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Picturing a Networked Nation: Abraham Bradley's Landmark U.S. Postal Maps

by Larry Caldwell and Michael Buehler



(Inset) Abraham Bradley, *Map of the United States*, (1804), 1st state.
Courtesy of the Library of Congress, Geography and Map Division.

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Picturing a Networked Nation: Abraham Bradley's Landmark U.S. Postal Maps

By Larry Caldwell and Michael Buehler

Between 1796 and 1825, First Assistant Postmaster General Abraham Bradley, Jr. produced three remarkable maps of the United States. Whereas contemporary maps by Lewis and Clark, Melish and others achieved greatness as documents of American expansion, Bradley's contribution was to document American *connection*, the fast-growing network that carried the mail and bound the nation together. At the same time, his maps profile the settlement of the American republic in the late 18th and early 19th century. Bradley is now a little-known bureaucrat, but his cartographic contribution was significant and he deserves a place in the pantheon of early American mapmakers.

Bradley had a powerful intellect, first-rate legal training, strong management skills, and an astonishing capacity for hard work, all of which served him well as a central player in building the American postal system. In his key Post Office position, Bradley was able to create a vast information-sharing network of postmasters, postal contractors, surveyors and mapmakers. He was distinctly qualified—probably uniquely so—to compile postal maps of genuine merit.

Bradley's maps were for their time the most up-to-date and detailed maps of the United States that had yet been produced. As such they are invaluable documents which reveal the incredibly rapid expansion of American infrastructure and settlement in the post-independence period. These maps inaugurated 170 years of mapmaking by the Post Office Department and were themselves not superseded until David H. Burr published his *American Atlas* of regional postal maps in 1839.¹ The Bradley maps have broader significance as the product of the first systematic, nationwide mapping program of a young Federal government, whose unparalleled resources and needs made it a principal participant in the rise of American cartography.

THE POST OFFICE SYSTEM

By any measure, the early United States Post Office was a large and fast-growing business. The year before Bradley joined in 1792 as a clerk, the country had only 89

post offices and 1,905 miles of post roads. By 1830, the year after Bradley's departure, the network had grown to 8,450 post offices and 115,176 miles of post roads.² During the Bradley era, the U.S. Post Office dominated the Federal government, accounting at times for over 75% of all Federal employees. The Department was the largest peacetime organization in the United States until it was surpassed by the Pennsylvania Railroad Corporation in the early 1870s.³

Prior to the establishment of the spoils system in 1829 and the resulting purges of Bradley and other senior managers and key local postmasters by President Jackson, the Post Office was also an efficient and profitable enterprise.⁴ It attracted a talented management and clerical staff who held some of the best-paying jobs in the country. Mail was carried by stagecoach, horseback, and steamboat. Railroads began hauling mail after 1830. Mail carriage was outsourced to lower-cost private mail contractors, contracts were frequently rebid, and standards for hour-by-hour pickup-and-delivery schedules and the integrity of carried product were tightly enforced. Although some mail routes and mail contracts were politically allotted, Congress from the start required an annual review of unprofitable routes.⁵

Mail delivery frequency to most post offices ranged from twice a day to once a week, depending on their size and location. Distribution centers, part of a hub-and-spoke system similar to one Federal Express uses today, were established in 1800 and continuously improved.⁶ The flow of cash within the Post Office system was handled according to banking standards, and the revenue from every letter and periodical was recorded in financial reports prepared by local postmasters for Post Office headquarters review.⁷ These local postmasters, while often appointed through a political filter, were paid primarily on commission based on a percentage of revenue they generated. Incompetent or corrupt postmasters were summarily removed. By 1825, the Postmaster General and three headquarters executives—supported by 23 clerks, two bookkeepers, and two messengers—managed about 45 distribution centers, 7,500 post offices, and 700 mail contractors.⁸

As a matter of policy, the growth of the postal system tracked, and in many cases fostered, the nation's territorial expansion. Certain immature mail routes were subsidized in order to encourage migration to the West and to the South. To keep an increasingly dispersed population informed, relatively high postage levied on letters subsidized the low-cost carriage of newspapers and free-franked mail from Congress. Over the Bradley years, newspapers generated 3–15% of revenue and 70–95% of weight in the postal system.⁹ The volume generated by both of these subsidy programs had the effect of accelerating development of the postal network across the countryside.

THE CARTOGRAPHIC CONTEXT

From the beginning, the postal system needed to be visually profiled in detail. Accurate “working” maps were needed for planning and operating mail routes, setting pickup-and-delivery schedules, assisting postal workers in post offices and distribution centers in sorting mail, establishing new post offices, negotiating contracts with carriers, and educating Washington politicians responsible for overseeing the Post Office. The need was recognized early. In a message to Congress in 1790, Samuel Osgood, the first Postmaster General appointed after ratification of the U.S. Constitution, stated, “The General Post Office is subject to many inconveniences for the want of a survey and map of the roads of the United States.”¹⁰ To address this gap, the Post Office Act of 1792 specifically directed the Postmaster General to “cause the post-roads to be surveyed, and maps made thereof, by Christopher Colles, agreeable to his report on the petition of the said Christopher Colles.”¹¹ Colles was the surveyor and publisher of the 1789 *A Survey Of The Roads Of The United States of America*, the first and only volume of an uncompleted attempt to map all of the major roads in America. No records have been found to indicate that his postal road proposal was ever executed.

The commercial maps of the entire United States available in the mid-1790's were not adequate for the Post Office. Those by Abel Buell (1784), William McMurray (1784), and Osgood Carleton (1791) were outdated, too small in scale, and/or did not provide the necessary high level of geographic, political and road detail. Aaron Arrowsmith's *Map of the United States*, issued in London on January 1, 1796, did have sufficient scale and even depicted much of the national road network, but would have

required major re-engraving to accommodate the additional information required on a postal map.

On the other hand, Federal mapping activity of the day was too specialized. The U.S. Army's cartographic activity generated maps either too tactical (forts, battlefields, etc.) or focused on areas which were unsettled and not yet in need of postal service. The Survey of Public Lands, under the Treasury Department until 1812 and then under the independent General Land Office, profiled thousands of square miles each year, but focused only on areas lying in the public domain and not yet settled. The United States Coast Survey was established by Jefferson in 1807, but its purview was confined to American coastal waters, and its first charts were not even issued until 1839.

The task of creating the maps necessary to manage the rapidly growing U.S. postal system was assumed by Abraham Bradley.

THE MAN: ABRAHAM BRADLEY, JR. (1767–1838)

Bradley was born in Litchfield, Connecticut and practiced law from 1788–1791 in Wilkes-Barre, Pennsylvania, first as an attorney and later as a county judge. He had spent several years studying law in Litchfield under the eminent Tapping Reeve, who had established the country's most prominent law school and formulated a curriculum that became the foundation of modern American legal education.¹² Over the years, Reeve taught nearly two hundred of America's most significant political leaders and judges, including such men as John C. Calhoun and Aaron Burr. Reeve himself later became Chief Justice of the Connecticut Supreme Court.¹³ When Timothy Pickering, a fellow Wilkes-Barre judge, was appointed Postmaster General by George Washington in 1791, Bradley joined him as his confidential clerk shortly thereafter in 1792. In 1800, Bradley was named First Assistant Postmaster General by Pickering's successor Joseph Habersham. Abraham's brother Phineas, a medical doctor by training, joined the Post Office as a clerk in 1801 and in 1818 was appointed to the key position of Second Assistant Postmaster General.¹⁴ The Bradley brothers were considered the Post Office brain trust, running the operations under the Postmaster General. In 1829, when Abraham refused to acquiesce to the replacement of highly-competent senior postal officials under Jackson's new spoils system, he and his brother were terminated.¹⁵ Following Abraham's firing, one paper wrote:

"He has fulfilled the duties of [his office] with eminent ability, undoubted integrity, and has acquired the respect and esteem of all who knew him, by his urbanity, promptness and vigilance as a public officer.... We venture to say that there does not exist an objection to Bradley as a public officer, save in his political opinions."¹⁶

The duties assigned to Abraham Bradley varied during the years in which he served with six different Postmasters General. He was at times responsible for establishing mail routes linking the post office locations approved by Congress; conducting the bidding for mail carriage contracts;¹⁷ evaluating the performance of and paying the mail carriers; overseeing the accounting function for the entire system; enforcing the accounting of funds handled by the local postmasters; managing the flow of cash between the head office and the local post offices; evaluating local postmaster performance; fielding complaints about poor mail service and investigating lost or stolen mail; submitting required reports to Congress and answering periodic Congressional inquiries. Bradley also served as President of the Union Bank of Georgetown, Washington, D.C., using this bank to pay mail contractors with banknotes which he himself signed.¹⁸

Bradley was not a trained surveyor or cartographer, although he may have assisted his land-surveyor father in his youth. He was a meticulous and scholarly man who managed a major enterprise. A Bradley descendant called him a "...book man; in his hours of leisure [he] loved study, talked philosophy and metaphysics, was fond of abstruse speculations, and wrote well on every subject on which he chose to employ his pen."¹⁹ Beyond all other interests and responsibilities, he created and published postal maps.

THE MAPS

Before examining Bradley's maps individually, an overview may be useful. Bradley published postal maps of the United States in 1796, 1804, and ca. 1825, each printed from a different set of four engraved plates. Advertisements in 1829 for a "Map of the U. States on a new plan" raise the possibility of a fourth map, though no examples have been located.²⁰ The maps show the geographical information one would expect; but they were executed on a relatively large scale in order to depict the network of post roads, the mileage between major local post offices,

county names and boundaries, and the emerging grid of townships on the public lands. Bradley's 1796 map actually included *every* post office in the country as well as a complete timetable of delivery/pickup schedules on the principal north/south postal route along the East Coast. The three maps were successively larger, reflecting the addition of States and Territories and the additional postal roads and post offices they necessitated. The maps have other interesting and important differences reflecting the state of the nation, the changing postal network, and newly-available cartographic information.

Both the 1796 and 1804 maps were updated in revised states as post roads and post offices were added and discontinued, but thus far the 1825 map is known only in a single state. The last known state of the 1804 map is 1812. This 13-year gap between the 1812 and 1825 maps strikes the authors as implausibly long, given the known pattern of publication at regular intervals between 1796 and 1812, the rapid expansion of the American postal network during the period, and Bradley's methodical style.

It is believed that a Bradley map was found in most large post offices across the country as a convenience to retail customers.²¹ Post Office committees in the U.S. Senate and U.S. House of Representatives used the maps in executing their oversight functions.²² Bradley maps were probably used by other government agencies. The maps were also sold to the general public by subscription and post-publication sale, often with advertisements such as the following:

"NEW MAP OF THE UNITED STATES

"Bradley's Map of the United States, in which all the Postroads and Post Offices are accurately laid down, and the distance in miles between respective Offices expressed in figures. This kind of information, so particularly useful to Post Masters cannot fail to be of general utility."²³

Bradley himself, rather than the U.S. Post Office, appeared to own the rights to the maps. He was personally granted a copyright on the 1796 map by the District of Pennsylvania²⁴ and received a similar copyright on the 1804 map. No copyright is known for the 1825 map, but purchases of this map by the Post Office during the 1827–29 period were made directly from Bradley.²⁵ Finally, the 1829 newspaper story publicizing a "new" map implied Bradley's ownership, as it called for readers to purchase

the map since "He is now advanced in life and has a large family to support..."²⁶

Bradley's maps are today very rare. We have identified 44 complete and 5 partial examples in institutional and private collections. Given the number of post offices operating and the fact that these maps were also sold to other governmental departments and to individuals, the survival rate seems very low.

The following table provides an overview of the maps:

DATE OF 1ST PUBLICATION	SIZE (H X W, IN CM.) ²⁷	SCALE	KNOWN STATES	EXAMPLES LOCATED
1796	88 x 94	1:2,400,000	4	22 (2 incomplete)
1804	98 x 132	1:1,940,000	4	24 (3 incomplete)
ca. 1825	119 x 156	1:1,774,000	1	3

Heretofore, no comprehensive study of these maps has been undertaken, though contributions have been made by Ristow, Rumsey, and Wheat and Brun. Immediately below is a summary description of the three maps, and an Appendix provides a provisional discussion of the variant states of each map. It should be noted that Bradley also contributed two small maps to Jedidiah Morse's 1797 and 1804 *The American Gazetteer*. These maps are not postal maps, do not present any cartographic advances, and will not be addressed here.

The 1796 Map

Bradley's first map (Figure 1) was published in Philadelphia with the imposing title *Map of the United States exhibiting post-roads, the situations, connections & distances of the post-offices, stage roads, counties, ports of entry and delivery for foreign vessels, and the principal rivers*. The northeastern sheet bears its own variant title, scale bar and explanatory table, the imprint of Philadelphia engraver "[James] Smither," and a copyright date of April 25, 1796. It was almost certainly first issued separately, though we have located only a single such example, lacking both the Smither imprint and copyright date.²⁸ The complete map in four sheets was deposited for copyright on September 26, 1796,²⁹ with the three additional sheets apparently engraved by William

Harrison, Jr., a well-connected, second-generation engraver and printer also based in Philadelphia. This four-sheet map, considered state two, was updated and reissued twice, both times bearing a copyright date of September 26, 1796. Based on the numbers of post offices depicted, these subsequent states can be dated 1797 and 1800 respectively.³⁰ The four states are summarized in the Appendix.³¹

The map was large for its time, measuring 88cm by 94cm at the neat line. A trapezoidal projection was employed and the prime meridian set at Washington, D.C., both features being repeated on the 1804 and ca. 1825 maps. This projection may have appealed to Bradley because it had been employed on Mitchell's seminal map of the British colonies, and minimizes distortion while being relatively simple to execute.³² The map's coverage extends just beyond the Mississippi River and includes parts of East and West Florida and much of Quebec, thus depicting the country in its entirety with the exception of the northern extremities of Maine. Distinctive geographic features include a significant distortion of the Great Lakes, a loose depiction of the Appalachians using the archaic "molehill" style, and increasingly sparse detail in the areas west of the mountains. Politically, the map depicts the new states of Kentucky, Tennessee and Vermont and—for the first time on a map of the United States—county names as well as townships surveyed in Maine, New York and Ohio.

What makes the map extraordinary is its depiction of the American postal system in a single coherent image. It shows every one of the roughly 450 existing post offices³³ and every postal route, with distinctive symbols differentiating "post roads," "post roads established by contract," and "post and stage roads." Each route is marked to indicate the mileage between post offices. The varying density of the network displayed on the map serves as a profile of national expansion and development—dense in the Northern and Middle States, less so in the South, and almost non-existent west of the Appalachians.

A striking element on the map is a separately-engraved chart entitled "Progress of the Mail on the Main Line," pasted on to the blank lower right section of the map. With great economy and clever design, the chart shows the delivery schedule for post offices along the nation's main East Coast route from Brewers, Maine to St. Mary's, Georgia. For reasons unknown the chart was engraved not by William Harrison, Jr., but by fellow Philadelphian William Barker.

An interesting anecdote testifies to the esteem in which the map was held. It concerns a visit paid to

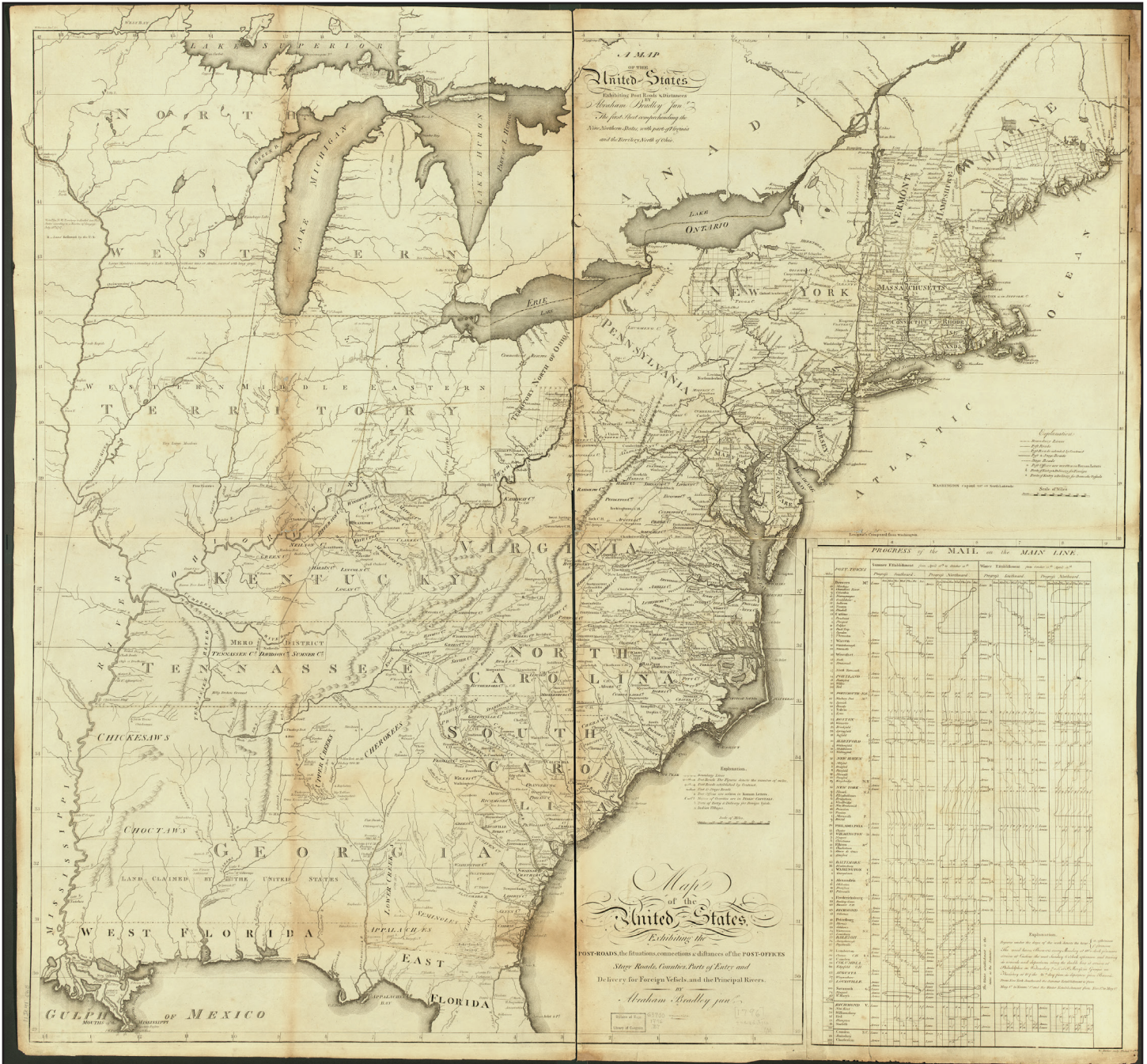


Figure 1. Abraham Bradley, *Map of the United States*, (1796), 2nd state. Courtesy of the Library of Congress, Geography and Map Division. Viewable online at http://memory.loc.gov/cgi-bin/query/D?gmd:1::/templ~ammem_NrF8:



Figure 2. Abraham Bradley, *Map of the United States*, (1804), 1st state. Courtesy of the Library of Congress, Geography and Map Division. Viewable online at http://memory.loc.gov/cgi-bin/query/D?gmd:2:./temp/~ammem_NrF8:

George Washington in 1797 by Louise Philippe, the future French King:

"They [the French visitors] announced to the General their purpose of exploring the mysterious interior of America. He was much interested; he took a copy of Abraham Bradley's recent map of the United States and on it traced in red ink a recommended itinerary. Years later King Louis Philippe liked to impress American visitors by unfolding his map and pointing to the red line drawn by the hand of the great Washington."³⁴

The 1804 map

Bradley's 1796 map was soon rendered obsolete. The postal system had grown from about 450 post offices as shown on Bradley's 1796 map to 1,405 post offices in 1804.³⁵ More importantly, the 1803 purchase of more than 800,000 square miles of the French Louisiana Territory had markedly expanded the country. On August 29, 1803, Bradley wrote to President Jefferson, "The great alterations which have taken place in the U.S. since my map was first published have rendered it of little use & I have for sometime suspended the sale."³⁶ A full depiction of the expanded United States and the inclusion of its hundreds of new post offices were essential for future system planning and route contracting.

Also in his August 23, 1803 letter to Jefferson, Bradley complained, "I intended to have published a new map this summer, but fear it cannot be accomplished as all the good engravers are engaged at book-works." He apparently tired of waiting and engaged the less-talented Francis Shallus of Philadelphia, and his second *Map of the United States* was copyrighted on June 2, 1804 (Figure 2). The new map was designed on a larger scale and with greater dimensions than the 1796 map to accommodate wider geographic coverage and a denser postal network. In fact, at 98 cm x 132 cm on four sheets, it has over 50% more surface area. The expanded coverage encompasses the newly acquired Louisiana Territory as far as 19 degrees west of Washington, but the sparsely settled northern extremities of the United States (the Lake Superior country, for example) are not shown. The geography of the Great Lakes is more accurately portrayed and far more detail is shown in the West than on the 1796 map. The nation's expansion is indicated not only by the Louisiana Territory

and its subsequent division into the Orleans Territory and the District of Louisiana (1804), but also by the new Mississippi (1798) and Indiana (1800) Territories. A small inset map of North America replaces the East Coast route chart included on the 1796 map.

It is probable that every postal road existing at the time is shown, with mileages between major post offices indicated, but the growth of the network made it impossible to depict each of the 1,405 post offices. Bradley retained the previously used symbols for "post roads" and "post & stage roads," but he discarded the symbol for "post roads established by contract." One of the most important routes depicted is the one "made by Order from the Secretary at War from Nashville T[ennessee] to Pierre R[iver] M[ississippi] T[erritory]." This route was key to establishing reliable mail service to, and administrative control over, the lower Mississippi region which was at the time still under heavy French influence.

A diplomatically intriguing anecdote describes how President Jefferson sought to use the map itself as an instrument of expansion:

"...when Jefferson purchased Louisiana, he happened at his leisure to conceive the plan of including West Florida in the purchase, and, to give colour of title, he directed Abraham Bradley, when he published his coloured map of the United States, to draw the same paint brush over Louisiana and West Florida; they are accordingly both painted with the same green color, and thus our title to that disputed territory is forever put at rest by a half-penny worth of paint in water colours."³⁷

An examination of the Library of Congress copy of the map confirms this story. The name "West Florida" appears nowhere, the green wash of the Orleans Territory extends east to the Conecuh River, and a note on the map states that "The French call the Country west of the Conecuh River Louisiana & have ceded it to the United States." Given the August 29, 1803 date of Bradley's letter to Jefferson and this West Florida quote, it is conceivable that a draft of Bradley's map played some role in the negotiations for the Louisiana Purchase. In any case, the map certainly played a role in the ongoing negotiations with the Spanish for West Florida, resolution of which did not come until 1819.



Figure 3. Abraham Bradley, *Map of the United States*, (ca. 1825), only known state. Courtesy of the Library of Congress, Geography and Map Division. Viewable online at http://memory.loc.gov/cgi-bin/query/D?gmd:3:./temp/~ammem_NrF8: [Editor's Note: Color and brightness enhanced for clarity using Photoshop.]

The authors have located four states of the 1804 map. All retain the June 2, 1804 copyright, but from internal evidence the later states may be dated to roughly 1806, 1809 and 1812. While the first state shows more townships surveyed in Ohio than on the 1796 map, the later states may be distinguished by substantial re-engraving in the Mississippi Basin and along the Gulf Coast; the progress of the Survey of Public Lands in Indiana, Illinois, and the Mississippi Territory; the creation of the Illinois Territory (1809); and the statehood of Louisiana (1812).

The Ca. 1825 Map

At 119cm by 156 cm, Bradley's third *Map of the United States* (Figure 3) is a monumental production almost 50 per cent larger in area than the 1804 map. The map was engraved by William Harrison, Jr., who had engraved Bradley's 1796 map in Philadelphia, but had since relocated to Georgetown, Washington, D.C. It depicts the nation as far as 22 degrees west of Washington, thus including the States of Missouri and Arkansas and much of eastern Texas. As with the earlier maps, it depicts county boundaries and surveys of public lands by the General Land Office, whose work in the trans-Mississippi West is included for the first time on a map of the United States. Because of the rapid growth of the postal system since 1804, only a small portion of the approximately 5,677 post offices and only the most important of more than 1,700 postal roads in operation are shown.³⁸ The map employs single lines to represent some routes and double lines for others, but there is no legend to explain their respective meanings. It is striking how saturated the country had become with routes and post offices, though few are evident west of the Mississippi. (See Figures 4a, 4b, and 4c showing the progress of development in one area of the country.)

The map's date of first publication is uncertain as it bears no copyright statement, and no references to it have been found in the period press. The map refers to "Parry's track [seeking a Northwest Passage] in 1819," and to Stephen Long's 1820 western expedition. Neither of the two examples of this map examined by the authors was issued before 1825, as they include Illinois counties formed in 1825 but not those formed in 1826. Only three copies of the map are known and we were unable to examine the third copy. We have thus adopted a publication date for this map of "ca. 1825." However, the 1819–1820 expedi-

tions depicted on the map, together with Post Office map purchases of 1827–29 discussed below, raise the possibility that states of the map were issued both before and after 1825.

Print Runs and Map Survival

There is no known print run documentation for Bradley's maps, likely because of the loss of early postal records in an 1836 fire at Post Office headquarters in Washington, D.C. The existence of three distinct maps published over a span of 29 years, two of which appeared in multiple states with significant updates, suggests a fairly large total of maps produced. Further, the print runs would have had to be large to accommodate the needs of the postal network. These maps were probably issued to the regional distribution centers, larger post offices, and post offices in politically important cities and towns. The only data on map sales comes from a Post Office report indicating the purchase of 500 copies of the ca. 1825 map from Abraham Bradley during a 24-month period from 1827–1829³⁹ at a time when total local post offices numbered about 7,500.⁴⁰ Making assumptions about the relationship between Post Office map purchases and the number of existing post offices over the publication period of Bradley's maps—together with moderate sales to private individuals and other arms of Federal and State government—suggests a total print run of all known editions and states of perhaps 2,500 copies.

Surprisingly, the authors have located only 44 intact examples of Bradley maps in institutional and private collections, and another five examples missing one or more sheets (see Appendix). This level of survival strikes us as astonishingly low, even allowing for the maps' rapid obsolescence and the "wear and tear" endured by large working maps. The 1796 series appears to have the highest survival rate (i.e., the ratio of surviving copies to the estimated number of copies printed). Despite our unsuccessful attempt to locate them, it is our belief that additional examples are held by local historical societies, libraries, museums and private persons. We would welcome any information in this regard.

BRADLEY'S INFORMATION SOURCES

There is no evidence that Bradley was trained as a map maker. Yet he created a vast and complex information-sharing network comprised of local postmasters, postal

contractors, surveyors hired by the Post Office, and surveyors and mapmakers elsewhere in the Federal government (particularly the U.S. Army, and the General Land Office and its predecessors). As such he was distinctly and uniquely qualified to produce postal maps of the highest order.

The authors' initial hypothesis was that Bradley compiled his maps by adding postal information (post offices, routes, and distances) to a pre-existing, commercially available map. However, a comparison with national maps by Abel Buell (1784), Osgood Carlton (1791), Samuel Lewis (1795 and 1816), Aaron Arrowsmith (1796), John Melish (1816) and others showed that none of Bradley's three maps rests on a single "base map." However, Thomas Hutchins' 1778 *A New Map of Virginia, Pennsylvania, Maryland and North Carolina* did serve as the prototype for the Great Lakes and Mississippi Basin areas as depicted on Bradley's 1796 and 1804 maps.

We conclude that Bradley's maps are complex compositions, drawn from sources both private and public. These include commercially-published regional, State, and local maps; surveys of the public lands undertaken by the U.S. Treasury Department and after 1812 the General Land Office; occasional road surveys commissioned by the Post Office Department; military and civilian surveys; and postal road information collected from postal employees and contractors. It is impossible to exhaustively review these sources in detail here, but some of the more interesting examples are cited below.

Commercially-Available Maps

Bradley sought out the best available commercial maps. Some of these were directly acquired by the Post Office. For example, an 1830 report of Post Office expenses submitted to Congress shows the purchase in 1828 of maps of New Jersey (presumably Thomas Gordon's large and important map) and Pennsylvania (perhaps a revised edition of Melish's landmark map).⁴¹ It seems plausible that such purchases started when the Post Office was permanently established in 1794. Other Federal departments were certainly prolific purchasers of maps; for example, an 1823 report to Congress lists purchases of numerous maps and atlases by the Treasury Department between 1817 and 1822.⁴²

Bradley's access to cartographic information was enhanced by his relationships with the important Philadel-

phia engravers, William Harrison, Jr. and Francis Shallus. Harrison worked on both the 1796 and 1825 maps and also engraved maps for cartographers such as Aaron Arrowsmith, Phillip Carrigain, Bartholemy Lafon, Samuel Lewis, Jared Mansfield, and John Strother and Jonathon Price—all of whom produced seminal maps of the United States or individual States and Territories. Shallus engraved Bradley's 1804 map, the maps in Moore and Jones' 1802 *Traveller's directory*, and Nicholas King's 1806 *Map of Red River in Louisiana* and 1811 *Map of the Mississippi*. Harrison, Shallus and others would likely have made their material available to Bradley and facilitated direct contact with mapmakers.⁴³

Other information came from political figures who sought to support development of their dominions. In June, 1805, for example, Louisiana Territorial Governor William Claiborne sent to the Post Office a map by surveyor Bartholemy Lafon, who produced a number of important maps of New Orleans, the Orleans Territory and the lower Mississippi River. Claiborne annotated the map to indicate a proposed mail route between New Orleans and Fort Stoddert in present-day Alabama and wrote: "The Map...was made out by a Mr. Lafon from an actual survey of the country which it delineates, and ought of consequence to be very accurate. If it is so, no difficulty will be experienced in the Transportation of the Mail on the Route Marked out by the red lines..."⁴⁴

Federal Government Sources

The Post Office also used private sector surveyors, though the 1836 fire probably destroyed most evidence of this activity. For example, the 1830 Post Office report to Congress mentioned earlier also records payments of \$350 to H.L. Barnum for "measuring, laying out, and surveying roads" and \$300 to W. H. Swift for three projects described as "services as topographical engineer."⁴⁵

Bradley's most important source may have been the enormous network of local postal clerks and postal contractors, with whom he and other Post Office staff were in continuous contact. Though most of their communications addressed the day-to-day issues of mail delivery, these people were a ready and reliable source of information about local geography—in particular the routes and distances that make the Bradley maps so unique and important. Bradley acknowledged their assistance—along

with help from the legislative branch—in a November, 1796 broadside issued to correct and update information on his first postal map: “The distances noted in the map are taken chiefly from the information of Members of Congress and of Post Masters living on the routes; and it is presumed they are pretty accurate.”⁴⁶

Information was also obtained from other departments of the Federal government. The most important such source was the Survey of Public Lands, conducted first under the Treasury Department, and from 1812 under the new General Land Office. Bradley was methodical about including this information presumably because the surveys were seen as a prelude to settlement. For example, the 1796 map shows the Seven Ranges in Ohio along with townships surveyed under non-Federal auspices in Maine and New York, while successive states of the 1804 map track the progression of townships across the Old Northwest and the Mississippi Territory. Surveys of public lands in the trans-Mississippi region became available starting in 1817⁴⁷ and are shown on the 1825 map.

In the early 19th century, turnpikes, national roads, canals, and river and harbor improvements were unsystematically and intermittently funded by the United States as the country struggled to define the role of its central government. Some of these projects involved postal routes. Road surveys conducted by the U.S. Army were also an important source for Bradley. The most prominent example was previously cited—the road “made by Order from the Secretary at War from Nashville T[ennessee] to Pierre R[iver] M[ississippi] T[erritory] Distance 333 miles.” Other route surveys were commissioned by the Post Office Department itself. There was a spurt of such activity just after the Louisiana Purchase, as the government sought to consolidate control over New Orleans and the southern reaches of the Mississippi River. In 1805, Postmaster General Gideon Granger ordered one Lieutenant Pratt to lay out a new route from Fort Stoddert on the Mobile River in the Mississippi Territory to New Orleans, perhaps the very route outlined by Governor Claiborne on the Lafon map he had sent to Granger in June of that year. At the same time, Granger wrote an officer named Toulmin to lay out a post road from Fort Stoddert to Pinckneyville, Mississippi Territory.⁴⁸ This detailing of military engineers for postal projects may have continued for many years. Years later, the General Survey Act of 1824 authorized the President to use U.S. military topographical engineers to carry out surveys of

roads and canals deemed of national importance for commercial, military, or postal service purposes. One such project was an 1826 survey identifying eight improved postal route alternatives between Baltimore and Philadelphia.⁴⁹

Seth Pease: In-House Cartographic Experience

Collecting and compiling the above information was a major effort. Abraham Bradley may have handled it himself early in his career, but the rapidly increasing scale of Post Office operations under his supervision would have stretched his capabilities. These circumstances probably explain why surveyor and mapmaker Seth Pease joined the Post Office staff in 1803–04. Pease was known for years of surveying and mapmaking in Ohio’s Western Reserve country and for work on the Holland Land Company holdings in upstate New York. He served as a senior Post Office clerk until late 1806, left to become Surveyor General of the new Mississippi and Orleans Territories, and then rejoined the Post Office in 1810 as Second Assistant Postmaster General, where he remained until 1818.⁵⁰ This position was the third highest in the Post Office. Both Pease and Postmaster General Granger were natives of Suffield, Connecticut, and Granger had married Pease’s sister.⁵¹

Given his extensive background as surveyor and mapmaker, it seems highly likely that Pease was an important player in Bradley’s cartographic network. However, the only relevant record we have found is in the papers of the American Philosophical Society. In 1804, he and Bradley made astronomical observations at the site of the U.S. Capitol building, which data were then employed to determine the latitude and longitude of the city of Washington. Pease took additional observations at the Capitol building in 1811 and then again with Bradley in 1813.⁵² Thus far, the only known maps issued during Pease’s tenure were the 1806 and 1812 states of the 1804 map. The authors believe that Pease likely played a role in revisions of postal maps issued after 1812, not yet found or now lost.

THE LEGACY OF THE BRADLEY MAPS

Abraham Bradley’s landmark maps are the product of the first nationwide mapping conducted by the Federal government—unique representations of a young, vital, and

expanding United States. In terms of the Post Office, the maps were management tools of the largest peacetime organization in early 19th century America. The geography was current, interconnecting road networks were clear, many more towns were shown than on other contemporary maps, and the distances between towns gave a clear sense of scale. Abraham Bradley, through his organizational talent and his dogged dedication to the mission of the Post Office, helped bring an infant organization to operational maturity. The maps are evidence of that achievement. In terms of the nation, these maps lay open a picture of America's regional population densities, level of infrastructure development, and extent of settlement, thereby revealing much about the economic, cultural, and

political characteristics of numerous regional subsections of the country.

The Bradley maps stand as significant markers in the story of America's assumption of leadership of the mapping of North America, and helped to obsolete Jedidiah Morse's 1792 observation that "Europeans have been the sole writers of American Geography...."⁵³

APPENDIX: EDITIONS AND STATES OF BRADLEY'S POSTAL MAPS, WITH LOCATIONS

Please note that the "defining features" listed below are intended only to facilitate rapid identification and are *not* a complete account of the differences between the variant states.

Abraham Bradley (mapmaker) / W[illiam] Harrison, Junr. and J[ames] Smither (engravers), *A map of the United States exhibiting post roads & distances: the first sheet comprehending the nine northern states, with parts of Virginia and the territory north of Ohio*. [Additional title included on second and subsequent states:] *Map of the United States exhibiting post-roads, the situations, connections & distances of the post-offices, stage roads, counties, ports of entry and delivery for foreign vessels, and the principal rivers*. Philadelphia, copyrighted Apr. 25, 1796 / Sept. 26, 1796.

STATE	PUB. DATE	DEFINING FEATURES	REFERENCE	EXAMPLES LOCATED
1	1796	Northeast sheet only.	Wheat & Brun #127	Library of Congress ⁵⁴
2	1796	Four sheets, including new title and southeast sheet with chart titled "Progress of the Mail on the Maine Line." Townships shown in Maine, western New York, and Seven Ranges in Ohio. Copyright date of April 25, 1796 and J. Smither imprint in lower margin of northeast sheet (not visible on joined examples).	Wheat & Brun #128	Amer. Geog. Society, Amer. Philos. Society, Harvard (sheets not joined, southeast sheet not present), Libr. of Congress, Maine Hist. Society (incomplete), NY Public
3	1797	Georgia now appears on two lines as "GEOR / GIA." Copyright date of Sept. 26, 1796 added in upper-left margin. Publication date of 1797 based on number of post offices shown.	Wheat & Brun #129	Boston Public, British Libr., Libr. of Congress, Mass. Hist. Society, NY Public, Osher Map Libr., Univ. of Mich.-Clements, private collection
4	1800	Note in Georgia reads "All West of this line is claimed both by the United States and by Georgia." Symbol for "Post roads discontinued" added to legend in ocean east of South Carolina. Publication date of 1800 based on number of post offices shown.	Wheat & Brun #130	Barry MacLean, Hagley Museum and Library, John Carter Brown, Libr. Of Congress, Nat'l Postal Museum, Yale
Not known	Not known	Not known		Biblioteca Nacional de Portugal

Abraham Bradley (mapmaker) / Francis Shallus (engraver), *Map of the United States: exhibiting the post-roads, the situations, connexions & distances of the post-offices, stage roads, counties & principal rivers*. Philadelphia, copyrighted June 2, 1804.

STATE	PUB. DATE	DEFINING FEATURES	REFERENCE	EXAMPLES LOCATED
1	1804	Note in Gulf south of Florida Panhandle refers to "Conecuh" River. Illinois and Indiana separated by dotted line, but named only "Indiana."		Barry MacLean (3 copies), Libr. of Congress, MD Hist. Society, private collection
2	ca. 1806	Note in Gulf now refers to "Perdido" River. Orleans Territory west of Mississippi re-engraved, with rivers changed and Gulf Coast shifted south. Adds "Frontier House 1806" along Red River in Louisiana.		Amer. Phil. Society, Boston Athenaeum, Libr. of Congress, MD Hist. Society
3	ca. 1809	Township surveys introduced in Indiana (but not Illinois), Illinois Territory named, and ca. 25 towns added to Ohio Fire Lands.	Rumsey #3043	Libr. Co. of Phila., Barry MacLean, Phila. Free Library, David Rumsey, Univ. of Virginia, Yale-Sterling, private collection
4	ca. 1812	Orleans Territory renamed "Louisiana," Louisiana Territory renamed "Missouri Territory." Township surveys introduced in southern Illinois and Mississippi. Mississippi River re-engraved from the Ohio north to the Wyaconda River.	Rumsey #2929	Amer. Geog. Society, (incomplete), Library of Congress (two copies, of which one incomplete), David Rumsey, Univ. of Chicago, Univ. of Mich.-Clements, Univ. of Mich.-Hatcher (incomplete)

Abraham Bradley (mapmaker), *Map of the United States: intended chiefly to exhibit the Post Roads & distances*. Washington, D.C., [ca. 1825].

STATE	PUB. DATE	DEFINING FEATURES	REFERENCE	EXAMPLES LOCATED
Not known	ca. 1825	Dating based on presence of Illinois counties formed in 1825 but not those formed in 1826. Also, does not show Arkansas counties formed in 1825.		Boston Public, Libr. of Congress
Not known	Not known	Not known		Barry MacLean

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ENDNOTES

- 1 Ginny Mason, "The U.S. Post Office Department, Division of Topography: The Conception, Production, and Obsolescence of Postal Mapping in the United States" (unpublished master's thesis). University of Wisconsin, Madison, 2002, p. 75.
- 2 Wade & Gideon, printers, "Table of Post Offices in the United States." Washington City, 1825, p. 131.
- 3 Richard R. John, *Spreading The News*. Cambridge, MA: Harvard University Press, 1995, pp. 3, 6. Most of the Post Office operations descriptions which follow come from John's book. It is an excellent overview of the Post Office prior to the development of the telegraph in 1844.
- 4 John, *ibid.*, pp. 48, 107.
- 5 [Gideon Granger, Postmaster General], "Letter and Report From the Post-Master General Accompanying a List of Post Roads Which have not produced one third of the expense of carrying the Mail." [Washington, D.C.], December 24, 1801.
- 6 John, *op. cit.*, p. 73.
- 7 *Ibid.*, p. 91.
- 8 General Post Office, Executive Section, "Register of Officers and Agents, Civil, Military, and Naval, in the Service of the United States on 30th September, 1825." Washington City, 1825, p. 3. An estimated fifteen of the clerks were assigned to review reports required from local postmasters. See also, John, *op. cit.*, pp. 74 and 90 and Wade & Gideon, *op. cit.*, p. 131.
- 9 John, *op. cit.*, p. 38.
- 10 U.S. Congress, House (1st Congress, 2nd Session), "No. 2. Survey and Publication of the Post Roads. Communicated to the House of Representatives, April 27, 1790." (In *American State Papers. Miscellaneous. Volume II*. Washington: Gales and Seaton, 1834, p. 8.)
- 11 U.S. Congress, House (2nd Congress, 1st Session), "A bill to establish the post-office and post-roads within the United States." Philadelphia: Childs and Swaine, 1791, p. 7.
- 12 George B. Kulp, *Families of the Wyoming Valley, Sketches of the Bench and Bar of Luzerne County, Pennsylvania*. Wilkes-Barre, PA, 1890, vol. III, p. 1054.
- 13 Litchfield (Conn.) Historical Society, "A History of the Litchfield Law School." At http://www.litchfieldhistoricalsociety.org/history/law_school.php.
- 14 Charles S. Bradley, "The Bradley Family and the Times in Which They Lived." *Records of the Columbia Historical Society*. Washington, D.C., 1903, vol. 6, pp. 123–142.
- 15 John, *op. cit.*,
- 16 *Connecticut Mirror*, vol. XXI no. 1055 (Sept. 19, 1829), p. 2.
- 17 During the mid-1820's, the Post Office received each year about 6,000 bids seeking over 400 different carriage contracts. The 400 contracts covered carriage in different regions in different years on a rolling basis. John, *op. cit.*, p. 94.
- 18 John, *op. cit.*, p. 106.
- 19 Charles S. Bradley, *op. cit.*
- 20 See for example *New Hampshire Sentinel*, vol. XXXI, no. 44 (Oct. 30, 1829), p. 3.
- 21 John, *op. cit.*, p. 70.
- 22 The Clerk of the House was directed to purchase 5 copies of Bradley's map on December 18, 1804. U.S. Congress, House (8th Congress, 2nd Session), *Journal*. City of Washington: Samuel Harrison Smith, 1804 [but 1805], p. 136.
- 23 *The Eastern herald And Gazette of Maine*, Feb. 27, 1797, p. 3.
- 24 *Gazette of the United States*, vol. X no. 1269 (Oct. 3, 1796), p. 3.
- 25 U.S. Congress, Senate (21st Congress, 2nd Session), "No. 109. Condition of the Post Office Department. Communicated to the Senate, March 3, 1831." (In *American State Papers. Post Office Department*. Washington: Gales and Seaton, 1834, pp. 305, 307, 308, and 309.)
- 26 *New Hampshire Sentinel*, vol. XXXI no. 44 (Oct. 30, 1829), p. 3.
- 27 Dimensions obtained from examples held by the Library of Congress and bearing call numbers G3700 1796 .B72 Vault (1796 map), G3700 1804 .B7 Vault Oversize (1804), and G3700 1825 .B7 TIL (1825).
- 28 Wheat and Brun, *Maps and Charts Published in America Before 1800*. New Haven: Yale University Press, 1969, pp. 25–26 (item 127).
- 29 The Library of Congress holds the copy submitted by Bradley for copyright (call number G3700 1796 .B72 Vault), the verso of which bears the original deposit slip.
- 30 Wade & Gideon, *op. cit.*
- 31 The three states of the four-sheet map are also described in Wheat and Brun, *ibid.*, p. 26 (items 28–30).



Figure 4a. Bradley, 1796. Comparison of part of Kentucky and the Old Northwest as depicted on the three maps. Courtesy of the Library of Congress, Geography and Map Division.



Figure 4b. Bradley, 1804. Comparison of part of Kentucky and the Old Northwest as depicted on the three maps. Courtesy of the Library of Congress, Geography and Map Division.



Figure 4c. Bradley, ca. 1825. Comparison of part of Kentucky and the Old Northwest as depicted on the three maps. Courtesy of the Library of Congress, Geography and Map Division. [Editor's Note: Color and brightness enhanced for clarity using PhotoShop.]

- It should be noted that Wheat and Brun erroneously refer to the 1804 map as "state V" of the 1796 map.
- 32 John Hessler, unpublished conversation at Library of Congress Geography and Map Division, Washington, D.C., Feb. 16, 2010.
- 33 See Wade & Gideon, *op. cit.*
- 34 Morris Bishop, "Louise Phillipe in America." *American Heritage Magazine*, vol. 20 no. 3 (April, 1969).
- 35 Wade & Gideon, *op. cit.*
- 36 Abraham Bradley, junr., Letter to Thomas Jefferson, Aug. 29, 1803. *The Thomas Jefferson Papers Series 1. 1651-1827. General Correspondence*. Library of Congress, Washington, D.C.
- 37 "Disputed Indian Boundary." *Salem Gazette*, vol. XX-VIII no. 27 (Nov. 1, 1814), p. 3.
- 38 Wade & Gideon, *op. cit.*
- 39 U.S. Congress, Senate (21st Congress, 2nd Session), *op. cit.*
- 40 Wade & Gideon, *op. cit.*
- 41 U.S. Congress, Senate (21st Congress, 2nd Session), *op. cit.* p. 307.
- 42 U.S. Congress, House (17th Congress, 2nd Session), "House Doc. 96. Letter From the Secretary of the Treasury Transmitting Statements, Shewing [sic] The Newspapers, Journals, Charts, Instruments, Maps, &c." Washington: Gales & Seaton, February 25, 1823, pp. 8-9. Similar reports were submitted by the Secretaries of the Navy, State and War.
- 43 Ben A. Smith and James W. Vining, *American Geographers, 1784-1812*. Westport, CT: Praeger Publishers, 2003, pp. 152, 274-75.
- 44 William Charles Cole Claiborne, *Official Letter Books 1801-1816*, ed. Dunbar Rowland. Jackson, Miss., 1917, vol. 3, pp. 97-98 (Quoted in Walter Ristow, *American Maps and Mapmakers*. Detroit: Wayne State University Press, 1985, p. 140.) There is some disagreement about which Lafon map was sent by Claiborne: Ristow argues that it was a never-published or now-lost 17-sheet map of the Lower Mississippi, advertised in the *National Intelligencer and Washington Advertiser* of Nov. 22, 1805. Others assert that it was Lafon's *Carte Generale du Territoire d'Orleans* (Alfred E. Lemmon, John T. Magill and Jason R. Wiese, eds., *Charting Louisiana*. New Orleans: Historic New Orleans Collection, 2003, p. 126.) In either case, the map sent by Claiborne would have had to be a manuscript fair copy or a pre-publication proof.
- 45 U.S. Congress, Senate (21st Congress, 2nd Session), *op. cit.* p. 311-312.
- 46 Abraham Bradley, *TABLE of POST-OFFICES in the United States...* Philadelphia, Nov. 2, 1796.
- 47 Ristow, *op. cit.*
- 48 Wesley Everett Rich, *History of the United States Post Office to the Year 1829*, Cambridge, MA: Harvard University Press, 1924, p. 82.
- 49 U.S. Congress, House (19th Congress, 2nd Session), "No. 94. Letter From the Postmaster General Transmitting A Report of General Bernard, Of Surveys of Routes For a Post Road From Baltimore to Philadelphia." Washington: Gales & Seaton, February 12, 1827.
- 50 Silvio A. Bedini, "Seth Pease, Astronomer Surveyor of the Public Lands, Part 2." *The American Surveyor*, vol. 3 no. 2 (March/April, 2006), p. 76 ff.
- 51 Kent Memorial Library (Suffield, CT), "Gideon Granger, Jr. (1767-1822)." At <http://suffield-library.org/localhistory/granger.htm>.
- 52 U.S. Congress, House (17th Congress, 1st Session), "No. 508. Longitude of the Capitol. Communicated to the House of Representatives, January 9 and March 19, 1822." (In *American State Papers. Miscellaneous. Volume II*. Washington: Gales and Seaton, 1834, pp. 762, 768.)
- 53 Jedidiah Morse, *The American Geography*. London: John Stockdale, 1792 (2nd ed.), p. i.
- 54 Wheat and Brun cite a second example at the British Museum (now British Library), but as of the time of publication this copy has not been located.

