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Reflections on the Significance of Post Offices as Indicators of the Evolution of the Red River Valley Settlement Systems in Louisiana

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우편·체신업무체계에 근거한 루이지애나주 레드강유역의 취락발달 분석

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Abstract : The paper is concerned with the transformation of the antebellum settlement systems in the Red River Valley of Louisiana. Prior to the American Civil War, post offices served as nascent functional centers in the frontier region. Based on the assumption that the hierarchies of postal settlement is a function of the extent of information exchanged, the study traces the periodic changes in the contours of the structures of the Red River Valley postal settlement. The analysis builds on data drawing from the record of postal businesses. A general finding is twofold: 1) The postal settlement increased in both numbers and size over time, 2) The transformation of the postal settlement proceeded in tandem with the hierarchical fragmentation and periodic rearrangement of the structure. Combined together, these two processes led to the consolidation phase in the booming fifties. A driving force for the condensation was a booming cotton economy during the decade.

Key Words : information, post offices, settlement system, the Red River Valley

요약 : 본 연구는 남북전쟁 이전 미국 루이지애나주 레드강 유역의 취락발달과정을 다루었다. 당시 프런티어에 들어선 우체국은 초기 기능지역의 결절점을 형성하였는데, 본 연구는 우체국의 업무기록에 수록된 통계자료를 바탕으로 우체국취락의 발달과정을 계층구조의 변화에 중점을 두고 접근하였다. 연구는 취락계층이 정보유통량에 비례한다는 가설을 전제로 수행하였다. 자료를 분석한 결과 크게 두 가지 사실을 확인하였는데, 초창기 취락발달이 배후지역으로의 확장을 특징으로 한 반면, 시대를 내려오면서 취락내부에 계층적 분화가 심화되고 있음을 알 수 있었다. 구조변화의 주원인은 무엇보다 세계체제내에서 유럽과 미국 북동부 섬유산업의 원료로 이용되는 면화경제의 발달이었다.

주요어 : 레드강 유역, 우체국, 정보, 취락체계

1. Introduction

In his *magnum opus, The Information Age* (1996), Manuel Castells captures one of the most significant historical changes in our time, or the rise of the network society. Castells claims that a technological revolution centered on information is reshaping the material basis of societies. Indeed, a network-based social structure has become a powerful instrument for the suppression of space and the annihilation of time. The astonishing development of an information society has been, by all means, revolutionary.

A similar sea change occurred with far-reaching consequences more than a century ago on the American landscape. Increased literacy levels, the development of advanced printing technology, and widespread circulation of printed materials helped feed an information-consuming American public and fostered a nineteenth-century communication revolution. These revolutionary developments in information technology brought about a fundamental change in the American way of life and the structure of *mentalité*. In discussing the dialectics of technology, Gouldner(1982), for instance, has identified a profound interconnection between the communication revolution and the proliferation of ideologies.

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In most traditional societies, as social historians have elaborated, news was distributed through a variety of information nodes, such as markets, churches, schools, taverns, alehouses, coffeehouses, *salons*, and courthouses.[1] The information or *mis*information was transmitted by context-laden face-to-face conversations. The advent of print communication accelerated the rhythm of everyday life, transforming traditional place-bound societies into time- and information-bound ones. The rearrangement of public places as an arena for consuming mass-produced printed materials, the diversification of knowledge-dissemination medium, and the expansion of information field all did much to enlarge public sphere and to expedite civilizing process (Thrift, 1985; Gregory, 1987).

In politics, the increased density and frequency of information exchange facilitated the formation of a collective identity and a new sense of nationhood. The Louisiana Purchase in 1803 offers a case in point. The spread of the English language throughout this Francophone region constituted one of the most potent assertions of centralized power. In this fashion, "the effective penetration of the tentacles of government," to quote Brayshay and his colleagues(1998, 268), "was critically dependent upon access to rapid and reliable communications."

While the theoretical, conceptual and methodological improvements achieved by Walter Christaller have helped to explain the spatial principles regulating the functions, sizes, numbers, hierarchies, and spacing of settlements, and while Pred' s (1971, 1973, 1980) seminal inquiries into pre-electronic communication have disclosed the impact of specialized economic information on the growth of U.S. city systems, little has been done to incorporate institutional aspects in tracing the evolutionary path of a regional settlement system. Using U.S. post offices as a main subject matter, this study seeks to address what Hillis(1998) laments the "invisibility of communications in geography."

The objective of this study is to present a constructive way of interpreting antebellum settlement systems on the basis of business records of U.S. post offices. This essay begins with a brief overview of U.S. postal service history, then proceeds to the specifics of the post offices in the Red River Valley of Louisiana, and finally presents a geohistorical synopsis of the evolution of the antebellum postal settlement systems in the region.

2. The United States Postal Service: A Brief History

During the colonial period letters and news were transmitted haphazardly. Colonists entrusted mails and official messages to public officers, travelers, merchants, captains of private vessels, and other informal messengers. As were in the Virginia "tobacco posts" where each plantation owner carried out the duty of passing news on to the next plantation, official messages were circulated by neighborly arrangement(Blount, 1976). By the eve of the American Revolution, the British had used postal services as revenue-generating monopoly industries, with their functions ranging from the transmission of letters and printed materials to the transportation of travelers and baggage.

In the early stages of nation-building, information services were vital for U.S. government to manage frontier affairs, consolidate central power, and tie the country together. In other words, the development of postal system was inextricably linked to the progress of the nation(Bowen, 1851). Because of the need for a powerful institution to carry out such a critical national project, the postal service has, since 1782, been under control of the federal government.

In 1789, the U.S. Constitution ceded power to Congress to establish post offices and postal roads wherever it deemed conducive to the general interest and the development of the nation(*De*

Bow's Review 5, 1848). An act of 1792 gave a Postmaster-General the right to appoint regional postmasters. Steamboat alleys were declared postal routes by 1813, and the same occurred for railroads twenty-five years later. Prior to the introduction of these speedy modes of transportation, mails were transported by stages and horses(*Table of Post Offices*, 1817). An 1845 law extended contract system to be applicable not only to stagecoaches but also to steamboats and railroads. To ensure the celerity, certainty, and security, fines were imposed upon those who delayed mail delivery and damaged the mail. The postage stamp made its first appearance with the act of March 1847(*Statistical Abstract*, 1930).

Although it was not always profitable, U.S. postal service achieved a remarkable progress during the period 1790~1860. As Table 1 shows, the number of post offices per 10,000 persons increased constantly, from 0.19 in 1790 to 9.06 in 1860. Overland post roads extended by 238,719 miles during the same period, from 1,875 miles to 240,594 miles. This amounts to an annual increase of 3,410 miles. Railroads and steamboat lines added mileage, speeded up mail delivery, and enhanced regularity.

The development of U.S. postal services resulted in the adjustment of postage rates. The Act of 1792 set the rate at 6 cents for a single-page letter traveling up to 30 miles. Thereafter, this base rate increased as follows: from 30 to 60 miles, 8 cents; from 60 to 100 miles, 10 cents; from 100 to 150 miles, 12 cents; from 150 to 200 miles, 15 cents; from 200 to 250 miles, 17 cents; from 250 to 350 miles, 20 cents; from 350 to 450 miles, 22 cents; and more than 450 miles, 25 cents (Gullinan, 1968). By 1845 the American transportation revolution helped to dramatically compress this postage structure from nine classes to just two. Now, customer could send a single letter up to 300 miles for only 5 cents; more than 300 miles, 10 cents. Moreover, the costs for a 300 mile letter fell by 75% from 20 cents to 5 cents. An act of 1851 eased the burden of distance even further by imposing a charge of only 3 cents for the circulation of a single letter within the bound of 3,000 miles.

Table 1. Progress of the U.S. post offices, 1790-1860

Year	#,P.O.	P.O./10,000 person	Post Road (miles)	Railroad (miles)	Steamboat (miles)	Postages (revenue)	Transport Cost	Other Expenditure[a]	Net Revenue
1790	75	0.19	1,875			$ 37,934	$ 22,081	$ 10,058	$ 5,795
1795	453		13,207			160,629	75,359	42,533	42,737
1800	903	1.70	20,817			280,804	128,644	85,348	66,812
1805	1,558		31,076			421,373	239,635	137,730	44,008
1810	2,300	3.18	36,406			551,684	327,966	168,003	55,715
1815	3,000		43,966			1,043,065	487,779	260,342	294,944
1820	4,500	4.67	73,492			1,111,927	782,425	378,501	-48,999
1825	5,677		94,052			1,306,525	785,646	443,397	77,482
1830	8,450	6.57	115,176			1,919,300	1,272,156	686,953	-39,809
1835	10,770		112,774	1,098		3,152,376	1,553,222	1,031,886	567,268
1840	13,458	7.88	155,739	2,818		4,543,522	3,213,043	1,505,193	-174,714
1845	14,183		143,940	4,633		4,289,842	2,898,630	1,422,102	-30,890
1850	18,417	7.94	178,672	9,021	10,826	5,499,985	2,965,786	2,247,167	287,032
1855	24,410		227,908	18,333		6,642,136	5,345,238	4,623,104	-3,326,206
1860	28,498	9.06	240,594	27,129	14,976	8,518,067	8,808,710	10,361,900	-10,652,543

Note: [a]Other expenditure includes compensation to postmasters and incidental expenses; Mileage of railroads and steamboat lines refer to that used as postal routes.

Sources: General Post Office, *Table of Post Offices in the United States* (Washington City, 1811 and 1831); Eli Bowen, *The United States Post-Office Guide* (New York: D. Appleton & Co., 1851), 60; D.D.T. Leech, *The Post Office Department of the United States of America* (Washington, D.C.: Judd & Detweiler, 1879), 17, 78; Bureau of the Census, *Historical Statistics of the United States*: Colonial Times to 1970, Part 1 (Washington, D.C.: Government Printing Office, 1975), 8.

3. Post Offices in the Antebellum Red River Valley

The Red River Valley as a region has distinctive historical and geographical features. Founded as a French colonial district in 1714, the river basin initially constituted a geopolitical marchland between two competing European powers-France and Spain. Almost half a century later(1763) the French ceded sovereignty over the region to the Spanish colonial government. Even after the United States' Louisiana Purchase in 1803, this frontier region remained strategically important in its new role as a gateway to Spain' s Texas territory.

As in other parts of the antebellum Lower South, the Red River Valley relied on staple crops and a slave labor system for its economic viability. With its fertile soils and relatively benign climate, the region became the latest member of the Cotton Belt in the 1830s, and, following successful experiment with sugarcane in the mid-1840s, defined the northern limit of sugar country. The valley' s development was hindered by the so-called Great Raft, the huge logjams that blocked navigation on the Red River and governed the pace, rate and direction of the settlement process.[2] With the clearance of the logjams downriver from Shreveport in 1836, the valley opened a new chapter in its history. The removal of the raft liberated large acres of fertile land, attracted many English-speaking immigrants to this place, and set the stage for the Americanization of this Francophone enclave. The valley, established as the Natchitoches District under the French, grew to comprise eleven parishes on the eve of the American Civil War(Fig. 1).

The origin of post offices in the Red River Valley can be traced back to St. Jean Baptiste des Natchitoches which was established in 1717 as a French colonial fort.[3] Although not a post office by designation, the garrison town nonetheless performed de facto functions of the name.[4] It was only after the 1803 Louisiana Purchase that the Red River post offices became institutionalized agents of the U.S. information services. At the outset, special agents stationed at New Orleans took care of the arrangement of mail delivery for the newly purchased territory. Mail sorted there moved northwest by coach. In April 1841, steamboats began transporting mail as often as river conditions allowed.[5]

The steamboat mail packets delivered private letters, commercial correspondence, and political news at an accelerated speed. It was the steamer *Meteor*, for example, that brought Shreveport news of the 1848 revolution in France and the consequent decline in the price of cotton.[6] Around this time, national news was transmitted from Washington through Richmond and Mobil to New Orleans on 1,726 miles of telegraphic line(*DeBow's Review 8*, 1850). The news thus collected was distributed throughout the region via steamers and coaches, and the decreasing time gap in information exchange brought fundamental changes in the behavior and attitude of the Red River people. The news of moderate demand in the Liverpool cotton market, for example, led planters and merchants to hold the cotton stocks for the future, instead of selling them at low prices as they usually did before.[7]

In order to enhance the efficiency of the mail delivery process, a regional distributing office was established at Natchitoches in the mid-1840s. The distribution center was relocated to Grand Ecore in 1851, and then finally to Alexandria in 1855. These regional communication centers handled mails for both eastern Texas and the Red River Valley(Dorr, [1860] 1938). Postmasters in these distributing centers sorted letters, newspapers, and magazines by route, and entrusted the delivery of the mail to local contractors(Bowen, 1851).[8] Mail contractors, in addition to delivering letters and newspapers, carried passengers and freight between places designated by Congress for a transportation fee

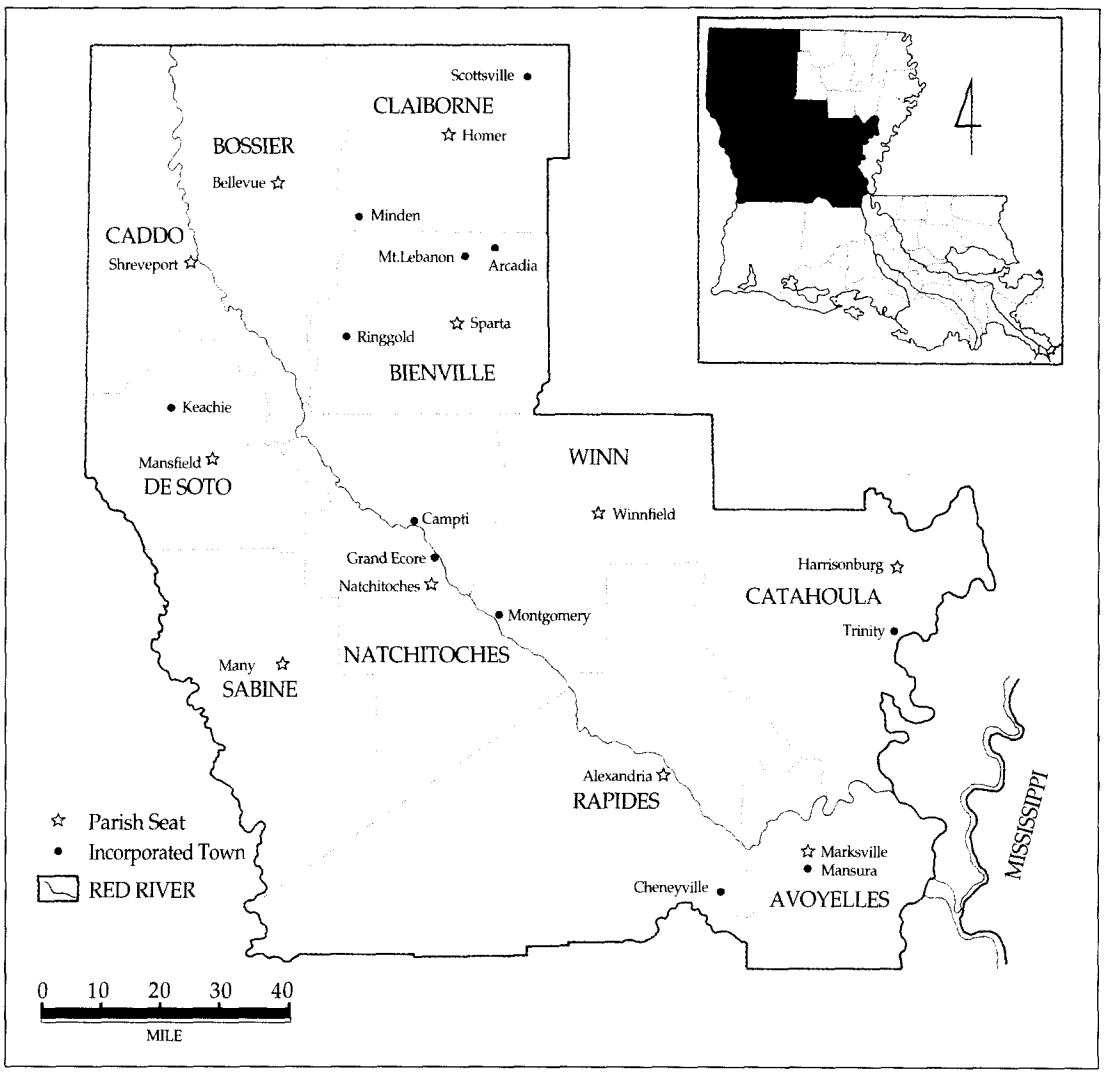

Figure 1. Red River Valley of Louisiana

Parishes noted on the map are those established as of 1860.

based on road conditions and the weight and volume of the freight. The mail contract was a franchise that could be sold or bought out.

Generally speaking, post offices in the Red River Valley opened everyday from 9 a.m. to 1 p.m. and from 2 to 5 p.m. On Sundays, the hours of operation lasted from 9 to 10 a.m. and from 2 to 3 p.m.[9] Some in the backcountry offered services tri-weekly, while those located in towns did so for 6 or 7 days a week. The latter handled mail arriving at and departing from the office every two, three or four days for the various directions. For instance, the mailing schedule for the Mt. Lebanon office in Bienville Parish was set in the following manner:

> *Southern*, via Alexandria(arrives Tuesday and Saturday at 6 p.m.; departs Monday and Thursday at 6 a.m.), *Northern*, via Homer(arrives Wednesday and Sunday 6 p.m.; departs Wednesday and Sunday at 6 a.m.), *Western*, via Shreveport and Minden(arrives Wednesday, Friday and Saturday

Table 2. Post Offices of the Antebellum Red River Valley, Louisiana (1805-1861)

Year	Natch 1805[a]	Rapid 1805	Avoy 1807	Catah 1808	Claib 1828	Cadd 1838	DeSo 1843	Sabin 1843	Boss 1843	Bien 1848	Winn 1852	RRV	PO/ 10000[b]
1805	1	1		1								3	
1808	1	1		1								3	
1811	1	1		1								3	0.04
1816	1	1	1	1								4	
1817	2	2	1	1								6	
1819	2	1	1	1								5	
1821	2	4	1	1								8	0.44
1822	2	4	1	1								8	
1823	3	4	1									8	
1825	2	4	1	1								8	
1827	2	3	1	1	1							8	
1828	3	3	1	1	1							9	
1829	5	3	1	1	1							11	
1831	6	3	1	1	2							13	0.56
1833	5	3	1	2	2							13	
1835	5	3	1	2	2							13	
1836	4	2	1	2	2							11	
1837	5	4	4	3	2							18	
1839	5	4	6	1	4							20	
1841	8	5	6	3	7	3						32	0.62
1842	8	5	7	2	9	4						35	
1843	9	6	6	4	9	5	1	1				41	
1845	8	4	7	6	8	5	3	2				43	
1846	6	4	7	4	7	5	4	2	1			40	
1847	6	6	7	4	8	5	4	3	4			47	
1849	6	7	10	7	6	5	5	4	3	5		58	
1851	9	9	7	7	10	5	7	5	7	8		74	0.83
1853	6	8	9	6	12	4	10	7	9	8	3	82	
1854	4	8	8	10	14	4	9	6	9	9	6	87	
1855	7	9	7	10	13	5	9	7	7	10	7	91	
1857	6	11	7	9	15	8	10	7	10	10	9	102	
1859	7	12	7	11	19	10	10	10	12	12	10	120	
1861	8	13	7	13	19	11	12	12	10	12	11	128	0.89
±[c]	7	12	6	12	18	8	11	11	9	7	8	125	0.49

Notes: RRV Red River Valley; [a]the year of the establishment of a parish, [b]post offices per 10,000 persons, [c]net increase of post offices; For the calculation of the number of post offices per 10,000 persons, population data are drawn from decennial censuses which enumerate the number of people as of June 1 in each decennial year.

Sources: *List of Post Offices in the United States* (1805, 1808, 1855, 1857, 1859); *Table of Post Offices in the United States* (1811, 1817, 1819, 1825, 1836, 1837, 1842, 1846, 1851); *Register of Officers and Agents, in the Service of the United States* (1816, 1821, 1822, 1823, 1827, 1828, 1829, 1831, 1833, 1835, 1839, 1841, 1843, 1845, 1847, 1849, 1861); *Rode's U.S. Post Office Directory and Postal Guide* (1853); *The U.S. Post Office Directory and Postal Guide* (1854).

at 1 a.m.; departs Tuesday, Thursday and Saturday at 11 p.m.), *Eastern*, via Monroe(arrives Tuesday, Thursday and Saturday at 11 p.m.; departs Wednesday, Friday and Sunday at 1 a.m.). H. Gibbs, p.m. August 9, 1855 (*Louisiana Baptist*, Mount Lebanon, February 21, 1856).

To the extent that a communication system connects important centers of social, economic and

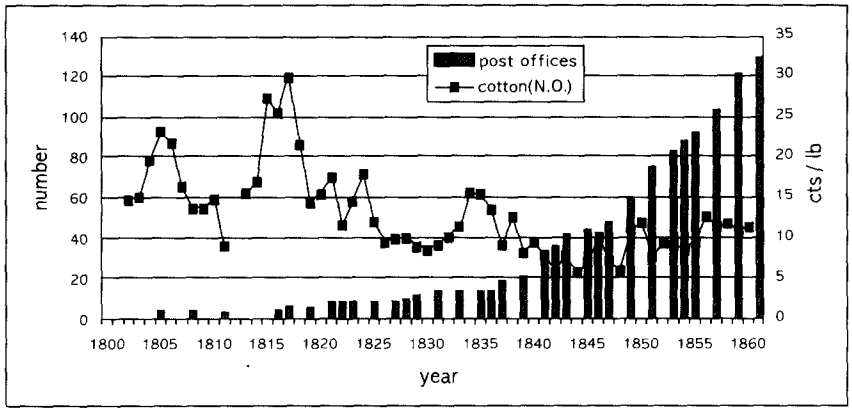

Figure 2. Weighted yearly average prices of short-staple cotton at New Orleans and the growth of Red River Valley post offices

Source: Bruchey, S., 1967, 29-30.

administrative activities(Falk and Abler, 1985), so the rapid expansion of post offices in this valley represented the multiplication of central places over space and time. Table 2 shows the general trend in the expansion of Red River Valley post offices between 1805 and 1861. In that span, the number of offices in the region increased from 3 to 128 or by about 4166%. The increase came as a direct response to the growth of population, the spread of settlement along the frontier, the expansion of cotton and sugar production, the growing conflict over Texas, and the spoils system of political patronage associated with Jacksonian democracy. The Red River Valley post offices exceeded 30 in 1841, 40 in 1843, 70 in 1851, and 100 in 1857. Besides this numerical increase, quality of postal services as measured by the number of post offices per 10,000 people also attained a steady improvement, from 4.0 in 1811 to 8.9 in 1861.

The fortunes of the Red River Valley post offices displayed either instantaneous or lagged association with the movement of cotton prices that modulated the pace of the settlement process in this region. Figure 2 shows that the price of cotton tended to fall from its peak after Napoleon's defeat in 1815 to the 1840s, and then recovered somewhat in the 1850s. In the first two decades of the 1800s, settlers in the Red River Valley were engrossed in experimenting with cotton in response to very high prices. But settlers were sparse and the expansion of post offices proceeded slowly. At the end of the 1820s only eleven post offices were in operation.

The most dramatic developments in the region's staple economy, settlements, and post offices occurred in the 1830s. First, the Red River Valley underwent a dramatic transformation from a diversified regional economy to a large-scale and specialized producer of staple crops. Second, the removal of logjams on the river opened a vast amount of land for the cultivation of crops and new stretches of the river for navigation(Humphreys 1984). Additionally, slow but steady urbanization including the establishment of the Town of Shreve's Company(later Shreveport) created booming labor markets for immigrants as well as natives.[10] As a result, population in the Red River Valley exploded in the 1830s by an unprecedented 120% from 23,251 to 51,314, and the number of post offices increased by 146% from 13 in 1831 to 32 in 1841.[11]

Toward the end of the boom of the 1830s, however, the Red River Valley had to brace for the inevitable downturn ahead. As the demand and price of raw cotton fell in the Northwest European

core of capitalist world system, the impacts rippled through daily life in the cotton fields and along the levees of the Red River. In the depressed cotton economy of the 1840s, planters, farmers, field labors, slaves, and merchants suffered all at once. To make matters worse, regional cotton production decreased because of natural disasters such as drought, flooding, killing frost, and worms that ate their way through a large part of the crop (Champomier, 1844-1861; Mills, 1977). Fortunately, the successful experiment with sugarcane in Avoyelles and Rapides parishes in the mid-1840s helped to cushion the economic shock.

Thanks to the introduction of an alternative cash crop(sugar), continued population growth and Jacksonian patronage, post offices increased from 32 in 1841 to 74 in 1851 by unexpected 131% in the 1840s. As a matter of fact, it was in this decade that the most significant improvement occurred in terms of the number of post offices per 10,000 people. Compared to the booming 1830s that registered 146% of increase in absolute number of post offices but only 10.7% in per 10,000 ratio on account of a phenomenal increase of population (120%), the 1840s experienced 33.9% of enhancement in per 10,000 ratio.[12]

The slower pace of expansion during the economic recovery of the 1850s suggests that the spatial organization of the information fields in the Red River Valley had entered a consolidation phase. In this decade, increase rates of population (62.7%) and number of post offices(73%) hit the lowest record throughout the late antebellum period. The downhill trend becomes more prominent when it comes to the number of post offices per 10,000 inhabitants. It registered a modest increase of 7.2%.

A close observation of the lists of post offices highlights several geographical patterns. First, the earliest post offices in each parish tended to be located at parish seats and to persist. This political and legal centrality virtually guaranteed the continuity and growth of postal towns such as Marksville, Harrisonburg, Alexandria, Natchitoches, Many, Mansfield, Shreveport, Bellevue, and Winnfield. Other post offices, however, exhibit a high degree of fluidity. Numerous post offices on the federal lists were established, terminated, reinstalled, relocated, and renamed. To a large extent, the viability of local post offices was a function of the fortune of the communities that they served.

Transshipment points, inland crossroads, and other stopping places along the overland roads and waterways provided ideal location for post offices. Names of post offices provide clues to the location: Pleasant Hill, Simm' s Port, Logansport, Burr' s Ferry, Kirk' s Ferry, Parham' s Landing, Bossier Point, Harf' s Bluff, Connell' s Cross Roads, and Long Street, to name a few. Country stores also provided postal services as evidenced by such post office names as Davis' Store, Cook' s Store, Red Store, and Sentell' s Store. The shopkeeper-postmasters had locked mailboxes, containing pigeonholes which carried the names of patrons. These stores, besides managing the exchange of local products and dry goods, served as information and communication centers. Red Store of Rapides Parish is a good example. This store located at a crossroad housed a tavern and a post office. It functioned as a social center where news was dispensed, goods bought and sold, money loaned and repaid, and horses refreshed(Barber 1967).

Postal routes proved as vital for the information system as post offices(Fig. 3). These routes consisted of public and special roads, steamboat lines, railroads, and navigable canals(Bowen, 1851). Typically, high-order centers of political, administrative, and economic functions were central nodes within this pre-electronic information network. Prior to the diffusion of the magnetic telegraph, communication was a subset of transportation; hence a place' s connectivity and

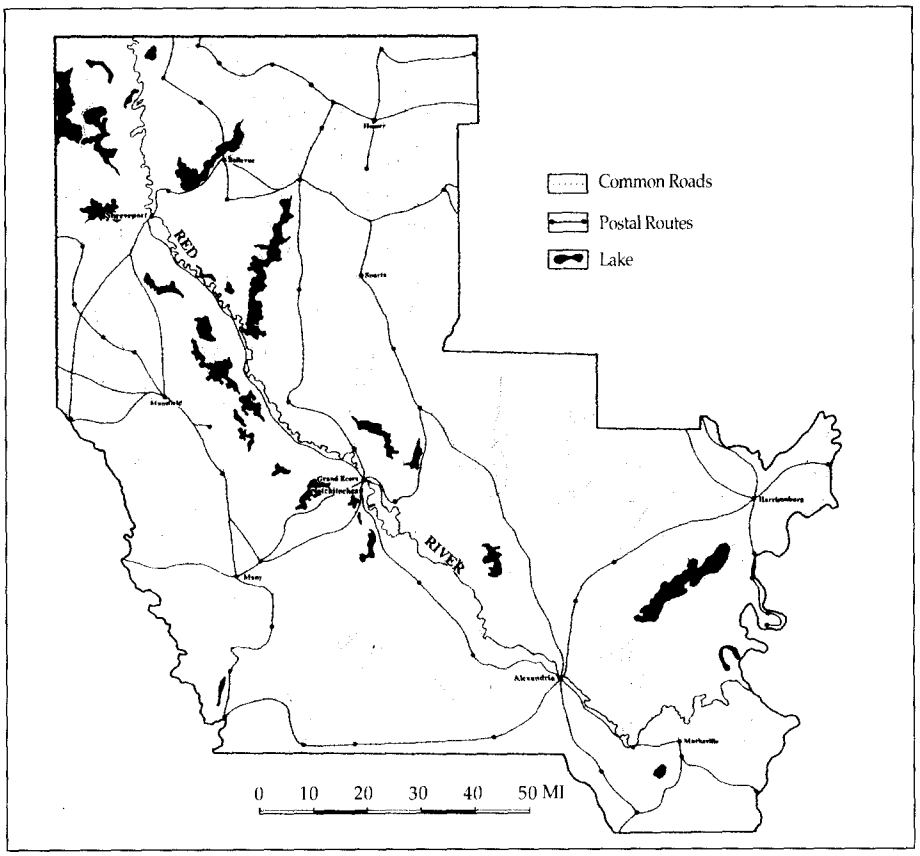

Figure 3. Postal Routes of the Red River Valley, 1850

accessibility within a transportation network were fundamental determinants of the place' s centrality in the information web. Post offices at the administrative, legal, and commercial centers usually served as nodes of incoming and outgoing transportation lines(Table 3).

The Red River was, without doubt, artery of the region' s postal routes. Post offices in towns along the Red River drew many overland branch lines, too. In 1850, Alexandria had seven route links entering into the city; Shreveport had five, and Natchitoches-Grand Ecore had seven. Away from the river, Harrisonburg had five links, and Homer, Mansfield, Many, and Bellevue, four.

4. Post Offices as Indicators of the Evolution of Settlement Systems: Evidence and Interpretations

A system is a nonrandom accumulation of interdependent units. The relationships among subsystems are simultaneously spatio-temporal and causal(Miller, 1965a). Implicit in this definition is the assumption that the system is a whole greater than the sum of its parts. As such, systems analysis provides an integrated framework for the analysis of geographical change(Langton, 1972). An open-systemic model rather than a closed one directs particular attention to spatial organization, as it places emphasis on continual energy inputs and hierarchical differentiation of the developmental

Table 3. Qualitative Features of the Red River Valley Post Offices, 1851

Post Offices	Parish	#,p-road[a]	t-p.o.[b]	c.h.,p.o.[c]	m-service/ week	x-statep.o.[d]	Pop.Wm[e]	Rank[f]
Natchitoches	Natch	3	x	x	2	x	1261	1
Alexandria	Rapid	3	x	x	9	x	672	2
Shreveport	Cadd	7	x	x	8	x	1728	3
Minden	Claib	7	x	x	7	x	533	4
Mansfield	DeSo	8	x	x	9	x		5
Greenwood	Cadd	5	x		5	x		6
Cheneyville	Rapid	1						7
Harrisonburg	Catah	6	x	x	10	x	326	8
Trinity	Catah	2	x		1		500	9
Mt.Lebanon	Claib	2	x		1		360	10
Holmesville	Avoy	2	x		1			11
Cloutiersville	Natch	1						12
Many	Sabin	4	x	x	2			13
Cotile	Rapid	1						14
Pineville	Boss	1						15
Blossom Hill	Cadd	1						16
Athens	Claib	3	x	x	2	x		17
Pleasant Hill	DeSo	1						18
Keachie	DeSo	2	x		1			19
Fort Jesup	Sabin	2	x		3			20
Campti	Natch	1						21
Huddleston	Rapid	1						22
Bellevue	Boss	3	x	x	2			23
Quay	Claib	2	x		1			24
Marksville	Avoy	2	x	x	1			25
Logansport	DeSo	2	x		1			26
Bayou Rouge	Avoy	1						27
Simm's Port	Avoy	1						28
Grand Cane	DeSo	1						29
Allen's Sett.	Claib	1						30

Notes: [a]number of postal roads passing through the office, [b]terminal post office which located at the start or end of a postal road, [c]post office at the parish seat, [d]cross-state post office which linked Louisiana to other adjacent states, i.e., Mississippi, Texas or Arkansas, [e]the White male population, [f]ranked by the amount of postmasters' annual commissions in the year 1849 (for actual values, see Table 4).

Sources: Eli Bowen, *The United States Post-Office Guide* (New York: D. Appleton & Co., 1851; reprint, New York: Arno Press, 1976); *Register of Officers and Agents* (1849).

path(Chorley, 1964). A self-organizing open system increases order by decreasing entropy, and the process of enhancing spatial order is evolutionary in character(Curry, 1964). Whatever the scale of units of analysis, theory gains power as it moves toward the systemic perspective, because, according to Hagen(1961), "a systems approach is geared to secure empirical relevancy and analytical power."

In applying a systemic approach to the study of settlement, the first logical step is to define mutually interacting, functionally related variables, which should be in measurable or definable states (Hagen, 1961). This study uses postmasters' commissions as an indicator of the volume of information flows to trace the transformation of

postal settlement systems.[13] Postmasters were compensated by commissions on the postage collected(*Register of Officers and Agents*, 1816). In 1850, for instance, they were entitled to the following rates: 40% on the first $100, 33$^{1/3}$% on the next $300, 30% on the next $2000, and 12$^{1/2}$% on the postage exceeding $2400.[14] For the postage of newspapers and magazines, a 50-percent commission was allowed(Bowen, 1851). The net compensation after deducting the expenses, however, could in no case exceed $2000 per annum, or $500 per quarter(*Register of Officers and Agents*, 1822).

Data on commissions are available for eleven separate years. After grouping the post offices by parish, I summed the amount of commissions and generated a diagram which allows intra-regional and temporal comparisons of the share of information services among parishes(Fig. 4). The diagram demonstrates that Rapides and Natchitoches parishes together account for more than 75% of the mail-delivery services through 1839. Their dominant position, however, weakened over time as new parishes were created. Six years later(1845) and through 1861, no parish accounted for more than 20% of compensation to postmasters. All this reflects parish creations noticeably in 1840s. Not even the rise of Shreveport, with its key role in cotton exports and its sphere of influence reaching far beyond the state border into northeast Texas, had much of an impact on the distribution of postmasters' commissions.

The basic theorem of rank-size rule is that a regional settlement system, when ordered according to the size of individual subsystem, has a characteristic distribution which reflects the social and economic entropy of the system(Dziewonski, 1972). To put this theorem to the test, graphs are constructed on a log-log chart that shows the rank-size distribution of postmasters' commissions. Out of the eleven curves thus created, we present five-those pertaining to the years of 1816, 1827, 1839, 1849 and 1861-for purposes of making 10-year comparisons(Table 4 and Fig. 5). Note that the rank-size curves move upward to the right in accompaniment with the transition of the y-intercept. The slopes of the curves flatten over time, which implies that the pace and pattern of these changes were largely governed by middle and small-sized post offices as mediated by the three

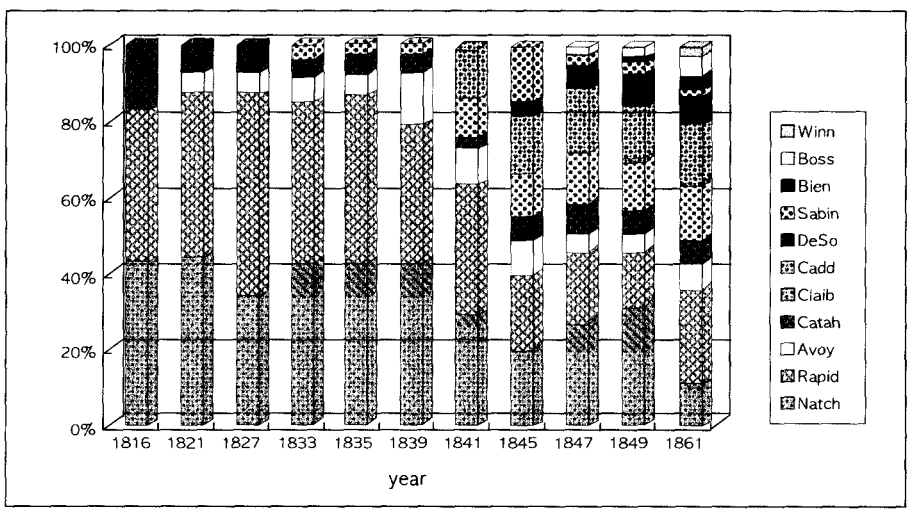

Figure 4. Share of Postal Services Reflected on Postmasters' Commissions

Source: *Register of Officers and Agents in the Service of the United States*, 1816-1961

Table 4. List of Postmasters' Commissions(1816-1861)

Rk	1861		1849		1839		1827		1816	
1	Alexandria	$ 1500.00	Natchitoches	$ 1174.61	Natchitoches	$ 653.64	Alexandria	$ 384.34	Natchitoches	$ 129.96
2	Shreveport	1090.62	Alexandria	459.70	Alexandria	596.32	Natchitoches	252.35	Alexandria	116.66
3	Natchitoches	599.27	Shreveport	385.55	Fort Jesup	214.52	Harrisonburgh	58.71	Catahoula	49.48
4	Homer	317.65	Minden	298.39	Cheneyville	169.52	Cheneyville	51.69	Avoyelles*	
5	Minden	297.28	Mansfield	199.23	Marksville	134.68	Marksville	35.52		
6	Mansfield	251.00	Greenwood	198.39	Harrisonburg	76.80	Cloutiersville	12.91		
7	Harrisonburg	228.59	Cheneyville	127.07	Holmesville	51.60	Allen's Sett	11.47		
8	Trinity	171.84	Harrisonburg	120.16	Overton	49.52	Cotile	7.72		
9	Marksville	168.55	Trinity	115.65	Cloutiersville	46.20				
10	Mt. Lebanon	141.09	Mt. Lebanon	90.02	Borodino	44.00				
11	Evergreen	118.77	Holmesville	67.74	Cotile	40.04				
12	Coushatta Ch.	108.64	Cloutiersville	60.69	Campti	35.36				
13	Keachie	107.31	Many	55.91	Russellville	31.20				
14	Cheneyville	99.76	Cotile	53.64	Plaisance	21.84				
15	Winnfield	91.53	Pineville	52.74	Mt.Lebanon	21.80				
16	Collinsburg	89.89	Blossom Hill	51.97	Bayou Rouge	21.08				
17	Cotile	88.74	Athens	44.58	Negreet	19.40				
18	Ringgold	82.75	Pleasant Hill	44.01	Allen's Sett.	18.84				
19	Arcadia	81.24	Keachie	43.25	Bordeaux	17.08				
20	Greenwood	76.81	Fort Jesup	40.66	B.Rouge Pierre	15.08				
21	Bellevue	76.30	Campti	39.24	Bushly Creek	5.96				
22	Campti	67.77	Huddleston	37.68						
23	Lecompte	66.40	Bellevue	37.34						
24	Morauville	60.49	Quay	37.07						
25	Cloutiersville	59.73	Marksville	35.25						
26	Simmsport	59.42	Logansport	33.25						
27	Sparta	57.08	Bayou Rouge	27.35						
28	Sicily Island	54.91	Simm's Port	26.27						
29	Sentell's Store	52.79	Grand Cane	25.56						
30	Holmesville	50.85	Allen's Sett.	25.26						
31	Haynesville	47.68	Willow Chute	24.34						
32	Pleasant Hill	47.13	Burr's Ferry	22.69						
33	Plainville	45.88	Flat Lick	21.12						
34	Athens	44.55	Coushatta Chute	20.32						
35	Big Bend	43.76	Parham's Land.	19.54						
36	Mansura	41.37	Red Land	18.54						
37	Wh.S. Springs	37.75	Negreet	18.06						
38	Spring Ridge	36.50	Big Bend	17.64						
39	Lisbon	36.41	Black Lake	16.91						
40	Roky Mount	35.44	Saline	13.58						
41	Scottsville	32.33	Grand Ecore	13.05						
42	Lamothe	31.66	Cooksville	11.69						
43	Kingston	31.57	Hinestone	11.59						
44	Bethany	29.89	Walnut Creek	11.22						
45	Gordon	27.10	Hap Hazard	10.59						
46	Cotton Valley	26.56	Wh.Sulp.Springs	9.31						
47	Forest Grove	26.18	Mansura	9.05						
48	Wheeling	23.75	Big Creek	7.17						
49	Logansport	23.64	Bushley Creek	6.26						
50	Huddleston	23.57	Ringgold	5.73						
Ex[b]	78 Other P.O.s	801.66	8 Other P.O.s	27.25						
σ	176.39		171.70		183.20		139.47		43.14	

Notes: *Since the post office of Avoyelles had not been established a year, no accounts was rendered, [b]number of unlisted post offices and the sum of their commissions. Rk: rank, σ: standard deviation.

Source: *Register of Officers and Agents in the Service of the United States*, (1816-1861).

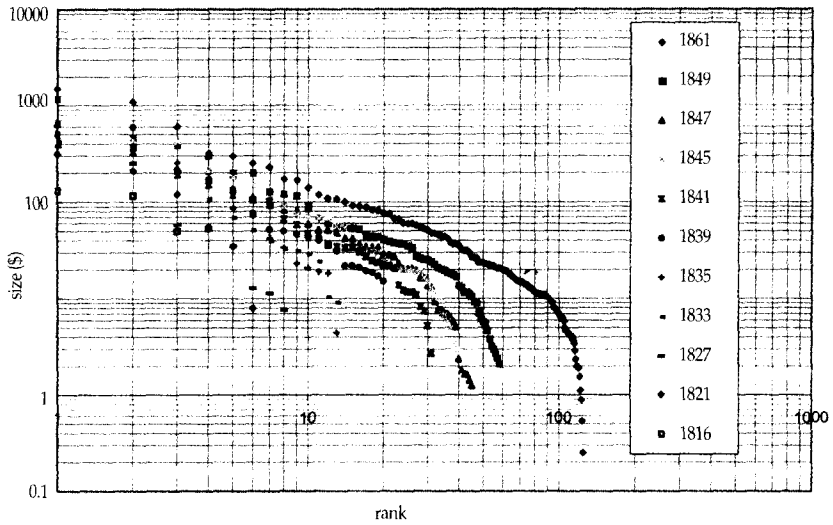

Figure 5. Rank-Size Distribution of Postmasters' Commissions, 1816-1861

Source: *Register of Officers and Agents in the Service of the United States*, 1816-1861

high-ranking regional information centers of Natchitoches, Alexandria, and Shreveport.

These trends indicate that the settlement system as represented by post office commissions(mail-flow volume) was growing in size and density and was becoming more diversified with the addition of new strata in the hierarchies. Standard deviations (σ) of the commission generally increase toward the end of the antebellum era: 1816(43.1), 1827(139.5), 1839(183.2), 1849(171.7), and 1861(176.4). This suggests that postal settlements in earlier period were more similar in size and function, whereas those coming later had more variable class intervals. Indeed, six hierarchies are identified on the 1839 log-log curve-the year that has the largest value of standard deviation.

These graphical representations of the region' s expanding settlement system are projected onto a series of maps in order to reveal the historical-geographical trends(Fig. 6). Each post office is ordered hierarchically based on the size of commissions. As the maps illustrate, post offices were confined to the Red River Corridor in the early stage of settlement(1816). The riverine post offices at Natchitoches, Grand Ecore, and Alexandria played, in sequence, the role of the distributing offices in the region and formed the hearth of the communications system from which branch offices would later spread out.

By 1827, Alexandria had displaced Natchitoches from the top of the postal hierarchy and the system added five new post offices- all southeast of Natchitoches. The expansion of the system proceeded apace in the 1830s, as post offices increased from 8 in 1827 to 20 in 1839. Moreover, Natchitoches won back the lead from Alexandria-a lead it held for the next decade.

In the 1830s and 1840s, the valley' s postal system gradually expanded away from the river and into the interior rural areas, partitioning the region into a hierarchy of postal nodal points and their information fields. Our survey suggests that the number of post offices increased rapidly during the 1840s(from 20 in 1839 to 58 in 1849) and most of the newly opened offices were lower-order centers. Concurrently, some post offices established earlier had been discarded or failed to appear on later lists. Post office mortality was modest in the 1840s,

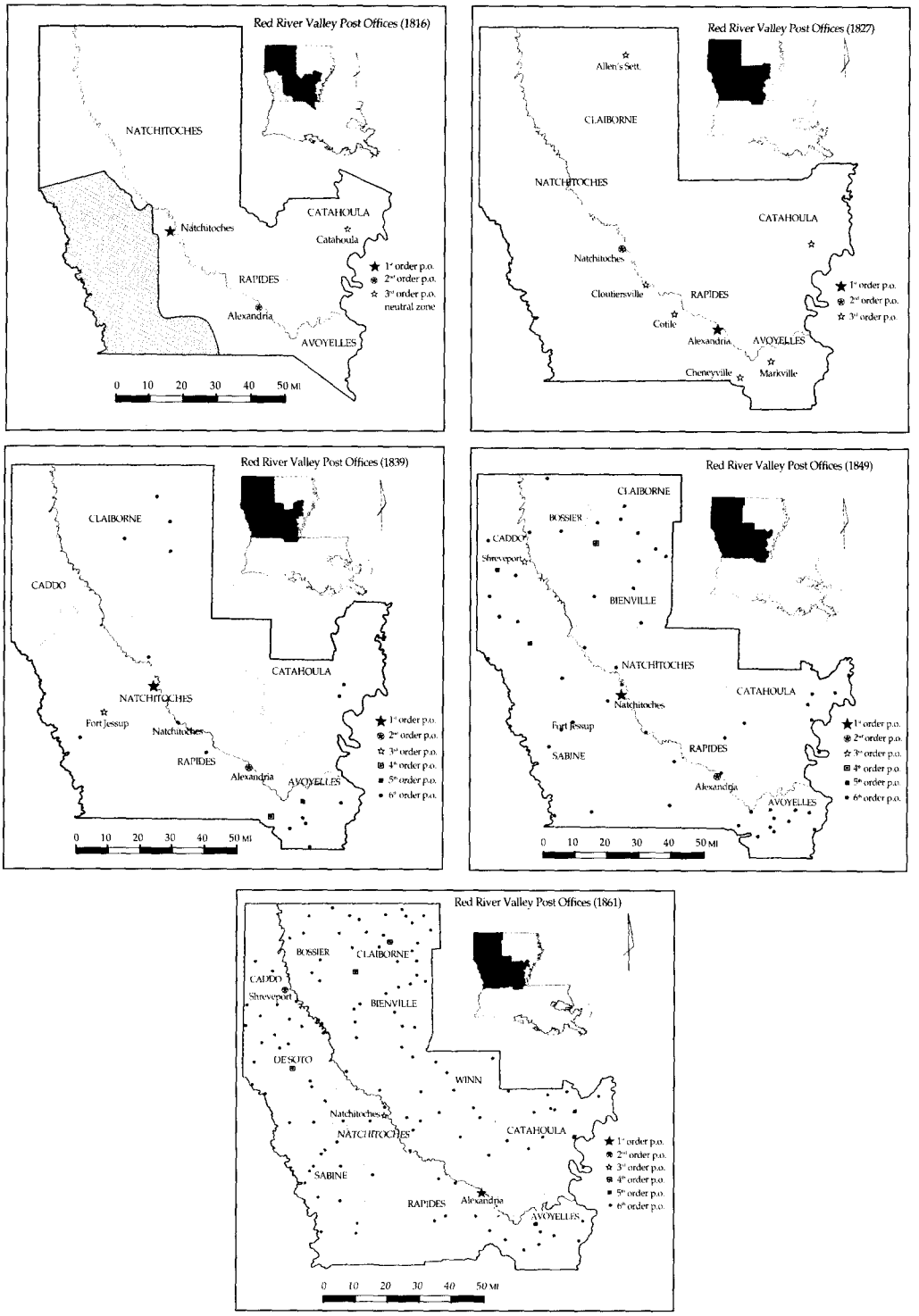

Figure 6. Spatial Organization of Information Fields in the Red River Valley, 1816-1861

Table 5. Hierarchical Shifts of the Red River Valley Post Offices

H[a]	1816-1827					1827-1839					1839-1849					1849-1861				
	R	S	F	Ds	E	R	S	F	Ds	E	R	S	F	Ds	E	R	S	F	Ds	E
1st			1					1				1						1		
2nd	1					1						1				1				
3rd		2			4			6		1			1		1	1				
4th													1		1		1			1
5th													1		2		1	1		
6th										12		12		4	37	3	38		13	82

Notes: [a]hierarchy, R rise from, S stable, F fall from, Ds discarded, E newly established.
Source: *Register of Officers and Agents in the Service of the United States*, 1816-1861

however. Of 20 post offices established as of 1839, only 4 were disestablished by 1849; at the same time, 37 post offices were established-a net gain of 33. Mortality rose sharply in the 1850s. Of 58 post offices in 1849, 13 had been disestablished by 1861; concurrently, 82 new post offices were born-a net gain of 69(Table 5).

In the meanwhile, post offices moved up and down on the hierarchical ladder and at variable rates; some rising faster than the average, others remaining static, and still others actually declining. Volatility characterized the 1830s. In that decade, only one post office(Natchitoches) moved upward, while seven others including the first-ranking Alexandria fell to lower status. This volatile regime was replaced by consolidation regime during the next two decades. In the 1840s, for example, 14 (24.1%) out of 58 post offices retained their hierarchical status and 40 of 128 (31.3%) were stable in the 1850s. Some prominent ones climbed the ladder.

Generally speaking, and consistent with Jacksonian democratic principles, post offices were distributed in an egalitarian manner, i.e., new post offices were equally distributed in the valley. None of the valley' s eleven parishes in 1861 has fewer than 7 post offices or more than 19, and eight of the parishes had between 10 and 13. Areas to the north and east of the river reported 71 post offices while areas south and west reported 57. Note, however, that the three largest post offices in the region as of 1861(Alexandria, Shreveport, and Natchitoches) were all located on the south side (right bank) of the Red River. As it turns out, this distribution pattern embodies a Skinnerian scheme of lowland core and upland periphery.[15] Most high-ranking post offices concentrate on the Red River Corridor, while sixth-ranking small ones packed outskirts(Fig. 1 and 6). Exceptionally, three fourth-ranking post offices (Mansfield in De Soto Parish and Minden and Homer in Claiborne Parish) were located at inland nodal points. Traditionally, these post offices played the role of what Skinner terms outer core, linking Northwestern Louisiana to Texas and Arkansas.

5. Conclusions

Historical geography uses historical data to reconstruct the geographies of past societies. As Jakle (1971) predicts, historical geographers are "no longer content to study spatial relationship in its static sense but are focusing increasingly on spatial change through time." During the last few decades, efforts have been made to incorporate hypotheses, models, and other analytical tools. These methodological developments have helped to secure a place for historical geography within the interdisciplinary inquiries known as social science history.

I have tried to provide systemic and evolutionary perspectives on the spatial development of pre-electronic communication systems. Study traces the

evolutionary path of settlement systems in the regional context of antebellum Red River Valley using post offices-what Meinig(1993) has characterizes as "the base level of a nascent hierarchy of central places"-and postmasters' commissions as proxy for the volume of information flows.

It has been argued that an input or output of energy and information may force the variables beyond the range of stability(Miller, 1965a), initiating a reconfiguration in the number, size, position, direction, pattern, order, and density of subsystems over time and space. In an evolutionary system, the general directions of change include: 1) an increase in the number of components, 2) an increase in the size, range, complexity, and integration of the system, 3) a reorganization of relationships among subsystems, and 4) an increase in the amounts of information(Miller, 1965b).

The development of the Red River Valley postal system confirms these evolutionary trends. First, the information system of the antebellum Red River Valley expanded in terms of size and density. Second, the growth of the system was driven by the addition of small- and mid-sized post office communities with the mediation of high-ranking postal towns on the Red River. Third, inland parish seats, interior nodal points, and other places of administrative, commercial and transportation importance functioned as intermediate centers in the hierarchical diffusion of information. Fourth, by 1861, post office locations and postmasters' commissions were fairly evenly distributed across the Red River Valley, albeit with slight biases in favor of the upper valley over the lower and the left bank of the river over the right. That said, all of the dominant centers in the region' s postal system -Natchitoches, Alexandria, and Shreveport- occupied the southern side or right bank of the Red River.

Overall, the postal settlement increased in both numbers and size over time. The transformation process, moreover, accompanied the hierarchical fragmentation of postal settlement and periodic rearrangement of the configuration of the structure. The earlier expansion phase of postal settlement was replaced by the consolidation phase in the booming fifties. And the condensation process was backed by the booming cotton economy during the decade.

While the "social distribution of information" was more or less egalitarian for the white population in the Red River Valley, "geographies of exclusion" were very deeply embedded in antebellum valley society. As Thrift(1985) has pointed out, any stock of information and knowledge is differentially distributed according to gender, age, and race of social groups as well as geography. In the antebellum Red River Valley, a large numbers were excluded by a slave-holding culture that prohibited slaves from participating in long-distance communication. Even the rare slave who had learned to write was, by law, barred from owning pens, ink, or paper and was required to have a pass in order to leave the plantation. Furthermore, postmasters simply refused to mail letters for slaves without written instructions from their masters(Northup [1853], 1968). Despite these stringent controls, slaves nonetheless participated in the making and consumption of news and played a significant role in conveying local, national, and international information as well as private messages to neighboring communities.

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Notes

1) Social, economic, and political implications of the flows of gossip, rumor, advertisements, and news mediated by these institutional nodes appear in E. P. Thompson's (1971) diagnosis on markets, Peter Clark's(1983) monograph on alehouses, Lawrence Klein's(1997) essay on coffeehouse civility, and Frank Owsley's (1982) sketch of antebellum churches and district courts.

2) A brief description of the raft can be found in *De Bow's Review* 19 (1855), 437-8: "The Red River raft was an accumulation of trees, logs, and drift, extending over the surface of the river from bank to bank, and for miles in extent, so close and compact as to be walked over without wetting the feet. Broom-straw, willow and other small bushes are growing out of the rich alluvial earth that cover the logs, so that it presents the appearance of an old worn-out field that has been abandoned to grow up again." The clearance started in 1833 by the U.S. engineers led by Captain Henry Miller Shreve. His team removed 70 miles of logjam for the first year and the partial completion of the task led to the establishment of Shreveport in 1836. The logjam was pulled out at the end of 19th century.

3) The fort was founded by St. Dennis who was dispatched to find a commercial outlet and check the advance of the Spaniards from the west. As it turned out, Natchitoches was the first European settlement established in the present-day Louisiana. The French fort was a square palisade, which functioned as a barrier against the Spanish force. The 1722 census reported that roughly 87 people lived in the garrison including 14 men, 10 women, 10 children, 20 Black slaves, 8 Indian slaves, and 25 Natchitoches Indians(Mills ,1981, 3-4).

4) Writing in 1812, Amos Stoddard talked about the connection between military post and postal services: "The road we have traced out is the great thoroughfare between Red River and the city of Mexico··· The Spaniards, at all the villages and at nearly all the rivers on this route, have established small military posts, composed of 8 or 10 men each, not merely as guards of security but to facilitate the passage of public letters and dispatches, which are carried with as much expedition between the Sabine and the most distant provinces, as in any part of the United States. All these posts are provided with mules. As soon as the mail arrives at one post, it is hastened by a fresh mule and rider to the next, and so on; it travels night and day, and is seldom obstructed, or even retarded, by the weather".

5) The first mail delivered under this arrangement was received on Monday evening on April 26, 1841(*Red River Whig*, Alexandria, Saturday, May 1, 1841).

6) *Shreveport Journal*, Shreveport, Monday, April 3, 1848.

7) *Southern Advocate and Catahoula Register*, Trinity, Saturday, October 22, 1853.

8) The terms of contract varied from place to place. As an example, the new contract for Avoyelles Parish was made on the condition that the contractor kept the following schedule: 94 miles from Red River Landing to Alexandria, daily; 6 miles from Simmsport to Big Bend, once a week; 30 miles from Simmsport to Moreauville, once a week; and 24 miles from Holmesville to Moreauville, three times a week(*The Villager*, February 20, 1858).

9) *Red River Whig*, Alexandria, Saturday, November 21, 1840; *The Bossier Banner*, Bellevue, March 9, 1860.

10) The peopling of the Red River Valley was driven not only by the presence of cheap and fertile land, the rapid expansion of cotton, the clearance of logjams, the relocation of Indian tribes, and the loose enforcement of public-land laws, but also by such push factors as soil exhaustion and limited labor market in the Old South (Gray 1933, esp., 896-900).

11) U.S. Bureau of Census, *Population of the U. S.*, The 5th(1830) and 6th(1840) Censuses(Washington, D. C.: Government Printing Office).

13) *Postal settlement* used in this essay is defined as hamlets, plantations, villages, towns, cities, and other functional units of settlement which had post offices in their bounds.

15) For more on the central ideas of G. William Skinner's regional system, see his, "The Structure of Chinese History," *Journal of Asian Studies* 44(1985), 271-92;

12) Statistical Comparison of the Progress of Population and Post Offices

	1811	1821	1831	1841	1851	1861
Population[a]	7443	18363	23251	51314	88641	144209
Increase Rate		146.7%	26.6%	120.7%	72.7%	62.7%
No. of P.O.	3	8	13	32	74	128
Increase Rate		166%	62.5%	146.2%	131.3%	73.0%
P.O. / 10000	4.0	4.4	5.6	6.2	8.3	8.9
Increase Rate		10%	27.3%	10.7%	33.9%	7.2%

Note: [a]Population data are drawn from federal censuses which registered the mid-year number of people, 1810, 1820, 1830, 1840, 1850 and 1860.

14) Rate of Commission on the Letter Postage in Selected Years

	Less than $ 100	$100 - $400	$400 - $2400	Over $2400
1850	40%	33 and a third%	30%	12 and a half%
1854	50%	40%	35%	15%
1854(July)	60%	50%	40%	15%
1857	60%	50%	40%	15%

Sources: Eli Bowen, *The United States Post-Office Guide* (New York: D. Appleton & Co., 1851), 39; *The U.S. Post Office Directory and Postal Guide* (1854); *List of Post Offices in the United States* (1857).

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