Greever concludes that the Santa Fe "conducted its business with strict honesty, showing due consideration of the welfare of the public in general." Unlike other promoters of the West, the Santa Fe did not chase unrealistic dreams of creating a desert Arcadia and instead followed a very conservative land policy that sought to treat fairly the other groups with interest in the land resources of that region—open range ranchers, the federal government, and the Navajo, Hopi, and Hualpai Indians whose reservations lay within the land grant's primary boundaries. Even these conservative policies, though, did not prevent the Santa Fe from making a "real contribution to the economic development of New Mexico and Arizona."²⁹

Any attempt to develop a composite picture of the disposal of all the North American railroad land grants obviously glosses over the significant differences that existed between the various grants—differences in geography, company philosophy and personality, and historical context. Nonetheless, there is a common tenor to all of the studies that have been completed to date. So, when William Greever wrote a comparative review of the railroads' land policies, he concluded that "the basic fact for all but the detailed specialist is the uniformity of method."

The railroads used all techniques of publicity and salesmanship then generally known to attract farmers into the West, preferably onto their own grant but at least into the West. They normally charged reasonable prices for their land and did not indulge in excessive advertisers' license. If a genuine farmer encountered reverses, they waited patiently for their money but took no extra steps to help him. ... The carriers were generally honest, far sighted, and enlightened.³⁰

In the opinion of these historians, the same free market forces that critics of the land grant policy feared when put in the hands of a monopoly turned out to be rather benign. Simply put, building up transportation business for the railroads outweighed amassing profits through the sales of real estate. According to the colonization historians, then, any deviation

²⁹ Greever, *Arid Domain*, p. 158.

³⁰ William S. Greever, "A Comparison of Railroad Land-Grant Policies," *Agricultural History*, 25 (April 1951), p. 90.

from the egalitarian land tenure goals of the nation's public land policy was more than balanced out by the railroads' stimulating effects on regional economic development.

Obviously, many scholars today would criticize this use of economic development as a justification for non-egalitarian land alienation. In fact, many would criticize the entire notion of trying to "settle" or "develop" the American West with Euro-Americans and a Euro-American-derived cultural ecological system which includes agricultural practices better suited to the humid East. Rather than seeing the railroads' colonization efforts as positive, this view would place the railroads and their land grants squarely in the middle of the "conquest" of the West, with all the negative qualities that the term implies.³¹ While I sympathize with aspects of this critique of economic growth and development, I am attempting in this study to address the colonization histories discussed here on their own terms. This requires accepting the premise that promoting regional economic development was a generally desirable goal for the nation's public land policy; evaluating the effectiveness of a development strategy and critiquing the overall wisdom of development in the first place are, for the most part, two separate questions.³²

³¹ Such a view is a centerpiece of the New Western History, although it has been an interpretation that some espoused as early as fifty years ago. See Patricia Nelson Limerick, The Legacy of Conquest: The Unbroken Past of the American West (New York: W. W. Norton & Co., 1987). cf., Howard, Montana.

³² Of course, criticizing the railroad-led development of interior North America on the grounds that it was not sustainable over the long run would be fair game. The only railroad colonization study reviewed here that really addresses this concern is Hedges' monograph on the Canadian Pacific. As he noted in the conclusion to his study, "one might well conclude that in the Canadian, as in the American West, speed was sometimes unwise and made for waste of national resources, human and material. A calmer and more considered course might have averted the mistakes of the pre-war period and spared the people of the West some of the untold heartaches and the cruel disillusionment of the post-war years." Hedges, Canadian West, pp. 409-10.

3. A Geographical Appraisal of the NP's Land Sales in Montana

3.1. The “Microscopic” Approach

If the histories of railroad land grant disposal are so consistent, one might question whether the issue warrants reexamination. As noted railroad historian Albro Martin—admittedly not the most objective of commentators on this subject—recently stated, anyone still clinging to the belief that the railroads were evil monopolists getting fat off of the public domain at the expense of the settler “has none but himself to blame for his ignorance.”³³ While the unanimity of the colonization historians’ conclusions is certainly convincing, closer examination reveals that their collective assessment is incomplete. Specifically, these histories fail to address the land grants’ local-scale geographic impact.

The regional development associated with the building of a railroad, especially one subsidized by a land grant, is fundamentally a geographical question. This fact did not completely escape the attention of the colonization historians; Gates, in particular, devoted the entire first chapter of his book to the “Geography of Illinois” and its “early settlement.” Like the other studies, though, Gates’s did not take this geographical inquiry beyond the regional and national scales. These studies ignore the equally interesting and important local scale. How, for instance, did the checkerboard pattern of land ownership affect local patterns of land tenure? Did this pattern foster the accumulation of large contiguous properties, or did it instead splinter the land into a number of small units?

What is specifically missing from these studies is any sort of systematic evaluation of individual land sales. Certainly, these studies make extensive use of company records. Gates, for example, listed the archives of the IC as his “chief source”, including the tract books in which the Land Department recorded its transactions. Gates, however, like all the other colonization historians, based his analysis primarily on correspondences between company officials, published reports, and aggregate statistics. Any use of local, individual land records

³³ Martin, Railroads Triumphant, p. 170.

was apparently limited—to a “glance at the sales books” in Gates’s case.³⁴ I do not want to suggest that Gates’s study of the Illinois Central or the other studies of land grant railroads are severely flawed by their omission of the local scale. Rather, I merely want to argue that these studies, when viewed as a collective body of work, are missing a major dimension of the railroad land grant story—a dimension that should be of central interest to geographers.

It has been a common refrain for scholars in review articles to make a pitch for local, “microscopic”, “grass roots” research. A number of rural land historians, including Gates and Robert Swierenga, have argued that a systematic examination of local records fosters scholarship that is largely “value-free” and quantitatively rigorous. The end result of such grass roots research, they argue, would be the creation of a “Domesday Survey of America”, one that could be objectively analyzed and generalized to either substantiate or debunk the various myths currently held about the nation’s public lands history. In contrast, James Malin argued that local history’s importance lay not in its ability to foster objective generalizations built from the bottom-up, but rather in its ability to unearth the myriad complexity that constitutes reality. In other words, local history for Malin provides a viewpoint much closer to the level at which individuals actually experience the world—a complex, holistic view of a particular time and place that may not conform to the “broad approximations” of a national scale, generalized history.³⁵

³⁴ Gates, *Illinois Central Railroad*, p. 273. For an excellent argument relating the localized analysis of land tenure patterns to geography’s concern with the cultural landscape, see John Fraser Hart, *The Look of the Land* (Englewood Cliffs, NJ: Prentice-Hall, 1975).

³⁵ The views of the three scholars mentioned here are perhaps best represented as belonging to a continuum. At one extreme is Swierenga, a strong proponent of a quantified, “objective” rural history whose primary task is to arrive at statistically significant conclusions and to use these conclusions to build economic theory. On the other extreme is Malin, who was devoted to a particularistic philosophy that shunned grand generalizations and theories—most notably, the “frontier thesis” of Frederick Jackson Turner. Gates is a little harder to place on this spectrum. He, like myself, lies somewhere between the two extremes, with Gates probably closer to Swierenga, and me closer to Malin.

The respective philosophies of Swierenga and Malin are readily apparent in Robert P. Swierenga, “Quantitative Methods in Rural Landholding,” *Journal of Interdisciplinary History*, 13 (1983), pp. 787-808; and James Malin, “On the Nature of Local History,” *Wisconsin Magazine of History*, 40 (1957), pp. 227-230. Gates’s fondness for grass roots analysis was demonstrated in a review article written towards the end of his career. See Paul Wallace Gates, “Homesteading in the High Plains,” *Agricultural History*, 51 (1977), pp. 109-33.

In addition to providing a local, particularistic perspective, as well as the ability to build generalizations from the bottom-up, grass roots analysis allows one to address geographic questions not accessible with aggregate data. Barron McIntosh demonstrated that the land entry and patent data of the federal General Land Office alone could be used to examine at least four geographic issues. These include “regional identification”, “settlement progression”, “cultural landscape abandonment”, and “man-land adjustment”. Elsewhere, McIntosh has also used the GLO records to geographically illustrate, describe, and draw conclusions from the experience of a notable Nebraska Sand Hills pioneer.³⁶

Despite these assets, it is not surprising that local-level analysis has not been used more frequently. While the necessary primary sources are readily available, they are incredibly tedious to use. Creating a Domesday-like survey from the bottom-up with grass roots sources would be a formidable task indeed for all but the smallest of geographic areas. Furthermore, Malin’s insistence for the preeminence of the local over the global notwithstanding, most scholars and their audiences are still interested in the “big picture”; too local a study without larger context is ultimately antiquarian. Nonetheless, successful examples of studies based on the grass roots do exist, and they provide an important complement to more traditional forms of historical and geographical research. The present study hopes to demonstrate that such a dimension can be usefully added to the historiography of railroad land grant colonization.³⁷

³⁶ C. Barron McIntosh, “Patterns from Land Alienation Maps,” *Annals of the AAG*, 66 (1976), pp. 570-582. The settlement and land tenure history of Jules Sandoz—the domineering father of author/historian Mari Sandoz—is the focus of C. Barron McIntosh, “One Man’s Sequential Land Alienation on the Great Plains,” *Geographical Review*, 71 (1981), pp. 427-445.

³⁷ In addition to the studies by Johnson (1957) and McIntosh (1976, 1981) noted above, examples of grass roots studies of historical land tenure are provided by: Robert Diller, *Farm Ownership, Tenancy, and Land Use in a Nebraska Community* (reprint; New York: Arno Press, 1979); Yasuo Okada, *Public Lands and Pioneer Farmers: Gage County, Nebraska, 1850-1900* (reprint; New York: Arno Press, 1979); and Sean Hartnett, “The Land Market on the Wisconsin Frontier: An Examination of Land Ownership Processes in Turtle and LaPrairie Townships, 1839-1890,” *Agricultural History*, 65 (Fall 1991), pp. 38-77.

3.2 Study Areas and Methodology

This study examines the land alienation patterns that arose in a four-township area along the Northern Pacific Railroad (NP) in eastern Montana. In addition, a similar area along the Great Northern Railroad (GN) in north-central Montana is examined for comparative purposes. Such a comparison is valuable because both railroads traversed similar natural/historical landscapes in Montana, and while the NP received a massive land grant from the federal government, the GN did not.³⁸ To a certain extent, then, the historical land ownership patterns along the GN provide an example of the patterns of land tenure that might have evolved along the NP had it not been given a land grant. As railroad historian John Rae has argued, the NP and the GN can be “profitably” compared.³⁹

Congress passed the legislation creating the NP and its land grant on July 2, 1864, chartering the company to build rail and telegraph lines from Lake Superior to Puget Sound. Like previous land grant railroads, the NP was to receive its checkerboard grant as construction was completed—for each mile of mainline railroad built, the company would receive all of the odd sections of land within forty miles of the route in the territories (including present-day Washington, Idaho, Montana, and North Dakota) and within twenty miles in the states (Minnesota and Wisconsin). In other words, the NP’s grant consisted of half the land within an 80-mile wide (40 in the states) swath of territory across the northern tier of the United States. As with the other grants, the NP did not receive title to lands within this “primary grant area” that were claimed prior to selection of the route. To compensate for land lost in this manner, the NP was allowed to select “lieu land” from “indemnity” strips ten miles wide (later increased to twenty miles) on each side of the primary grant area.⁴⁰

³⁸ The two institutions being compared here are the Northern Pacific and the General Land Office, not the Northern Pacific and the Great Northern. I located the control group study area of GLO-dispensed land along the GN so that the control group area, like the experimental NP area, included a transcontinental mainline railroad.

³⁹ Rae, “Great Northern’s Land Grant,” p. 143. The lines of both the Northern Pacific and the Great Northern fell under the control of railroad magnate James J. Hill around 1900 and remain active today as part of the Burlington Northern system.

⁴⁰ Cotroneo, Northern Pacific Land Grant, p. 3. In order to limit the number of speculators making

Business historians generally regard the NP as one of the nation's most poorly managed railroads. It took six years before the company could raise enough capital to begin construction, and this only happened with the massive aid of Philadelphia banker Jay Cooke. When Cooke's financial empire collapsed in 1873—a primary trigger to a 20-year period of off-and-on depression for the United States' economy—so did the NP, with construction stalled at Bismarck in Dakota Territory. Construction resumed in 1879 under the leadership of new President Frederick Billings and reached Montana territory in November 1880. During the following year, Pacific Northwest transportation magnate Henry Villard wrested control of the company with help from his famous “blind pool” of investors. Construction up the Yellowstone Valley and across the Rockies accelerated under Villard—Billings (the town, not the man) was reached by the end of 1882, Bozeman in May 1883, and Helena in July 1883. Finally, on September 8, 1883, the NP held its last spike ceremony near Garrison, Montana where the eastbound and westbound construction crews met to complete the Lake Superior to Pacific coast connection.⁴¹

The Great Northern was the second of what would be three transcontinental railroads to traverse Montana, and the only one of the continent's transcontinental lines to be built without the aid of a significant land grant. In contrast to the poorly managed NP, the GN is celebrated as one of North American railroading's greatest success stories. It was largely the personal creation of James J. Hill, a native Canadian who began his transportation career as a steamboat operator on the Mississippi and Red Rivers of the upper Middle West. In 1878,

homestead and other claims on odd-numbered sections prior to the railroad's construction, the GLO immediately withdrew from entry all the land within 80 miles of the expected route. This temporary withdrawal was general practice for the GLO within railroad land grant areas and became a point of controversy for some who were seeking a more rapid distribution of the public lands. In the case of eastern Montana, though, this was not a major point of contention. After all, U.S. warfare against the Lakota (Sioux) and other Amerindians in the Northern Plains continued through the late 1870s. Also, early Euro/Anglo settlement in this area primarily consisted of open range cattle and sheep ranchers. People did not demand land in this region as private property on any large scale until after the railroad arrived.

⁴¹ Cotroneo, Northern Pacific Land Grant, pp. 16-21. Donald B. Robertson, Encyclopedia of Western Railroad History, Volume III: The Mountain States: Colorado, Idaho, Montana, Wyoming (Dallas: Taylor Publishing Company, 1991), pp. 331, 334, 348.

Hill acquired the struggling St. Paul & Pacific and began expanding it across western Minnesota, Dakota, and Manitoba. Through acquisition of smaller lines, and expansion of what was now called the St. Paul, Minneapolis, and Manitoba, Hill extended his growing rail empire westward, reaching Minot in 1886. In an effort to tap into the growing copper business around Butte and Anaconda, Hill rapidly extended his line across northern Montana, following the valley of the Milk River for much of the way. By October 1887, Hill's "Manitoba" had reached the falls of the Missouri River, where Hill's associate Paris Gibson would later establish the city of Great Falls, and where the Manitoba could reach the state's copper mines via the Montana Central—another Hill creation. In 1889, Hill reorganized the Manitoba and associated lines as the Great Northern Railway Company. The following year, the GN began construction over the Rocky Mountains; it completed its connection with Puget Sound in 1893.⁴²

For the purposes of this comparative study, two areas are examined—one along the NP and one along the GN (Figure 1). Each study area consists of four contiguous townships that together constitute a 12-mile X 12-mile square block (approximately 92,160 acres). Efforts were made to choose two areas that were similar in terms of their physical environment and their historical cultural ecologies so that meaningful comparisons between the land tenure experiences of each could be made. The first characteristic shared by each area is the respective location of each along the mainline of one of eastern Montana's

⁴² Michael P. Malone, Richard B. Roeder, and William L. Lang, Montana: A History of Two Centuries (revised edition; Seattle: University of Washington Press, 1991), pp. 178-84. Robertson, Western Railroad History, p. 303. The third transcontinental to cross Montana—the Chicago, Milwaukee, St. Paul & Pacific—arrived relatively late in the state. Construction extend the "Milwaukee Road", as it was popularly known, west from South Dakota to Puget Sound between 1906 and 1909. The Milwaukee entered Montana in the southeast near the future site of Baker and headed West until it reached O'Fallon Creek, which the Milwaukee followed to the Yellowstone River near Terry. The Milwaukee then paralleled the Northern Pacific up the Yellowstone Valley, until it broke off at Forsyth and extended up the Musselshell Valley. The Milwaukee then rejoined the Northern Pacific near Three Forks before entering the Rocky Mountains.

FIGURE 1 not available in this electronic version

transcontinental railroads. In addition, each area includes a small town created to serve as a minor railroad stop between two larger depots. These towns are both examples of the small railroad distribution points that grew like “beads on a string” across the Great Plains. Many of these tiny urban centers did grow to provide some of the classic central place functions, such as a saloon and a general store, but their primary role was to serve as a mail and transshipment point linking the local farming and ranching activities with the metropolitan centers of the East.⁴³

The two areas selected for this study also share a similar natural and cultural landscape. This landscape is perhaps best described in reference to the classic Plains dichotomy of “sutland” and “yonland”. Under this simple binary classification scheme, both study areas are located in the sutland—the collective core of the Plains’ human geography that is centered on the region’s major rivers. In these sutland areas, one finds the vast majority of the people, industry, and commerce of the Plains. In contrast, the yonland areas which lay well beyond the bluffs and tablelands overlooking the region’s major rivers predominately consist of sparsely-settled grazing lands, a “persistent frontier” relatively isolated from the services of modern society. This dichotomy between a sutland integrated into the larger world and a remote yonland is largely a natural consequence of the distinct environments that river valleys provide amidst the wide expanses of semi-arid grassland that dominate the Plains. After all, the rivers provided a reliable water supply and transportation link to the rest of the world, a literal lifeline in a region once described as the “Great American Desert”. Once the railroads built their lines up these river valleys, thanks to the

⁴³ For an interesting discussion of the railroad-led townbuilding process on the Northern Plains and the roles these towns played in the emerging grain and livestock economy, see John C. Hudson, Plains Country Towns (Minneapolis: University of Minnesota Press, 1985). This book is focused on north-central North Dakota; a more specific discussion about Montana is provided by John C. Hudson, “Main Streets of the Yellowstone Valley: Town-Building Along the Northern Pacific in Montana,” Montana, the Magazine of Western History, 35 (Fall 1985), pp. 56-67.

easy grades and the water they provided, the dichotomy of bottomland sutland and upland yonland was solidified.⁴⁴

Centered as they are in the sutland, the two study areas include a mixture of irrigated riverside bottomlands, eroded or “broken” grazing land, and scattered areas of flat arable grain lands. Prior to the arrival of widespread European settlement, the bottomlands were dominated by groves of cottonwood trees interspersed with fields of sagebrush and various short grasses—most notably blue grama (*Bouteloua gracilis*) and western wheatgrass (*Agropyron smithii*). Today, cottonwoods remain a prominent feature of the streamside landscape, but the bulk of the adjacent bottomlands have been cleared for irrigated farming of sugar beets, alfalfa and other hay, small grains, and miscellaneous vegetable crops. Above the river bluffs, where excessive pumping requirements make irrigated farming unfeasible, the landscape is mostly devoted to grazing. Short-grass prairie is ubiquitous and trees are rare. Sections of the uplands in the two study areas are heavily dissected by erosion and are marginal grazing land at best. Both study areas also include substantial sections of level tablelands, though, and their brown grassland soils are generally suited to growing wheat or for raising hay to store for winter livestock feed.⁴⁵

⁴⁴ The sutland-yonland concept was popularized in the 1950s by Montana State University sociologist Carl Kraenzel. See chapter 15 of Carl F. Kraenzel, *The Great Plains in Transition* (Norman: University of Oklahoma Press, 1955). Prior to Kraenzel’s work, geographer Isaiah Bowman used a yonland area in eastern Montana—what he called “Jordan Country” and is today popularly known as “The Big Open”—as evidence of frontier conditions persisting in North America long after the mythical frontier closing date of 1890. Bowman cited the lack of rail connections, the mixture of breaks and badlands among semi-arid plains, and the lack of services like schools and physicians as proof that the frontier still existed in the yonlands of eastern Montana. See Isaiah Bowman, “Jordan Country”, *Geographical Review*, 21 (1931), pp. 22-55.

One can easily exaggerate the amount of isolation that still characterizes the yonland. With the spread of automobile and air transportation and modern telecommunications technologies, few if any places on earth are completely isolated. While “Jordan Country” is still properly described as remote, it is not isolated in the sense that it is not integrated into the national and global economies. For a recent reexamination of this area, see John A. Alwin, “Jordan Country: A Golden Anniversary Look”, *Annals of the Association of American Geographers*, 71 (1981), pp. 479-98. For an interesting look at daily life in the 1990s in the remote range country of Nevada, see John McPhee, “Irons in the Fire,” *The New Yorker*, 69 (December 20, 1993), pp. 94-113.

⁴⁵ This description of the common landscapes of the two areas is based on field reconnaissance conducted during July 1992. The maps of the U.S. Geological Survey, the original survey plats of the General Land Office, and the U.S. Department of Agriculture’s soil surveys have also been used throughout this study to provide section-specific physical geographical information. The various promotional brochures and immigrant

Sutland locations were made the focus of this study for two reasons. First, one could reasonably argue that these areas are more significant to study than their yonland counterparts simply because they always have been the geographical center of wealth and population on the Northern Plains—for Amerindian societies as well as later Euro-American ones. More relevant to the present study, however, is the fact that the sutland is the area in which the NP is believed to have been the most egalitarian in its land sales. NP officials were very optimistic about the agricultural potential via irrigation and Dry Farming in and around the Yellowstone Valley. When selling its land here, the NP wanted to do so in a manner that would promote the establishment of large communities of tonnage-creating farmers and ranchers. In contrast, convincing individuals to purchase small 160- or 320-acre parcels of land in the isolated, marginal areas of the yonland was a much more difficult task, especially considering that free homestead land was readily available from the government, and that the existing cattle and sheep ranchers had long been using this grazing land as free and open range. Given the increasing property tax burden that the company faced, a number of NP officials—most notably Land Commissioner William H. Phipps (1894-1904)—were eager to entertain offers from individuals and syndicates to purchase enormous blocks of land in yonland areas at bargain prices. In light of the troubles the NP had in disposing of its yonland grant, and because this study is largely a response to previous land grant studies whose conclusions have emphasized the settler-friendly policies of the railroads, sutland study areas were chosen. It was in these areas that the NP's land sales are most likely to have mimicked the alienation of the public domain by the GLO, so any differences found between the way the two institutions behaved in these areas are especially significant.⁴⁶

information pamphlets are also a useful source of information about the historical natural landscape—if one takes the descriptions with a grain of salt due to their tendency to exaggerate the agricultural potential and the “invigorating” climate of this semi-arid plains environment. Two such publications located in the library of the State Historical Society of Wisconsin were consulted for this study: Thomson P. McElrath, The Yellowstone Valley. What it is, Where it is, and How to Get to it: A Hand-Book for Tourists and Settlers (St. Paul: Pioneer Press, 1880); and The Climate, Soil and Resources of the Yellowstone Valley (St. Paul: Pioneer Press, 1882).

⁴⁶ Cotroneo, Northern Pacific Land Grant, pp. 156-57.

The area examined along the NP is located around the town of Terry, a significant turn-of-the-century cattle shipping point located at the mouth of the Powder River (Figure 2a). Specifically, the study area consists of the land bounded by townships 11 and 12 North and ranges 51 and 52 East of the Montana Principal Meridian and Baseline. The Yellowstone River runs west to east across the northern part of this area, while the smaller Powder River runs north-northwest through the southeast quadrant and O'Fallon Creek flows northwest into the Yellowstone through the northeast quadrant. Significant bluffs up to 500 feet high border these streams for much of their respective paths.

The four-township area of GLO land, to which the area around Terry is compared in this study, is located northwest of Glasgow, Montana. Specifically, this study area consists of the land bounded by Townships 29 and 30 north, and ranges 38 and 39 east of the Montana Principal Meridian and Baseline (Figure 2b). The Great Northern Railroad follows the Milk River which flows in a southwesterly direction towards Glasgow. A number of intermittent streams traverse the landscape, the most prominent being Cherry Creek which flows south through the study area's eastern half. Glasgow is located two miles south of the study area, while the much smaller flag stop at Tampico is located in the west-central part of the study area.

Land alienation data for both study areas were collected from the tract books of the U.S. General Land Office and the land sales books of the Northern Pacific Railway Company.⁴⁷ For each land transaction, information regarding the identity of the purchaser, the date of the transaction, the legal description and size of the property, and the method and outcome of the attempted acquisition were collected and then analyzed. Two main activities

⁴⁷ Originals of the GLO tract books are housed in the National Archives Field Branch in Denver, Colorado. They are also available on microfilm from the Montana state office of the Bureau of Land Management in Billings. For a good overview of working with GLO records, see [Guide to Genealogical Research in the National Archives](#) (revised edition; Washington, D.C.: National Archives Trust Fund Board for the National Archives and Records Administration, 1985).

The Northern Pacific Land Sales Books are housed at the Minnesota Historical Society, part of the Society's enormous collection of records for the Northern Pacific and Great Northern railroads. A more detailed description of the primary sources used in this study is provided in the bibliography.

Figure 2a
Northern Pacific Study Area Near Terry, Montana

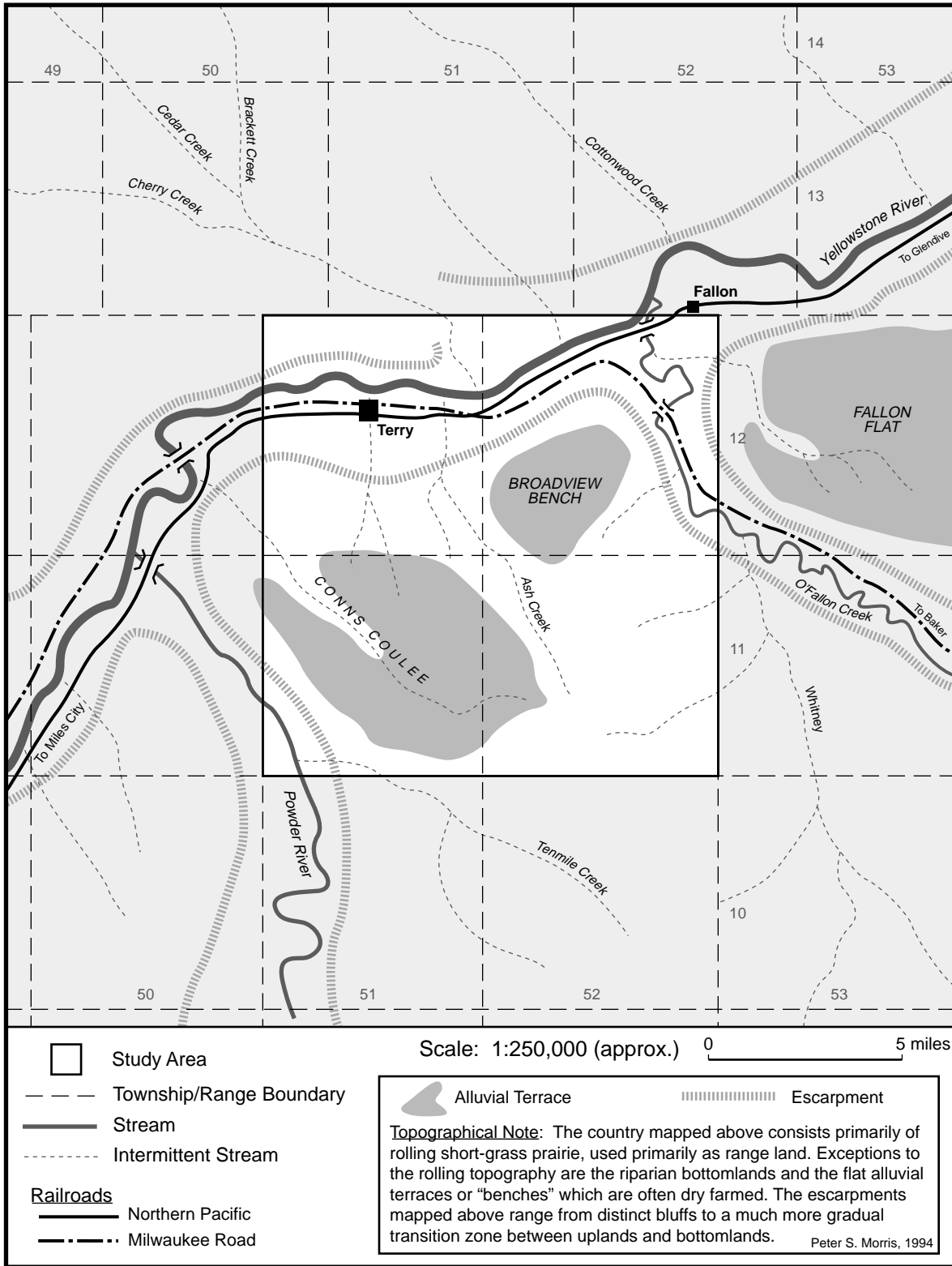
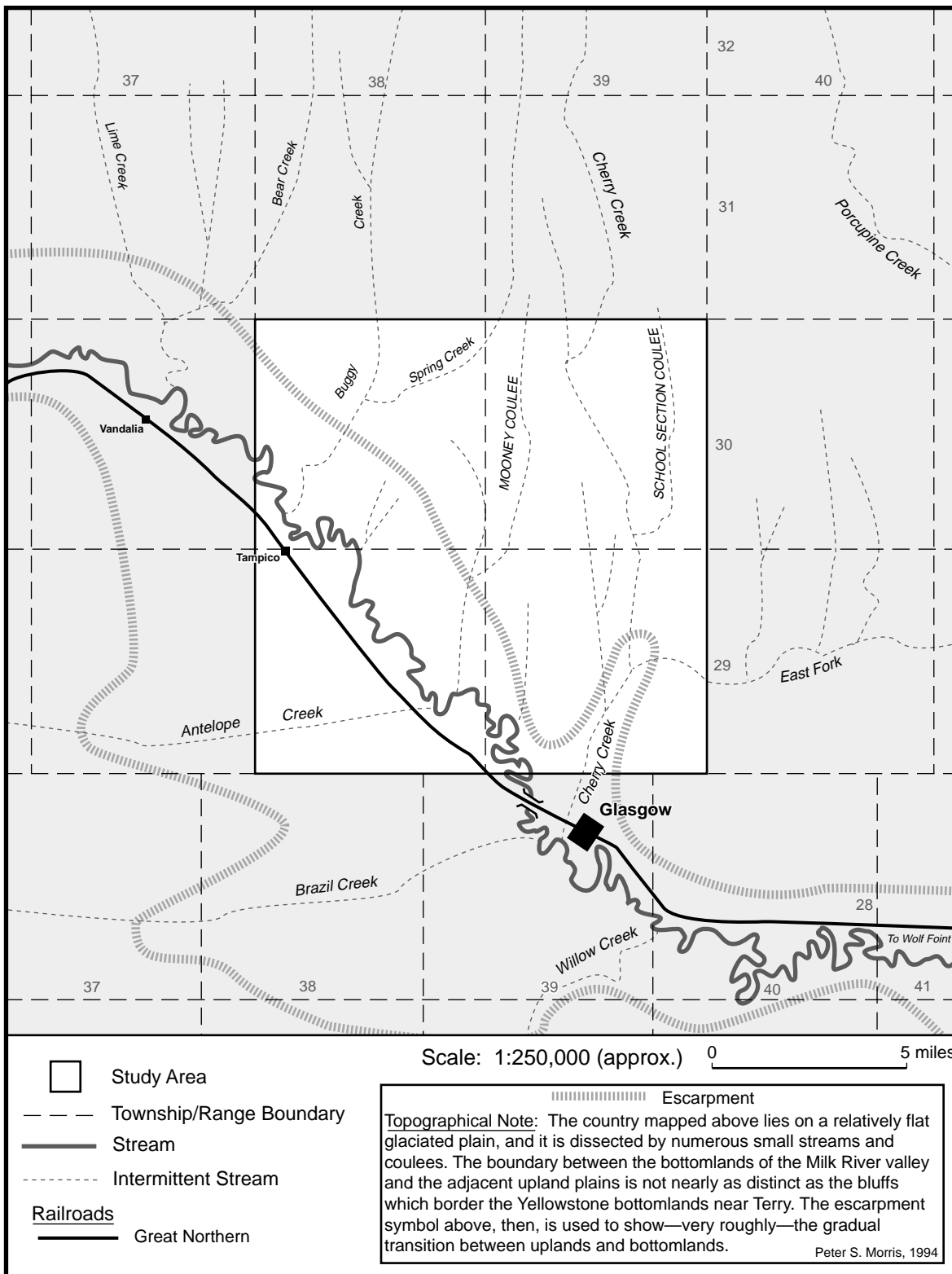


Figure 2b
GN/GLO Comparison Area Near Glasgow, Montana



constituted this analysis. First, simple tabulations and descriptive statistics were calculated to make some general comparisons between the ways in which the GLO and the NP disposed of their respective properties. More importantly, the data were then mapped in an attempt to assess the geographic impacts of the way in which these two institutions disposed of their land.

3.3 Analysis

My analysis of the NP's alienation of its land grant near Terry, Montana centers around four questions, three of which had been prominent concerns for contemporary critics of the land grant policy, as well as for subsequent historians. First, did the NP withhold its land from the market in an effort to realize a speculative capital gain? In other words, how rational was the belief of some nineteenth-century Americans that the railroad land grants slowed regional development by artificially limiting the market supply of farm and ranch land? Second, did the NP sell its land at extortionate prices, effectively eliminating a large segment of potential land owners from half the land market? This is more or less the same concern as the first, but using the sales price rather than the date of sale as evidence. Third, did the NP sell its land in homestead-sized parcels to bona fide settlers, or did it instead sell its land in large holdings to wealthy ranchers or speculators? Again, this is another way to measure the degree to which the NP's land sales were settler friendly, where "settler" is defined as a small-scale individual or family farmer.

The final concern I address in this study is more explicitly geographical. In simplest terms, I make an initial attempt to analyze the spatial pattern of land ownership that arose within the primary area of the NP's land grant. As Norman Thrower argues, the "subdivision of land" is "one of the most widespread, if not the most important" of all the activities that human beings practice in making the earth their respective homes. How any given society divides the land—how it creates territories for the purpose of managing land use—becomes

“part of man’s inheritance”, greatly influencing the social, economic, and ecological histories of that society and its region.⁴⁸ Thrower makes this argument in the context of his study of the rectangular land survey’s impact on Ohio’s cultural landscape. At first glance, the geographic impacts of land subdivision in North America would seem to be independent of the railroad land grant issue. After all, the rectangular land survey applied to railroad-land-grant areas and non-land-grant areas alike. The alternating checkerboard form of the railroad land grants, however, give them a spatial quality that might have significantly altered land subdivision outcomes within their respective domains. By mapping the land alienation patterns of NP and GLO land in the Terry study area, and by comparing these patterns to those on the GLO land in the Glasgow study area, I provide an initial assessment of the checkerboard land grants’ impact on the geography of land alienation and speculate on its ecological significance.

Dates of Entry on NP and GLO Land

When the Northern Pacific built its main line up the lower Yellowstone Valley in 1881, it was entering an area that most Americans considered undeveloped. The destruction of Custer’s Seventh Cavalry at nearby Little Bighorn and the subsequent conquest of the Lakota (Sioux) and their allies in 1876-77 were still a fresh memory. Ranching interests were indeed quick to populate the open range—an estimated 20,000 cattle were brought to eastern Montana in 1880 alone—but very few people joined them. In 1880, the entire eastern third of the territory (Custer and Dawson counties) was home to less than 2,800 persons, and 1,200 of these were located at the U.S. Army’s Fort Keough and adjacent Miles City. The population density of the entire Yellowstone drainage basin was estimated to be only 0.05 people per

⁴⁸ Norman J. W. Thrower, Original Survey and Land Subdivision: A Comparative Study of the Form and Effect of Contrasting Cadastral Surveys (Chicago: Rand, McNally for the Association of American Geographers, 1966), p. 1.

square mile (ppsm), well below the Census Bureau's standard for a "settled" area of 2.0 ppsm. Even by 1890, the basin's 21,574 people constituted a density of only 0.31 ppsm.⁴⁹

Americans viewed the building of a railroad as a fundamental component of regional economic development, especially in the remote West. Indeed, this desire for rapid economic and imperial growth was a primary rationale behind the federal government's award of subsidies to stimulate railroad construction in the West. Many people, however, feared that the land grant form of subsidy would counteract the development stimulated by the construction of a railroad. By awarding half of the region's land to a private company, so the argument went, the federal government effectively decreased the supply of public lands for homestead entry by half. Furthermore, people feared that the railroad companies would withhold the bulk of their land in the hopes of realizing a speculative profit. With half of the land within 40 miles of the railroad removed from homestead entry and perhaps from the land market altogether, people had good reason to question the developmental impact of a land grant railroad—especially since contemporary notions of "development" were centered around the settlement of landed family farmers.⁵⁰

A couple of factors worked to dampen the actual effects of this massive removal of land from the public domain. First, the series of financial crises that plagued the NP during the nineteenth century made it constantly in need of cash. Since the land grant was the company's primary saleable asset, the NP had a strong incentive to sell its land quickly. Ever-increasing property taxes provided additional motivation for the NP to dispose of its land grant as rapidly as possible. As Cotroneo summarizes the NP's Montana experience, "the continued burden of taxation placed the company in an awkward position; the vast

⁴⁹ Malone et al., Montana, pp. 128-34. U.S. Department of Commerce, Bureau of the Census, Tenth Census of the United States, 1880: Population, I, 70, 250. U.S. Department of Commerce, Bureau of the Census, Tenth Census of the United States, 1880: Agriculture, III, 73. U.S. Department of Commerce, Bureau of the Census, Eleventh Census of the United States, 1890: Population, I, xxxix.

⁵⁰ For an example of such criticism aimed at the NP in Montana, see editorial in Billings Journal (January 5, 1912), part of which is quoted in Cotroneo, Northern Pacific Land Grant, p. 174.

TABLE 1
First Entry Dates of Railroad and Government Land Within the Terry Study Area

PERIOD	NORTHERN PACIFIC		GENERAL LAND OFFICE	
	acres	cumulative %	acres	cumulative %
1882 - 1899	3,555	8.3	5,661	14.8
1900 - 1908	4,205	18.2	11,061	43.8
1909 - 1911	13,772	50.5	11,909	75.0
1912 - 1913	6,069	64.8	1,694	79.4
1914 - 1919	8,777	85.4	7,045	97.8
1920 - 1951	6,239	100.0	823	100.0
TOTAL	42,617		38,193	

Source: NPLD, Land Sales Books: Montana Division; GLO, Tract Books, Montana “headquarters” set

acreage of the grant had to be reduced.” The NP was thus driven to sell its land without delay by its constant need for cash and the tax burden of withholding its land from market.⁵¹

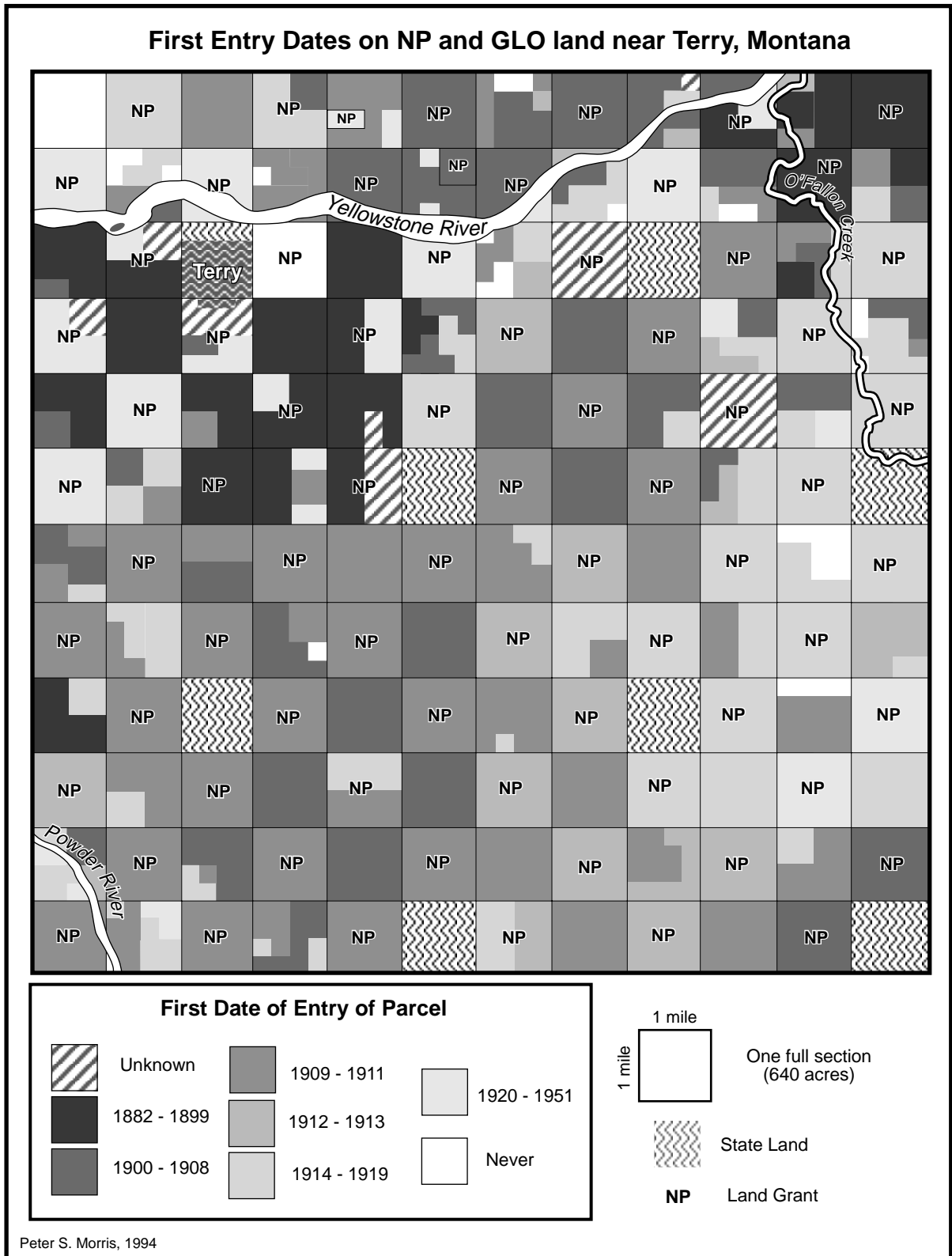
Examination of the land records for the 144-square mile area around Terry, Montana demonstrates that contemporary criticisms were not completely unfounded. As shown in Table 1, nearly 17,000 acres of public land in the study area had been entered upon prior to 1909, the year that Congress passed the Enlarged Homestead Act. In contrast, sales contracts had been signed for less than 8,000 acres of NP land. Furthermore, of the land first entered upon or contracted for during the homestead boom years of 1909-1917, settlers claimed 59% of the government’s land prior to 1912 versus only 48% of the railroad’s land.⁵²

Mapping these data provides further evidence that in the four-township area around Terry, the NP’s land was generally sold after adjacent public land had already been claimed via the Homestead Act or other federal law. Figure 3 is a choropleth map of the data

⁵¹ Cotroneo, *Northern Pacific Land Grant*, p. 244.

⁵² These calculations are based on data from the General Land Office’s Tract Books and the Land Sales Books of the Northern Pacific Railway Company. These figures do not include the 2,240 acres sold by the NP but whose date of sale I did not find. 1,798 acres of GLO land was never entered upon, while only the 640 acres of NP land in section 15-12N-51E had never been contracted for prior to 1955. See Bibliography for a more complete description of these sources and my use of them.

Figure 3



represented in Table 1. Throughout most of the map, NP land is surrounded by public lands with a darker shading, i.e., an earlier entry date. In some small groups of sections—particularly the flat fluvial terraces surrounding Conns Coulee and of the Broadview Bench—the pattern is so distinct that the checkerboard quality of the land grant can readily be seen. Even more striking is the sharp contrast between GLO first entry dates and NP sales dates on the valuable land in close proximity to Terry. Given the existence of a railroad stop in the town, as well as the irrigability of these bottomlands, it is not surprising that most of the government land in these sections had been selected by 1900—all of section 12-12N-51E was gone by 1882, within a year of its survey. In contrast, the NP held much of these lands off the market until 1942 when the U.S. government repurchased more than 1,640 of these acres. In fact, as of October 1955 the NP still owned all of section 15-12N-51E, the section immediately east of Terry. The NP made only two sales in this area prior to 1900 and apparently both were to friends of the company, given the buyers' addresses—Chicago and Philadelphia.⁵³

We see, then, that the criticisms of contemporary observers were to some degree justifiable. At least around Terry, the NP typically sold its land after adjacent public land had already been taken. It would be wrong to conclude, however, that the lag between entries on the public domain and the sale of adjacent railroad lands was significant enough to produce a drag on regional development. After all, given that GLO land was virtually free of charge via the Homestead Act, one would expect settlers to enter upon it before they purchased adjacent NP land. Furthermore, the delay between GLO entry and adjacent NP sale was rarely more than two or three years, a period of time that unlikely would have produced a significant delay in regional settlement and development. Given the tremendous bust at the end of the

⁵³ Minnesota Historical Society, Northern Pacific Railway Company, Land Department, records (hereafter NPLD), "Northern Pacific Railway Company and Northwestern Improvement Company Land Ownership Maps". In 1882, L. P. Hilliard of Chicago and William E. Thompson of Philadelphia each purchased a half section of land adjacent to the railroad for \$3.00 per acre or less. NPLD, Land Sales Books: Montana Division.

1910s to Montana's homestead boom—when drought and low prices hit farmers with a double dose of adversity—it is perhaps unfortunate that the NP's land grant did not act as more, rather than less, of a brake on development.

NP Land Prices and Parcel Sizes

Of greater concern to present-day students and contemporary observers than the time lag between public land entries and railroad land sales is the degree to which the Northern Pacific's land grant contradicted the nation's general goal of equitable distribution of the public domain. The award of nearly 39 million acres of land to a single corporation without restriction on the way in which it could dispose (or not dispose) of that property significantly contradicts the egalitarian values at the core of post-Civil War federal land policy. While the Homestead Act of 1862 sought to give American citizens equal access to the public domain, the land grants to the Northern Pacific and other western railroads created enormous corporate land owners. Many feared that these new land "monopolies" would sell much of their land to speculators in huge properties at bargain prices or would hold on to the land themselves until they could sell directly to settlers at extortionate prices. Using Paul Wallace Gates's phrase, the railroad land grants and the egalitarian Homestead Act together constituted an "incongruous land system" in which the interests of the bona fide settler—the yeoman farmer so cherished in American mythology—were trodden upon by the mechanisms of Eastern corporate capital.⁵⁴

⁵⁴ Paul Wallace Gates, "The Homestead Law in an Incongruous Land System," American Historical Review, 41 (1936), pp. 652-81. While the "speculator" has been a much maligned figure in popular American thought—someone antithetical to the ideal of the yeoman farmer—a number of historians have found a much more ambiguous role for land speculation. For one thing, some of the most prominent speculators on the frontier land market were the farmers themselves. The negative stigma attached to farm tenancy, which many people link with speculators, is also largely unfounded. As James Malin stated, in his typically acerbic style, "The 'actual settler' concept and the 'family size' farm are in large part social myths which were more closely associated with propaganda than with history." James C. Malin, The Grassland of North America: Prolegomena to its History with Addenda and Postscript, (reprinted with addenda; Gloucester, Mass.: Peter Smith, 1967), p. 314. Also, see Gates, "The Role of the Land Speculator in Western Development," Pennsylvania Magazine of History and Biography, 66 (1942), p. 314-33; Allan G. Bogue, From Prairie to Corn Belt: Farming on the Illinois and Iowa Prairies in the Nineteenth Century (Chicago, 1963); and Allan G. Bogue and M. B. Bogue,

The history of the Northern Pacific certainly includes a large number of examples supporting land grant critics' views. Especially during periods of financial duress, and in the semi-arid rangelands which company executives deemed virtually "worthless", the NP frequently sold enormous tracts of land to large-scale investors and ranchers. During the company's bankruptcy of the mid-1870s, for example, it encouraged bondholders to exchange their holdings for NP land. This was an especially attractive offer given that the bonds were valued by the railroad in this exchange at \$110 each (10% over par) while their market value had fallen below 20 dollars. One of the first to acquire large acreages of NP land in this manner was company president George Cass who turned his eighteen sections of land (roughly 11,500 acres) into one of the Red River Valley's first "Bonanza" wheat farms. By 1878, five years after the financial collapse of Jay Cooke and the NP, the company had sold over 1.7 million acres to slightly less than 3000 purchasers—an average of 578 acres per purchase. Technically, the average price of this land was \$4.57 per acre, but because of the ability to obtain NP preferred stocks and bonds at highly discounted prices and then swap them at or above par for land, the actual price of these properties ranged between 16 and 60 cents per acre.⁵⁵

Despite the company's sounder financial footing after 1900, sales of large tracts of land to single purchasers did not disappear. Many of these sales went to prominent ranchers in eastern Montana who had been using what was now railroad land since the days of the open range. Ranchers like Pierre Wibaux appealed to railroad officials that they deserved a right of first refusal for these lands on the basis of the improvements they had already made and the business they had generated for the railroad during the previous two decades. While railroad officials struggled for a time with the notion of setting a minimum price of \$1.00 per

"Profits' and the Frontier Land Speculator," *Journal of Economic History*, 17 (1957), pp. 1-24.

⁵⁵ Cotroneo, *Northern Pacific Land Grant*, pp. 43-44. For a more complete description of the Bonanza farms of the Red River Valley, see Hiram M. Drache, *The Day of the Bonanza* (Fargo: North Dakota Institute for Regional Studies, 1964).

acre, they eventually relented after the dry summer of 1903 caused them to reconsider their valuation of these lands. According to Cotroneo, company officials quickly decided that any individual “willing to buy Montana land during this period was extremely confident and the company should not place any obstacles in his way if it could be avoided.”⁵⁶ So, in 1903 after a year of negotiations, Wibaux purchased 38,840 acres of land for \$0.75 per acre. Similar sales were made the same year to Stewart J. Dunlap, an NP conductor whose intentions were solely speculative (45,000 acres) and Miles City sheep baron W. E. Harris (78,000 acres).⁵⁷

In one way, these large land sales to existing ranchers fits well within the federal land policy’s notion of fairness. After all, many of these sales were first and foremost a recognition of preemption rights, a legal tradition based on the notion that one’s right to a resource is based on the relative earliness in which one began using that resource. This “finders keepers” ideology actually has been a fundamental component of most natural resource laws concerning the American West—whether the resources in question be minerals, water, or land.

The case of Pierre Wibaux, however, shows that even the established ranchers’ large land purchases contained a speculative component. Wibaux had built his cattle empire near the Montana-Dakota border thanks to financial support from friends and family in France as well as his foresight to raise alfalfa for winter feed prior to devastating winter of 1886-87. Despite the fact he owned only 160 acres of land, he maintained close to 150 brands of cattle on a open range north of the Northern Pacific’s main line that extended from the Yellowstone River to the Little Missouri River in Dakota Territory. Shortly after purchasing the land from the NP, he sold it and became a banker in Miles City.⁵⁸

⁵⁶ Cotroneo, Northern Pacific Land Grant, p. 157.

⁵⁷ Cotroneo, Northern Pacific Land Grant, pp. 147-58, 161.

⁵⁸ Marie MacDonald, Glendive: The History of a Montana Town (Glendive: Gateway Press, 1968), pp. 21-22. Malone et al., Montana, pp. 157-71, discusses Wibaux’s ranching career in the context of the state’s open range boom during the final quarter of the nineteenth century.

The speculative nature of many of these large purchases is further exemplified by a 23,000 acre sale of Dawson County land to the Wisconsin-Montana Land Company (WMLC) of Burlington, Wisconsin. Stewart Dunlap of Mandan, North Dakota—the same NP conductor mentioned above—arranged a group of investors to purchase 45,000 acres at \$1.30 per acre, \$.10 per acre going to Dunlap as commission. On 1 May 1903, half of this land went to George M. Beasley and Guss C. Rasch who purchased 9,575 and 13,362 acres respectively on a five-year payment plan. Both men were representing the WMLC, a company whose stationery listed its 23,000 acres as “some of the best grazing lands” in Montana, “splendid opportunities for those seeking a home or an investment”. WMLC’s local representative and Vice President was William F. Jordan, a “Texas cowboy” who was a leading hotel owner and cattle and sheep magnate in Glendive, as well as President of his own Yellowstone Valley Land Company. After receiving a number of extensions on their delinquent payments for two years, Beasley and Rasch were refused extensions in 1905 and both contracts were assigned to another Wisconsin real estate firm, the Dawson Land Company (DLC) of Madison. DLC—“wholesale dealers in Western, Southern & Southwestern farm & timber land”—paid off these contracts and received the deeds finally in 1906 and 1907.⁵⁹

The four-township study area around Terry also included some relatively large land purchases by prominent local ranchers. These included the purchase of two half sections in the center of the study area at \$3.50 per acre during the 1910s by Miles City “cattle king” Henry Tusler. Also, the first mayor of Terry and “one of the area’s most prominent sheepmen”—a native of Hertfordshire, England named Alfred Wright—purchased an entire section in the upper reaches of Conns Coulee for \$5.75 per acre in 1910. More significant is Walter A. Cameron’s attempted purchase in 1904 of 7,580 acres on the north bank of the Yellowstone River. Cameron—son of a Nova Scotia farmer, a construction worker on the

⁵⁹ NPLD, Land Contracts: Montana Division, folders 4502 and 4503. MacDonald, Glendive, p. 22.

NP, and later a co-founder of lumber, brick, and drug stores in Terry—was apparently attempting to relocate or expand the sheep operation he established in 1883 along Little Pumpkin Creek (about 75 miles to the south). He had moved his winter home to Terry just two years earlier, but ultimately he was able to pay for only 480 acres of the railroad land at the contracted price of \$1.50 per acre. The remainder of the contract was assigned to and paid off by H. A. Whittier of Northfield, Minnesota.⁶⁰

By far the most significant purchase of NP land in the study area was made by George Washington Burt, a University of Michigan-trained engineer from Illinois. Burt moved to Terry in 1895 and quickly became one of the region's leading sheepmen. In 1902 he purchased 17 sections of NP land along Whitney and O'Fallon Creeks at \$0.75 per acre. (Only two of the sections—extreme southeast corner—fall within the study area). Burt, in partnership with his brother-in-law Lon Fluss, employed 10 full-time herders to manage his 30,000 sheep, and he was the first of the region's sheep barons to install steam-driven mechanical wool clippers at his shearing camp outside Terry. Apparently, Burt profited even more as a land speculator than as a wool producer, especially after the Milwaukee Road constructed its line in 1909 adjacent to his properties southeast of Terry. As a 1913 subscription history of Montana states, “Mr. Burt was one of those whose foresight caused them to purchase Northern Pacific land, purchasing ninety-three sections on O'Fallon Creek, of which he has disposed at a handsome profit.”⁶¹

⁶⁰ Two months later, in March 1908, Cameron purchased a quarter section of adjacent land from the NP at \$8.25 per acre, just two weeks after the NP had selected this parcel from the public domain in lieu of some land it was designated in Washington state. Biographical information on Tusler and Wright is taken from Donna M. Lucey, Photographing Montana, 1894-1928: The Life and Work of Evelyn Cameron (New York: Alfred A. Knopf, 1990), pp. 21, 146. Biographical information on Walter Cameron—apparently of no relation to his famous Terry neighbors Evelyn and Ewen Cameron—comes from one of the many local “subscription” histories produced in the late nineteenth and early twentieth centuries: Helen Fitzgerald Sanders, A History of Montana (Chicago: Lewis Publishing Company, 1913), pp. 1156-57. Cameron is also briefly mentioned in Carroll Van West, Capitalism on the Frontier: Billings & the Yellowstone Valley in the Nineteenth Century (Lincoln: University of Nebraska Press, 1993), pp. 95-96. All information regarding railroad land purchases comes from NPLD, Land Sales Books: Montana Division. The contract numbers for each of these individuals are 5630 and 5631 for Wright, 6084 and 10493 for Tusler, and 4682 and 5078 for Cameron.

⁶¹ Sanders, History of Montana, pp. 1544-45. Additional biographical information is taken from Lucey, Photographing Montana, pp. 137-44. Information regarding the seventeen-section purchase of NP land

Although such sales of large properties were obviously not rare, the NP preferred to sell its land in smaller parcels to new settlers. In April 1904, Thomas Cooper became the NP's new Land Commissioner, and all company lands were immediately taken off the market so company policy could be reevaluated. As the "Dry Farming" experiments of Hardy Webster Campbell and others began to convince railroad officials that grain farming was a viable activity on the northern plains, they revised the NP's land policy to favor individual homesteaders. In 1904 Cooper required that all sales exceeding 1,000 acres needed approval of the company President, and these sales henceforth were very uncommon. When most of the land grant was once again placed on the market in 1908, the NP made half- and full-sections its preferred parcel size (reflecting the use of biannual fallow periods under the "Dry Farming system"), and it required that all sales be made to actual settlers, complete with a residence and cultivation requirement a la the federal Homestead Act.⁶² In short, the Northern Pacific began to emulate in its sales policies the alienation of the public domain under the General Land Office. It is largely on the basis of these post-1908 policies that land grant historians like Cotroneo have concluded the railroads' land sales were not monopolistic, but were "fair and in the best interest of the settlers."⁶³

Most of the NP's land in the study area was disposed after 1908 under the new, GLO-like policies. As Table 2 shows, however, NP land sales continued to differ significantly from the disposal of the public domain. Whereas more than half of the 160 individuals who obtained land from only the General Land Office received 250 acres or less, only 16 (22.9%)

mentioned above is from the NPLD, Land Sales Books: Montana Division, contract #3984. Burt's wealth enabled him to become, in Lucey's words, "one of eastern Montana's most prominent and innovative citizens." (pg. 139) In addition to the steam-powered wool clippers, Burt was the first area resident to have a bicycle, an automobile, and running water and heat in his home. His most elaborate purchase, however, was that of a 100-foot sternwheeler on which he traveled down the Mississippi River and across the Gulf of Mexico to Florida, after a stroke forced his retirement from ranching. He managed his sheep business until 1911 when he moved to Miles City, focusing his business activities on the State Bank of Terry, of which he was President, and the Erling-Burt Mercantile Company of nearby Ismay.

⁶² Cotroneo, Northern Pacific Land Grant, pp. 160-62. For a detailed history of the dry farming movement, see Hargreaves, Dry Farming.

⁶³ Cotroneo, Northern Pacific Land Grant, p. 445.

TABLE 2

Individuals Successfully Acquiring Land in the Terry Study Area from
the Northern Pacific and/or the General Land Office,
by total property size, 1882-1951

Property Size (acres)	NP		GLO		Both		TOTAL	
	n	%	n	%	n	%	n	%
over 750	8	13.3	0	0	6	60.0	14	6.1
600 - 750	23	38.3	1	0.6	0	0	24	10.4
351 - 599	0	0	2	1.3	3	30.0	5	2.2
251 - 350	13	21.7	54	33.8	1	10.0	68	29.6
150 - 250	11	18.3	82	51.3	0	0	93	40.4
under 150	5	8.3	21	13.1	0	0	26	11.3
TOTAL	60	100	160	100	10	100	230	100
Total Acreage	29,192*		34,644		7,173		71,009	
Average Acreage per Person	503.3*		216.5		717.3		311.4	

* Excludes the 10,880 acres purchased by George Burt and the 7,100 acres by H. A. Whittier. Also excluded from this table is the 4,079 acre NP sale to the U.S. government in 1942.

Source: NPLD, Land Sales Books: Montana Division; GLO, Tract Books, Montana "headquarters" set

of the 70 individuals who acquired land from the Northern Pacific ("NP" plus "Both" in Table 2) received such a similarly small unit of property. In fact, 37 (52.8 %) of the railroad land buyers acquired properties exceeding 600 acres, most of these getting a full section or greater. As a result, the 68 people who purchased land from the NP in the study area (excluding the large purchases of George Burt and H. A. Whittier) acquired an average of 535 acres from the two institutions, more than double the 217 acre average for people who acquired public land only.⁶⁴

In addition to parcel size, the most obvious difference between purchasing land from the Northern Pacific and acquiring land from the General Land Office was the cost. Whereas GLO land was virtually free under the Homestead Act, the NP land cost the purchaser a non-

⁶⁴ See footnote 52.

trivial amount. Given that the preferred farm size during the Dry Farming era was 320 acres, a price of only \$2.50 per acre—the NP’s bare minimum price for “tillable” land—would add \$800 to the new farmer’s already significant capital requirements. As historian Mary Hargreaves has stated, most of the farmers settling the Montana/Dakota plains during this period “had started with far too little capital for an undertaking which from the nature of the environment entailed extraordinarily heavy expenditures.”⁶⁵ The added cost of railroad land, then, could have effectively bifurcated the land market, decreasing the supply of land for the capital-poor in half. The fact that only 10 of the 230 individuals obtaining land in the study area did so from both the railroad and the government suggests that just such a bifurcation took place.

There are a number of reasons, though, to dampen one’s criticism of the added land costs imposed by the NP land grant. First, government land was not completely free of charge, even under the Homestead Act. In addition to residency and cultivation requirements, the prospective homesteader was charged a small filing fee—\$22 for much of the period that the lands in Eastern Montana were being alienated. Much more significant, though, was the practice of locator fees and under-the-table charges on homestead “relinquishments”. Hargreaves noted that both of these practices, the latter of which was illegal, dramatically increased in price and frequency during Montana’s homestead boom. Jim Smrz, son of a north-central Montana homestead locator, described how the illegal sale of relinquishment rights worked: “These first guys that came, they were mostly bachelors. They’d claim a homestead, stay on it a couple years, and then sell it for \$200.” Jim’s father would then sell these relinquishment rights—merely a “handshake agreement” which had no legal standing whatsoever—to prospective settlers for approximately \$600.⁶⁶

⁶⁵ Hargreaves, Dry Farming, p. 539.

⁶⁶ Hargreaves, Dry Farming, p. 414. Smrz quoted in Daniel J. Vichorek, Montana’s Homestead Era (Helena: American Geographic Publishing and Montana Magazine, Inc., 1987), pp. 110-11.

There is no way of telling exactly how common a practice this was, but the high rate of homestead relinquishment on the prime lands near Terry suggests that it was not a rare occurrence in the study area. Overall, 64 of the 297 homestead entries in the study area were relinquished; another 46 were canceled. That produces a success rate of 63%. Somewhat paradoxically, relinquishments and cancellations were higher closer to Terry and the railroad than they were farther away. Whereas the success rate was only 52.9% in township 12N - range 51E (that in which Terry is located), it was 81.8% in the relatively remote 11N-52E. This might suggest that a number of early homestead applications were made close to the railroad for purely speculative purposes, i.e., in hopes of receiving a relinquishment fee. Measured differently, 30.5% of the 187 successful homestead entries in the study area were on parcels that had just been relinquished or canceled (34.8% in 12N-51E).⁶⁷

Even with these added costs, government land was still significantly less expensive to obtain than railroad land. It is important to note, however, that the NP did not charge prices that reasonably could be described as extortionate; NP prices appear to have been well within the bounds of the local land market. Pressly and Schofield have estimated, using agricultural census data, that farm real estate values in eastern Montana during 1910 were on average \$12-16 per acre, including improvements. This compares favorably with the prices charged by the NP. According to an NP Land Department Annual Report, the average price for all 38 million acres that the NP had sold through 1950 was \$3.29 per acre. During the homestead boom from 1908-1917, the NP sold a total of 5 million acres at an average price of \$5.91 per acre; the same figure was slightly higher for the study area—\$7.05 per acre—but still only about one-half of the local average value of improved lands. NP prices, generally speaking, reflect unimproved lands, but the cost of improvements such as buildings, fencing, and sod-busting typically would not have been large enough to push NP lands out of the

⁶⁷ NPLD, Land Sales Books: Montana Division; GLO, Tract Books, Montana “headquarters” set.

TABLE 3
Average Price (\$ per acre) of NP Land in the Terry Study Area

Parcel size	1882-1908	1909	1910	1911- 13	1914- 17	1918- 39	1940- 51	TOTAL	Acreage
over 600	2.50	3.50	5.46	6.56	3.56	5.00	2.16	3.65	20,400
251 - 600	2.25	6.00	6.09	13.72	9.97	9.30	4.50	7.25	10,053
150 - 250	8.25	10.68	10.75	9.60	15.00	--	5.00	10.45	3,360
under 150	10.00	8.25	--	8.25	--	16.01	16.07	13.40	537
All Parcels	2.79	7.27	5.97	9.07	5.73	8.21	2.67	5.52	
Acreage	3,232	4,046	3,987	5,687	6,422	1,749	9,228		34,350

Source: NPLD, Land Sales Books: Montana Division; GLO, Tract Books, Montana “headquarters” set

neighborhood of reasonable market prices. Table 3 shows the average prices of NP land by parcel size and time period.⁶⁸

In addition to what appear to have been fair prices, the credit terms offered by the NP helped make their land sales policy relatively “settler friendly”. As Gates and others have noted for other land grant railroads, the NP sought to make its land more affordable to capital-poor individuals by offering multi-year payment plans. Specifically, the NP offered two plans—a five-year plan in which one-sixth of the total be made at time of purchase with the remainder paid in five equal annual installments and a ten-year plan in which the down payment was one-tenth of the total. As of 1903, the annual interest rate charged was six per cent, and the ten-year plan also carried a three-year residency and cultivation requirement. After 1908, when the NP ended its four-year sales hiatus, new Land Commissioner extended the residency and cultivation requirements to all sales.⁶⁹

⁶⁸ Thomas J. Pressly and William H. Schofield, Farm Real Estate Values in the United States by Counties, 1850-1959 (Seattle: University of Washington Press, 1965), pp. 62-63. NP Land Department Annual Report cited in Cotroneo, Northern Pacific Land Grant, p. 465. Hargreaves, Dry Farming, p. 224. Figures for study area sales prices come from my analysis of relevant entries in NPLD, Land Sales Books: Montana Division. See footnote 52.

⁶⁹ Cotroneo, Northern Pacific Land Grant, p. 162. Details of the two payment plans are from the back side of a 1903 “Application for the Purchase of Land” (NP Land Department Form LD59), NPLD, Land Contracts:

Purchasing land from the NP was a risky proposition, however. The purchaser was liable for all taxes and other assessments throughout the duration of the contract, and failure to pay such taxes—or delinquency of contract payments—was justification for cancellation. Cancellation was especially painful because all improvements to the land (including buildings) and all payments that had been made remained the property of the NP. These risks were dampened, though, by the NP’s general leniency with traffic-producing settlers who became delinquent in their payments. As other land-grant railroads had done before it, the NP exercised the “utmost leniency in extensions,” especially during lean economic times like the 1919 drought.⁷⁰

This leniency was extended to large purchasers as well as small ones, as the experience of John McDougal demonstrates. In 1903 McDougal—a resident of Mandan, North Dakota—purchased 36 sections of NP land. After missing a number of payments and being threatened with cancellation, he sent the following extension request to Land Commissioner Thomas Cooper:

I received your notice of my defaulting in the payments on contracts 4500 & 4501 in Dawson Co. Montana, and expected a notice sooner, but your company has always been lenient with me. For years back I have owed your company for land every day since 1883 and still come out right, but they never forced me for payments. From 1884 to 1890 I was behind in my payments on land I bought from them in Morton Co. N. D. when every one out there thought that the country was no good. Still I am now sorry I hadn’t more confidence although I had more than my share of confidence in the country. Now I have tied up resources that would take care of those payments I owe your company and could realize on them if I would incur expense and force them. But others have never used me that way and I do not like to commence. If you can favor me with a little further extension of time on those contracts I will surely take care of those payments, for on or before October the first I will be able to pay up in full.

The NP granted McDougal the extension, as well as another one in February 1906. There were limits to their patience, however, and the two contracts were assigned in March 1906 to William Holton Dye of the Dakota Farm Lands Corporation in Indianapolis.⁷¹

Montana Division.

⁷⁰ “Application for the Purchase of Land” (NP Land Department Form LD59), NPLD, Land Contracts: Montana Division. Cotroneo, Northern Pacific Land Grant, p. 198.

⁷¹ letter, McDougal to Cooper, July, 8 1905, NPLD, Land Contracts: Montana Division, folder 4501.

Drawing conclusions from this experience is not a simple task and ultimately depends on one's perspective. For Cotroneo, the fact that the NP preferred to sell land in small parcels to actual settlers, and was generous with settlers who became delinquent on their payments, proves that an "American business could perform a valuable service, prosper and be ethical at the same time." In contrast, Hargreaves criticizes the prominence of large speculative concerns in the NP's lands. As she argues, the "pyramiding of profits through speculative ventures before the land passed to actual settlers" further depleted the capital resources of an already capital-poor group of farmers. Therefore, while the NP sought to design a land policy that promoted the region's agricultural development, the ultimate success of this development "was dependent upon the sales activities of groups whose primary concern tended to be a matter of immediate personal advantage." Certainly, the NP was not the evil monopolist that critics have made it out to be, but neither was it the unambiguous engine of benign regional development that some have suggested.⁷²

Geographical Pattern of NP Land Sales

Spatial patterns of land subdivision and settlement, along with their geographical and ecological implications, have long been an issue of concern for historical geographers, public lands historians, and land resource professionals. As early as John Wesley Powell's famous 1879 report on the "Arid Region" of the American West, a number of these environmental scientists have critiqued the U.S. rectangular land survey established by the Ordinance of 1785 for its ignorance of local physical geographic conditions. Powell noted that the Ordinance's arbitrary grid of land survey and division paid no attention to the location of streams and other water resources resulting—in the sub-humid West at least—in an unequal supply of water between different land parcels.⁷³

⁷² Cotroneo, *Northern Pacific Land Grant*, p. 445. Hargreaves, *Dry Farming*, p. 412.

⁷³ J. W. Powell, *Report on the Lands of the Arid Region of the United States, With a More Detailed Account of the Lands of Utah*, with a new introduction by T. H. Watkins, (reprint; Boston: The Harvard

Subsequent scholars have expanded this critique of the rectangular survey to its application in the humid heartland of the Middle West, where topography rather than water is the issue. As geographer Hildegard Binder Johnson noted, the rectangular survey was ill-suited to hilly and rolling country because it often forced settlers to include a combination of bottomlands, uplands, and highly-sloped lands in their farm properties. At best, the survey's artificial rectangular "order on the land" created inefficient farmsteads in which farmers had to haul wagons, machinery, and livestock up and down hillsides between upland and bottomland fields; at worst, the rectangular cadastre implanted by the survey encouraged an ecologically-degrading "farming on the square" and soil-erosive cultivation and grazing of steep hillsides. In the words of agricultural historian Robert Diller, the rectangular land survey fostered a system of farming that was "more time- and power- consuming and more conducive to erosion of the soil and waste of moisture" than what would have resulted under a land tenure system based on "topographical fields"⁷⁴

With its alternating checkerboard design, the railroad land grants would seem to have their own special geographic implications. The land grant colonization histories, however, fail to address these geographic concerns. In fact, other than noting the problems presented to federal land managers by the checkerboard intrusions of railroad land into National Forests and Grazing Districts, no one that I have found has analyzed potential implications of the alternating checkerboard design. My preliminary examination of the four-township study area near Terry, Montana suggests that these geographic impacts may have been significant.⁷⁵

Common Press, 1983), pp. 22-23.

⁷⁴ Johnson, "The Quarter Section." Johnson, Order Upon the Land. Robert Diller, Farm Ownership, p. 84. For a similar critique of the rectangular survey, see John Opie, The Law of the Land: 200 years of American Farmland Policy (Lincoln: University of Nebraska Press, 1987), p. x, 58.

⁷⁵ The existence of railroad land in the National Forest Reserves has been especially problematic in the mountains of northern Arizona and New Mexico. See chapter 5 of Greever, Arid Domain. It remains a concern also for Burlington Northern inholdings surrounding Yellowstone National Park. For example, see Todd Wilkinson, "A 'Holy Land' is saved in Montana," High Country News, October 4, 1993, p. 6.

Among the studies which note the management complications of checkerboard private land intrusions into public grazing districts are: Great Plains Committee, The Future of the Great Plains: Report of the Great Plains Committee (Washington, D.C.: Government Printing Office, 1936), 112-13; Laurence A. Stoddart and Arthur

Canadian public lands historian Chester Martin is one of the few people to comment on the geographical impact of the railroad land grant checkerboard. In a discussion of the Canadian Pacific's land grant, Martin suggested that the checkerboard was a "blessing in disguise" for homesteaders in the semi-arid plains of Alberta and Saskatchewan because it provided room for farm expansion during the rise of land-extensive Dry Farming techniques. He explains:

Throughout the whole range of the best agricultural lands in western Canada, free homesteads and railway lands were to be found in contiguous sections, and the successful homesteader could rely upon the prospect of purchasing a second quarter section at rates sometimes substantially below the average market price for his district. ... Without the maligned "land lock" the technique of dry farming might have been strangled in its infancy.⁷⁶

In other words, by preserving empty land adjacent to each farmer's government homestead, the checkerboard land grant theoretically gave settlers room for expansion in a region where large parcels of land were needed to raise grain successfully.

Martin was merely speculating, however, and he failed to examine land records for evidence of the actual frequency of such homestead expansions. As we have already seen, examination of the NP's checkerboard grant around Terry suggests that such expansion may not have been very common. As Table 2 shows, of the 170 individuals who obtained study-area property from the General Land Office, less than six per cent also purchased study-area land from the NP. Table 2 might understate the practice of obtaining land from both institutions slightly, because it does not include individuals who purchased NP land in townships adjacent to, but not within, the study area. But even if such purchases had been made by all thirty of the study-area homesteaders⁷⁷ whose land bordered on adjacent, non-

D. Smith, Range Management, second edition (New York: McGraw-Hill Book Company, 1955), 14-16; and Edward Higbee, American Agriculture: Geography, Resources, Conservation (New York: John Wiley & Sons, Inc., 1958), 145.

⁷⁶ Martin, 'Dominion Lands' Policy, p. 235.

⁷⁷ In this and following paragraphs, I use "homesteader" to refer to all individuals who obtained land from the federal government—whether under the actual Homestead Act (by far the most common means in this region) or one of the other public land acts. Thus, my usage here does not include individuals who obtained land solely from the railroad or elsewhere on the private market.

study-area NP land—an obviously gross exaggeration—the proportion of homesteaders also buying NP land still would have been less than twenty-five per cent.

Martin's speculation about an unintended benefit of the checkerboard design, therefore, appears dubious. These results should not be too surprising, however, as a number of factors would have limited the frequency with which homesteaders purchased adjacent land from the railroad. First, most of the settlers around Terry arrived after passage of the Enlarged Homestead Act in 1909 which enabled homesteaders to obtain up to 320 acres (half a section)—arguably more land than most homesteaders could effectively cultivate in this era of nascent agricultural mechanization. Furthermore, for those successful homesteaders with enough capital to expand their farms or ranches beyond 320 acres, the time window during which adjacent railroad land was available was not very long. As we have already seen, the time lag between entries upon government land and upon adjacent railroad land was usually not more than a 2-5 years. Consequently, if a successful homesteader wanted to expand onto adjacent odd-numbered sections, he/she likely would have purchased such land on the secondary market, not from the railroad.

Mapping the successful land entries and purchases in the study area provides visual evidence for this apparent land-market bifurcation between homesteaders and railroad land purchasers (see Figure 4a). In addition to the very few parcels that cover both railroad and government land, we see that a number of individuals obtained non-adjacent land from the same institution. In fact, more people obtained non-adjacent parcels from the GLO than adjacent land from the two institutions. Of the 55 parcels that were added to someone's

Figure 4a

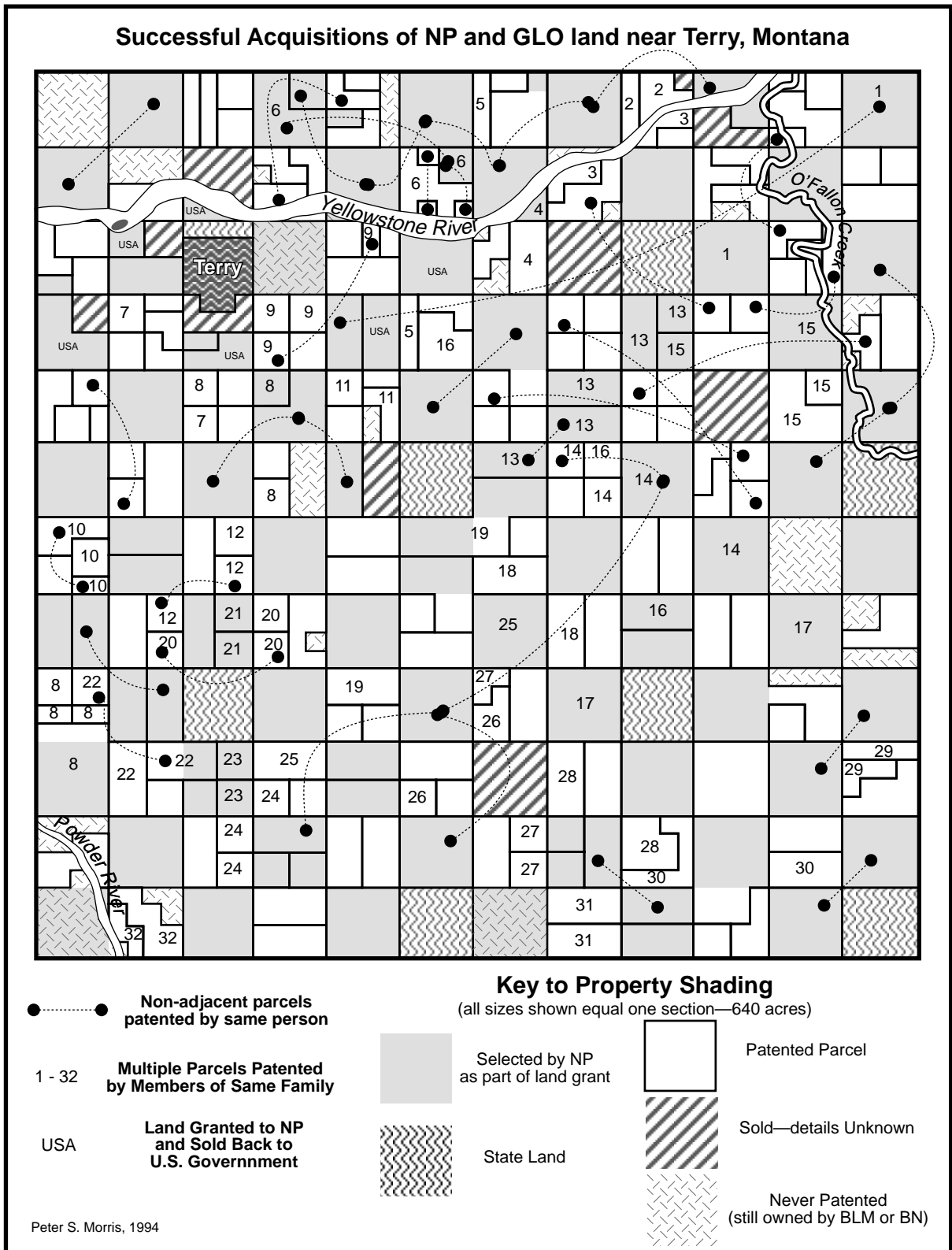
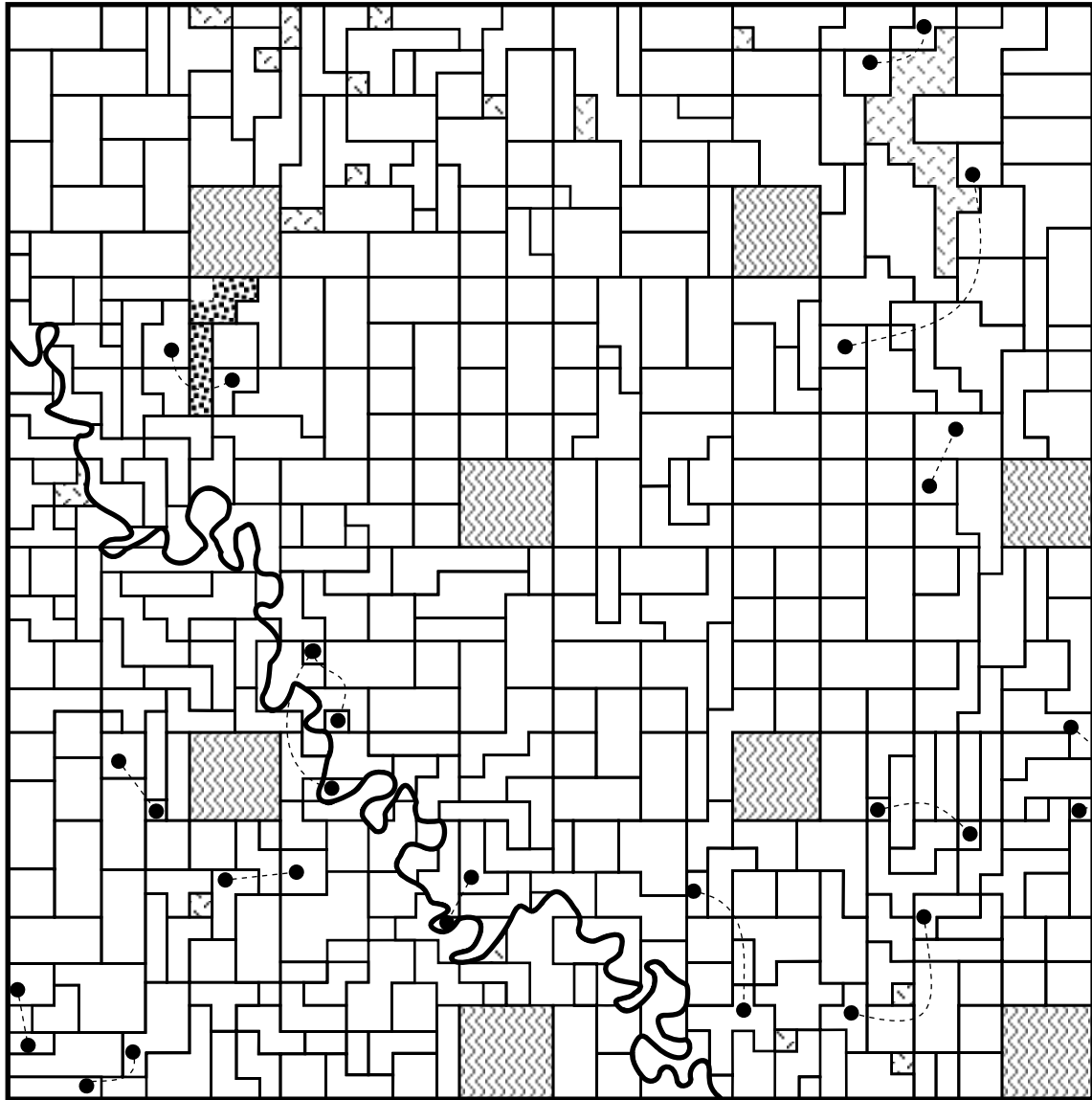


Figure 4b

Successful Acquisitions of GLO land near Glasgow, Montana



●.....● Non-adjacent parcels patented by same person

Early Homestead Entries in T30N, R38E (see Figure 5)

Key to Property Shading

Patented Parcel

Never Patented (still owned by BLM)

State Land

original GLO holding in the study area, 31 were on adjacent GLO land (i.e., within the same square-mile section), 13 were on non-adjacent GLO land, and 11 were on railroad land. In short, because the land grant apparently segregated buyers into government purchasers and railroad purchasers, and because the grant was designed as a checkerboard, one impact of the policy was to fragment some individuals' land holdings.⁷⁸

The geographic significance of the alternating-checkerboard layout of the land grant, however, does not end with its impact on the size and institutional heritage of early land parcels. Instead, the greatest legacy of the alternating checkerboard may have been its impact on parcel shapes. Specifically, examination of Figure 4a reveals that the initial properties successfully acquired by both homesteaders and railroad land purchasers were predominately square or rectangular in shape. This fact is even more evident when Figure 4a is compared with Figure 4b, a similar map of alienation-era properties for a comparison area along the mainline of the Great Northern Railroad near Glasgow, Montana—an area in which there was no land grant. As can be readily seen, non-rectangular parcels were much more common in the Glasgow comparison area, where all of the properties were obtained from the GLO.

Johnson has shown that this ability to create irregularly-shaped parcels by piecing together adjacent, modular units of forty acres (quarter-quarter sections) allowed homesteaders to partially escape the geometric constraints of the rectangular land survey; in a classic local-scale study of southeast Minnesota, she demonstrates that homesteaders used modular “forties” to acquire farms which were at least partially sensitive to local topography. In fact, by assembling the standard 160-acre homestead out of adjacent forties, the settler had nineteen different geometric options—when directional orientation is taken into account—in designing a farmstead suited to the local landscape. Often by crossing section boundaries—

⁷⁸ Of course, it remains uncertain whether this apparent fragmentation was truly significant in the long run. Since 1920, farms and ranches throughout the northern Plains have been consolidated into much larger properties. It is indeed possible that this consolidation process rapidly eliminated much of the fragmentation from the land grant era as the 1920s and 1930s witnessed dramatic agricultural readjustment on the Plains. Further research with county land records would be needed to see if this was the case.

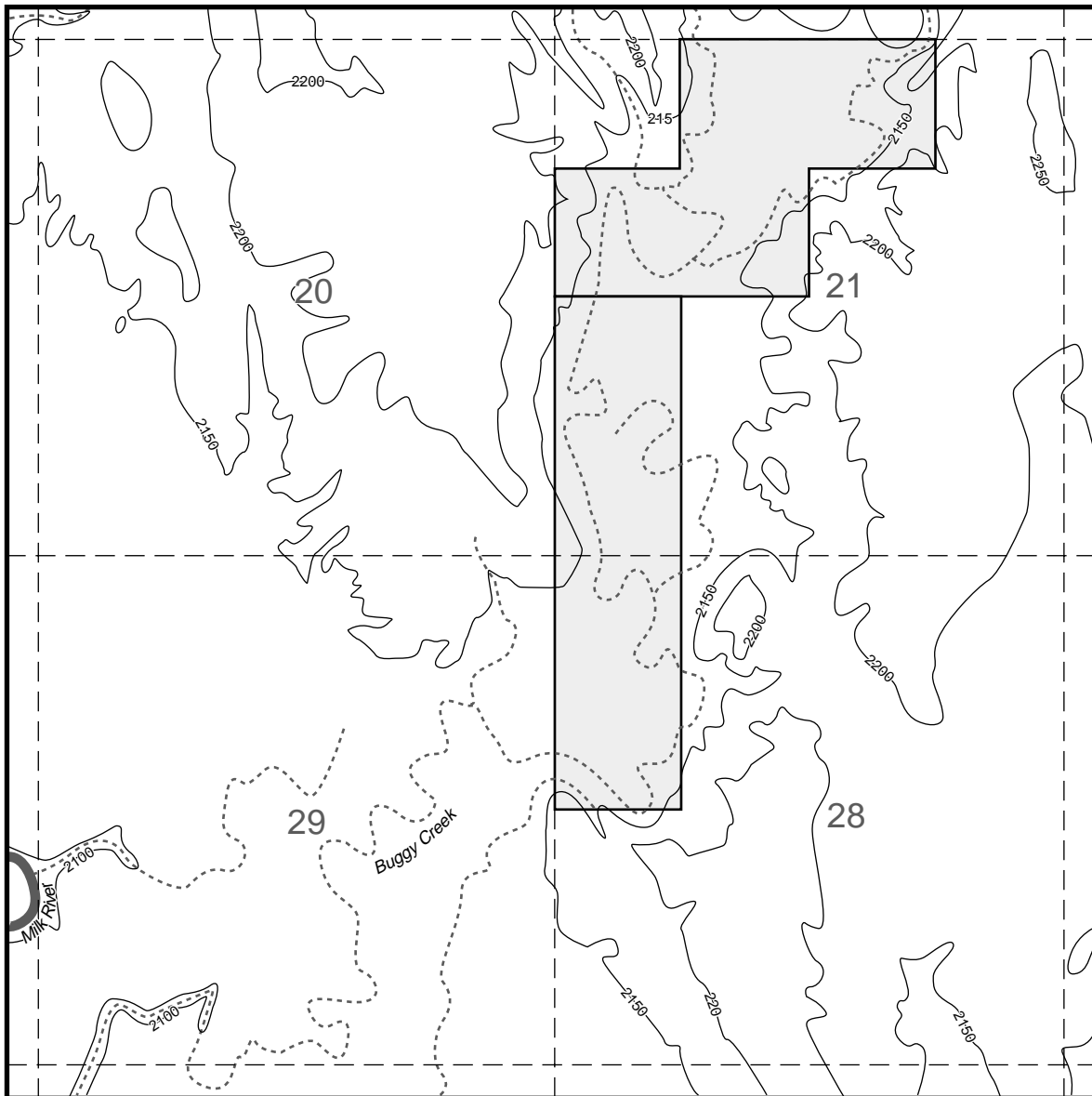
an important point for the present study—one could design a parcel that snaked along a narrow, curving stream or otherwise avoided an inefficient mixture of uplands and bottomlands that a simple square quarter section may have required. Obviously, even with the ability to design homesteads in modular forty-acre units, significant constraints remained. But this ability to strategically assemble adjacent forties into shapes other than squares allowed homesteaders to take a “first, if short, step to adjust a rational land system to geographical reality.”⁷⁹

Cross-referencing Figure 4b with topographic maps of the Glasgow area reveals exactly what one would expect—the non-rectangular parcels in this area were located primarily along streams and coulees. Most immediately striking are the homesteaders’ attempts to maximize their respective frontages along the Milk River; one can virtually make out the location of the escarpments above the river’s bottomlands in Figure 4b’s transition from irregularly-shaped parcels to rectangular ones. Slightly less apparent from the parcel shapes in Figure 4b, but still detectable, are the paths of some of the Milk River’s small tributaries. For example, one can identify the respective locations of Cherry Creek in the southwestern part of the area, the West Fork of Cherry Creek in the northeastern portion (note the large diagonal parcels between the two “school sections” of state land), and Buggy Creek in the northwestern part (note the long, narrow north-south parcels).

An example may help illustrate this point. Figure 5 shows the location of two early homestead entries along Buggy Creek, just across the Milk River from Tampico in the GN/GLO comparison area. Buggy Creek runs intermittently along a flat valley bottom approximately 750 yards wide, surrounded on each side by steep escarpments 50-100 feet high. Surveyors James and Rodney Page found very little settlement here when they visited in the Spring of 1891. Despite the fact that the Great Northern had constructed its mainline through the area four years earlier, the vast majority of homesteaders would not arrive for

⁷⁹ Johnson, “The Quarter Section,” pp. 338-39, 348.

Figure 5
Early Homestead Entries in GN/GLO Comparison Area
(Township 30 North, Range 38 East)



--- Township/Range Boundary

Scale: 1:24,000

Contour Interval = 50 feet

— Stream

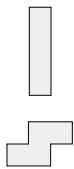


- - - - Intermittent Stream

Early Homestead Entries

(a) Joseph Glotfelty (24 August 1897)
 = W^2NW^4 of section 28 and W^2SW^4 of section 21

(b) John B. Stephens (02 June 1904)
 = $SW^4NW^4 + E^2NW^4 + NW^4NE^4$ of section 21



Source: U.S. General Land Office Tract Books
 Montana ("Headquarters" Set)

another twenty years. The only buildings the Pages noted on their survey plat of township 30 North, range 38 East were a small garden, a stable, and a cabin located near the creek on the boundary between sections 20 and 21.⁸⁰

In August 1897, Joseph Glotfelty filed an application for a 160-acre homestead along Buggy Creek. Since he was the first person to formally claim government land along the lower reaches of the creek—two other men had made similar entries three miles up the creek earlier that summer—Glotfelty was free to choose whatever land he wanted, as long as it consisted of adjacent “forties” oriented to the recently-drawn survey grid. Not surprisingly, he abandoned the simple, square quarter-section and instead selected a 440-yard-wide, mile-long rectangle of land that extended up the narrow valley bottom and included a minimum of steep escarpment. While this rectangular design greatly complicated the homestead’s legal description—western half of the southwest quarter of section 21, plus the western half of the northwest quarter of section 28—this design fitted the homestead to the physical landscape much better than a simple square would have done. As Figure 5 shows, the next homesteader along lower Buggy Creek, John Stephens in 1904, also abandoned the square and used an irregular collection of forties to fit his homestead within the valley bottom.⁸¹

Had the Great Northern been awarded a land grant such as the one given to the NP, the story of Glotfelty’s and Stephens’ respective land acquisitions would have been quite different. Section 21—being an odd-numbered section—would have been reserved for the railroad. Even if that pre-survey cabin and stable near the creek belonged to Glotfelty, thus giving him an apparently-valid preemption claim in section 21, the experience of the NP and other land grant railroads suggests that Glotfelty’s chances for getting the GLO to recognize his claim would have been very slim.⁸² Therefore, a checkerboard land grant in this area

⁸⁰ U.S. Department of the Interior, Geological Survey, “Tampico Quadrangle (Montana),” 7.5 minute series topographic map (1969). U.S. Department of Interior, General Land Office, Survey Plat, Township 30 North, Range 38 East of the Principal Meridian Montana (Helena, Mont., February 9, 1893).

⁸¹ GLO, Tract Books, Montana “headquarters” set.

⁸² As mentioned earlier, railroad land grants received heavy criticism in the nineteenth century for their alleged tendency to deny squatters preemption rights to the public domain. As the colonization historians have

probably would have forced Glotfelty to buy the section-21 portion of his property from the railroad or to accept instead a homestead which replaced his section-21 bottomlands with steeply-sloped uplands and escarpment (the northwest quarter of section 28 perhaps?). For Stephens the situation would have been even worse, as all of his homestead would have fallen within the railroad's domain.

Obviously, homesteaders within the boundaries of the NP land-grant area possessed this same capability to custom design parcels to match the physical landscape. Some of the parcels along O'Fallon Creek and the Powder River testify to that fact. The alternating checkerboard constrained homesteaders' options, however, because it severely limited their ability to design parcels which crossed section boundaries. Under the checkerboard design, even-numbered, square-mile sections of government land are surrounded on all four sides by odd-numbered sections belonging to the railroad. If a homesteader wanted to design a parcel which consisted of land in two adjacent sections, he/she would have had to buy land from the NP as well as enter upon government land. We have seen that, for whatever reason, such acquisition of land from both institutions was very uncommon, less common in fact than obtaining non-adjacent land from the same institution. The net result, shown by Figure 4a, was a land tenure landscape consisting largely of squares and rectangles with little apparent adjustment made to fit the local physical geography.

For capital-poor homesteaders, the obvious drawback of railroad land grants was the grants' effective removal of half of the public domain, i.e., elimination of half the supply of potential homesteads. The land grants' alternating-checkerboard design created further constraints, however, that have not been as obvious to contemporary and recent observers.

Unless willing and able to buy railroad land, the prospective settler's options for piecing

noted, much of this criticism is not supported by the actual experience. Land-grant infringement upon preemption rights, however, was not purely the mythical creation of Frank Norris and other polemical critics. Whether for reasons of convenience or corruption, evidence suggests that GLO officials greatly preferred to give designated odd-numbered sections to the railroad, thus avoiding the hassle of finding lieu lands. For examples of cases in eastern Montana in which apparently legitimate preemption claims were not recognized by the GLO, see Miles City Daily Star (January 12, 1912; September 14, 1912).

together an economically-efficient and ecologically-sensitive farm or ranch were sharply limited since the entire property had to be contained within a single, square-mile section. As the example of Joseph Glotfelty shows—as well as that of John Brown in southeast Minnesota⁸³—combining forties from different adjacent sections was often needed to fit one’s farm to the local topography. Examination of the four-township study area near Terry suggests that the landscape impacts of these checkerboard constraints may have been significant. In addition to apparently fragmenting some individuals’ properties, the alternating-checkerboard may have encouraged a strictly rectangular pattern of land division—a pattern which many environmental scientists have found to be at-risk for soil erosion and other types of degradation.

⁸³ Johnson, “The Quarter Section,” p. 337.

Chapter 4: Summary and Conclusions

By examining the Northern Pacific's land grant at a "microscopic" level, this study adds complexity to the earlier findings of railroad "colonization" historians. On the one hand, it does not significantly challenge and perhaps even confirms the historians' generalizations that land grant railroads—the NP at least—were not "soulless" land monopolies. When local conditions allowed, the NP genuinely favored actual settlers over speculators and sold land in what may be labeled a "settler-friendly" manner. Specifically, the NP offered the bulk of its land in the Terry study area at prices well within market range and in parcels suitable to individual farmers and ranchers.

As any local-scale study would likely provide, this study also turns up some notable exceptions to these favorable generalizations. In fact, local-scale analysis demonstrates that the NP was often guilty of many of the evils that critics have assigned to the land grant railroads. For example, NP land was often disposed of later, at a higher cost to settlers (obviously), and in larger parcels than nearby government land. Furthermore, this study examines a set of four townships located in the sutland of the northern Plains—an area targeted by the railroad for settler-friendly land policies. Had a similar study been made of townships located farther from the railroad and river, it is unlikely that the NP would have appeared so egalitarian in its land sales.

As a direct follow-up to the colonization histories, then, this study produces an ambiguous result. While finding elements in its local "ground truth" of railroad land sales that support the general conclusions of earlier studies, this study also uncovers some disconcerting exceptions. Thus, one's ultimate conclusions remain subjective and depend largely on the perspective from which one is coming. (Is the glass half-full or is it half-empty?) This ambiguity of local detail is simultaneously the microscopic method's greatest asset as well as its most disappointing drawback.

Local-scale analysis provides more than just serendipitous detail, however. It also provides the possibility for a new, geographic dimension of analysis. While the results of this study are very preliminary, this study uncovers some potentially disturbing implications of the alternating-checkerboard style of land grant. Designed to prevent regional land monopolies and to enhance the value of intervening government land, the alternating checkerboard appears to have had a number of ecologically- and economically-inefficient consequences. For example, the checkerboard apparently fragmented a number of individuals' properties; more people in the study area obtained non-adjacent land from the same institution than those who acquired adjacent land from both institutions. Perhaps even more disturbing is the alternating checkerboard's apparent enforcement of the much-maligned rectangular land survey. Because individuals were reluctant or unable to obtain land from both institutions, the checkerboard restricted land buyers' ability to custom fit their land acquisitions to the landscape. By limiting the number of parcels crossing section boundaries, the alternating checkerboard greatly constrained the "first step" of adjusting federal land policies to suit local conditions.

Bibliography

SOURCES

I. Collections

(a) Records of the Northern Pacific Railway Company Land Department

The voluminous archives of the Northern Pacific Railway Co. are located at the Research Center of the Minnesota Historical Society in St. Paul (345 Kellogg Blvd. West). Two sets of sources were used in this study. First, the bulk of the data on the NP's parcel-by-parcel sale of its land grant was taken from the "Land Sales Books" maintained by the Land Department. Organized chronologically for each state/territory, these account books contain for each transaction the name and address of the purchaser, a legal description of the parcel, and a schedule for and record of annual payments. Records for sales of NP land within Montana are contained in the 30 volumes of the Montana Division (accession numbers 138.C.14.2 through 138.C.15.8).

Problematic for the researcher using these records is the absence of "tract books" or "plats" that organize the land sales information geographically. Furthermore, most of the company land inventories included in these collections are aggregated by county or state. Thus, there are no parcel-by-parcel accountings of the NP's land holdings and sales. The one exception is a set of medium-scale maps produced by the company in October 1955 that show the NP's land holdings as of 01 October 1955 ("Northern Pacific Railway Company and Northwestern Improvement Company Land Ownership Maps", accession number 47.D.Oversize Drawer 2). By referring to this map, I discovered that 2,240 acres for which I did not find entries in the Land Sales Books apparently had been sold. These 2,240 acres are marked "unknown" on the maps produced for this thesis, and the sales of these lands are not included in any of the statistics presented in the text or tables.

The second set of sources from the records of the NP Land Department used for this study are the individual Land Contract files which contain applications, contracts, and correspondences for each sale. Contract files for sales of Montana land are contained in 291 boxes (accession numbers 135.J.19.10F through 136.B.9.7B)

(b) Records of the U.S. General Land Office

This study uses two sources from this collection, which is maintained by the National Archives and the Bureau of Land Management. Data concerning the parcel-by-parcel alienation of the public domain are taken from the D.C., or "headquarters", set of Tract Books. Organized geographically, these books list the method and date of alienation, as well as the name of the applicant. The second GLO source used is the original survey plat for each township. These survey maps are necessary to locate the irregularly-shaped lots located along the banks of major streams. Microform copies of both the tract books and the survey plats for Montana are available for purchase from the state office of the Bureau of Land Management in Billings (222 North 32nd Street).

II. Promotional Guides, Local Histories and Other Primary Sources

The Climate, Soil and Resources of the Yellowstone Valley , with Accurate Maps of the Yellowstone Country, the Transcontinental Route and Connections of the Northern Pacific Railroad and a Plat and Description of the Town of Glendive, at the Junction of this Railroad, with the Steamboat Navigation of the Yellowstone and Upper Missouri Rivers. St. Paul: Pioneer Press, 1882.

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