



Postal Service Contributions to National Infrastructure

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Executive Summary

Throughout its 220-year history, the Postal Service has been an instrument of national infrastructure development. The political and commercial sectors alike have freely used postal resources to foster industry and develop the communications and commercial foundation on which the national culture, economy, and government have grown.

Realizing that an informed citizenry was essential for a democracy to be successful, America's first politicians authorized highly subsidized postage rates for a nascent newspaper industry that created the greatest proliferation of newspapers the world had ever seen and a national market for information long before there was a national market for goods. As early as 1785, Congress authorized government-sponsored stagecoach service primarily for mail and newspaper transportation, and until the advent of railroads, subsidized stagecoaches were the principal means of intercity public transportation. The constitutional power to establish post roads was seized upon to expand the national role in road development, leading by 1840 to a 150,000-mile network of post roads binding the nation into an integrated whole.

The first telegraph line in the United States was operated by the Post Office. Railroads were established under private ownership, but transportation of the mail heavily supported their growth and provided a counterweight to their monopolistic tendencies. The Post Office Department was the first government entity to promote commercial air transportation, in the face of initial congressional skepticism. The Aerial Mail Service opened the first airfields, towers, and weather stations, and mail contracts provided the initial support for what eventually became a great industry.

Many agencies of the government turned to the Post Office — as the entity with the greatest presence and reach into every corner of the country, to help meet their own missions. The Post Office registered aliens and kept track of their addresses for example, and became the contact point for draft registration military recruitment. Congress established the postal savings system in 1911 to meet the need for a safe, convenient, and unquestionably solvent vehicle for small savers who needed a banking relationship, serving this purpose for 55 years.

The commercial business sector has thrived as a customer of the Postal Service, of course, but it has also put to use innovations that were developed by the Postal Service — such as the best maps available in the earliest days of the republic, the ZIP Code pattern of geographical designation used widely for research and by other distribution entities, and the intermodal rail transportation concept originally developed for transport of the mail.

The report of the Kappel Commission in 1968 promoted the concept that the Postal Service is strictly a business, and that its resources should not be used to pursue ends unrelated to its core mail delivery function. This stemmed partly from a perception that political involvement was an impediment to efficient mail service, but it represented a sharp break from past history, when the country often used postal resources to achieve broader public purposes. With the Postal Service's core business under technological and competitive attack today, the question arises once again whether the infrastructure needs spawned by the digital revolution have created service voids that the Postal Service, with its grounding in physical communications, can help the nation to bridge.

The challenges facing the nation in 2012 are different from those of the past, but perhaps no more daunting. The digital revolution is transforming communication and creating new infrastructure demands. The vulnerabilities of the digital age can be serious, especially for those disconnected and left behind, and even newer forms of disruptive technology are arriving — from smart phones to additive manufacturing that moves production from the factory to the workshop.

During this period of inventive turbulence, the Postal Service may again be able to serve the broader public interest by supporting the nation's infrastructure. The Postal Service's role in the physical world leaves it uniquely qualified to ensure robust, neutral, and secure links across the nation as it has always done. By providing safety net services, the Postal Service could keep digital refugees connected to communications, commerce, and the government. As the originator and custodian of the national address system, the Postal Service is well-positioned to offer an authentication platform that links an individual to an address and allows the replication in the digital space of the secure connections the Postal Service has provided in the physical space. In undertaking these and other efforts to bridge infrastructure gaps, the Postal Service would not be breaking new ground but hewing closely to its longstanding tradition of enabling the national infrastructure.

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Postal Service Contributions to National Infrastructure

Every American is familiar with the Postal Service in its role as the direct distributor of paper messages to every populated corner of the country. As the digital revolution challenges the contemporary value and relevance of that role, it could be important to realize that in the 22 decades of its existence, the Postal Service has also contributed mightily to the development of an evolving national infrastructure for communications and commerce that extends well beyond its own realm of direct message delivery. Both the national government and the commercial business sector have found the Postal Service to be an indispensable tool for fostering industry and developing the communications and commercial foundation on which the national economy grows. This has been true since the very first days of the republic, when both the Articles of Confederation and the Constitution provided for postal powers as explicit elements of federal responsibility, and it has endured through our history as postal resources were used to expand the foundation for commerce and communication through every stage of our economic development. This paper provides an overview of these Postal Service developmental contributions, in the thought that this historical perspective can help inform the contemporary debate on what America needs from the Postal Service today.

From its European origins extending into the colonial 18th century, the nascent Post Office was organized and controlled by the king and royal favorites as a monopoly source of revenue for the state, much like the customs service. The aim of the enterprise was profit rather than service, and rates were set as high as the market would bear. Much of the pre-Revolutionary postal history is the growing colonial resentment of the British Post Office as “an oppressive agency of taxation,” exploiting its complete monopoly of letter carrying and sending every pound of surplus revenues back to England.¹ Benjamin Franklin was dismissed as deputy postmaster general in 1774, ostensibly for allowing Crown letters to be read, but in reality for his vigorous arguments that postage should be a fee for service rather than a form of taxation.² One of the first actions of the Continental Congress in 1775 was to establish a Post Office with Franklin as the first postmaster general.³ The framers of both the Articles of Confederation and the Constitution provided the national government with postal powers, and rejected proposals that the Post Office should be a revenue producing agency.⁴ However, for another 60 years, the Post Office was expected to pay its way, limiting its service to what its revenues could support. Even within this constraint, the Post Office has served as an instrument for achieving national goals from its earliest days.

¹ Clyde Kelly, *United States Postal Policy*, (New York: 1931), p. 14.

² *Ibid.*

³ *Ibid.*, pp. 8-18.

⁴ *Ibid.*, p. 36.

Newspapers Were the First Postal Subsidized Industry

“From its creation,” writes historian David Henkin, “the U.S. Post Office was committed principally to facilitating the wide circulation of political news.”⁵ America’s first politicians realized that for democracy to be successful, an informed citizenry was essential. The diffusion of political knowledge could be achieved through the free distribution of public information via the congressional franking privilege, and through newspapers, both dependent on the mail. The earliest debates about postal policy all revolved around the franking privilege and the need to minimize the postage on newspapers in order to develop an enlightened public opinion.⁶ The result was the institution of incredibly low postage rates on newspapers. For example, the postal act of 1792 provided that a bulky newspaper could be sent any distance for a cent and one half. Two years later, newspaper rates were liberalized even further, so that a newspaper could be conveyed any distance within a state for a penny. Magazines were also granted preferential rates in the Act of 1794, though they remained far more costly than newspapers.⁷ Under the 1792 law newspaper editors anywhere in the nation could exchange copies with one another free of postage charge, adding significantly to their (and their readers’) access to information from distant areas.

According to the most comprehensive history of the Post Office, Fuller’s *The American Mail*, the generous postage policy for newspapers “was perhaps the most important single element in the development of the nation’s press” ... and “made possible the greatest proliferation of newspapers the world had ever seen.”⁸ The number of newspapers in the country grew from 38 in 1775 to 1,200 in 1822, and Alexis de Tocqueville described the American press as “the power which impels the circulation of political life through all the districts of that vast territory.”⁹ By underwriting the low-cost transmission of newspapers throughout the United States, wrote Richard John, “the central government established a national market for information sixty years before a comparable national market would emerge for goods.”¹⁰

The extremely low price of newspapers contributed to the raucous and even raffish nature of the American press since, as an English peer observed in the 1830s, “Newspapers are so cheap in the United States that the generality even of the lowest order can afford to purchase them. They therefore depend for support on the most ignorant class of people.”¹¹ Alexander Mackey, an English traveler in the early 19th century, contrasted the number and variety of newspapers in America with those in

⁵ David Henkin, *The Postal Age*, (Chicago: University of Chicago Press, 2006), p. 21.

⁶ Wayne E. Fuller, *The American Mail: Enlarger of the Common Life*, (Chicago: University of Chicago Press, 1972), p. 110.

⁷ Richard R. John, *Spreading the News: The American Postal System from Franklin to Morse*, (Cambridge, MA: Harvard University Press, 1995), p. 37.

⁸ Fuller, *The American Mail*, pp. 111-2.

⁹ President’s Commission on Postal Organization (Kappel Commission), *Towards Postal Excellence: The Report of the President’s Commission on Postal Organization*, (Washington D.C.: U.S. Government Printing Office, 1968), Annex Vol. 3, p. 1.8 and Fuller, *The American Mail*, p. 115.

¹⁰ John, *Spreading the News*, p. 37.

¹¹ Fuller, *The American Mail*, p. 116.

England, and remarked that “in America the vast body of the rural population peruse them with the same avidity and universality as do their brethren in the towns.”¹²

In the first half of the 19th century, the Post Office was largely a newspaper delivery service.¹³ The domination of the distribution network by newspapers had its downside in the relatively slow development of private correspondence, whose high postage rates subsidized the newspaper industry. By 1832, newspapers generated only a seventh of postage revenue yet constituted 95 percent of weight.¹⁴ Postage rates for letters were fixed in the Act of 1792 and remained high for 50 years.¹⁵ They were so expensive as to be well beyond the reach of most citizens. Rates were based on distance and the number of pages, with an envelope a prohibitive extravagance. In an age when few laborers made more than a dollar a day, a one-page letter cost 6 cents to send 30 miles, and 25 cents to send 450 miles.¹⁶ To send three sheets from Washington to Boston cost 75 cents,¹⁷ an amount that could also buy a bushel of wheat, capable of producing 60 pounds of flour.¹⁸ These rates were in effect when newspapers could be sent to any place in the nation for one and a half cents. In exchange for its distinctive culture of public discourse, private correspondence languished until rates were lowered dramatically in the middle of the 19th century.

Stagecoaches Became Favored Transportation

In addition to subsidizing the development of the popular press, the Post Office also supported the development of intercity public transportation before the advent of railroads.¹⁹ Steamships were supported and used to deliver mail but were never a favored option because they were limited to navigable waterways, and generally did not adhere to fixed schedules.²⁰ If the delivery of letters had been its only concern, the Post Office could have depended on post riders to transport the mail between cities. Individual horsemen could not easily handle bulky newspapers, however, and as a result the government began to foster an “interlocking relationship between the postal system, the stagecoach industry, and the periodical press that would soon become a defining feature of the post-constitutional communications infrastructure.”²¹

The first government-sponsored stagecoach service was authorized in 1785 by Congress under the Articles of Confederation, with Congress’s “intention in having mail transported by stage carriers ... not only to render its conveyance more certain and secure, but by encouraging the establishment of stages to make intercourse between different parts of the Union less difficult and expensive.”²² By 1828 the relationship

¹² Ibid., p. 117.

¹³ Daniel R. Headrick, *When Information Came of Age*, (New York: Oxford University Press, 2000), p. 191.

¹⁴ John, p. 38.

¹⁵ Kelly, p. 44.

¹⁶ Fuller, *The American Mail*, p. 111.

¹⁷ Kelly, p. 53.

¹⁸ John, p. 159.

¹⁹ Headrick, p. 191.

²⁰ John, p. 92.

²¹ Ibid., p. 93.

²² Kelly, pp. 30-1 quoting motion by Charles Pinckney, delegate from South Carolina, in 1786.

between the national government and the stagecoach industry was well established. As an explicit subsidy, the law allowed contracts to carry the mail by coach to be a third higher than a bid to carry the mail by horseback. Congress favored the coaches because they carried passengers and made their own travels easier. Postal officials favored the coaches because they offered greater security (passengers could help fend off robbers) and, because of the passengers, tended to stick to a predictable schedule. Contracts to carry the mail provided the foundation for growth of the stagecoach industry; stagecoach proprietors and lobbyists became a familiar and lively presence in Washington. Postal subsidies accounted for from a third to a half of the stagecoach industry's total revenues.²³ The historian who has studied the subject most deeply concluded "Had the government not underwritten the stagecoach industry with its postal subsidies, it would have been difficult, if not impossible, for this important industry to have attained such an impressive level of service, particularly in the thinly settled portions of the South and West."²⁴ "By bringing the postal system and the stagecoach industry together into a new configuration, by insisting that stagecoach service be coordinated in accordance with a regular schedule, and, most important, by establishing a network of distribution centers to coordinate the whole, the central government had created a communications infrastructure that was largely independent of the preexisting routes of maritime trade and that far outstripped anything that had existed before."²⁵

Post Roads Bound the States into a Union

Stagecoaches needed roads on which to travel, and in the early years of the republic, determination of responsibility for road building was a hotly contested political and constitutional issue. The Constitution provided no authority for the national government to construct the roads so necessary for development beyond the seaboard, and certainly no authority to override the preferences of the states through which roads traversed. However, the phrase in the Constitution giving Congress the power to "establish Post Offices and post Roads" provided an opening for national influence on road construction and maintenance.²⁶

A contentious constitutional debate in the early decades of the 19th century centered on what was intended by the word "establish." As Thomas Jefferson phrased the issue, "Does the power to *establish* postroads given you by Congress, mean that you shall *make* the roads, or only *select* from those already made those on which there shall be a post?"²⁷ There were no appropriations for roads in the Washington or Adams administrations, and Jefferson resorted to a negotiated agreement among the states of Virginia, Maryland, and Pennsylvania to allow the Cumberland Road to proceed. President Madison vetoed a bill to provide a general fund for road construction in 1817, concluding that neither the commerce nor the general welfare clauses of the

²³ John, p. 98.

²⁴ *Ibid.*, p. 99.

²⁵ *Ibid.*, p. 110.

²⁶ U.S. Const. art. I, § 8.

²⁷ Lindsay Rogers, *The Postal Power of Congress: A Study in Constitutional Expansion*, (Baltimore: The Johns Hopkins Press, 1916), p. 62.

Constitution conveyed the necessary authority. President Monroe agreed and recommended that a constitutional amendment be adopted to do so.²⁸ President John Quincy Adams, John C. Calhoun, and Henry Clay variously argued the other side and leaned heavily on the authority provided for post roads and military roads. While the national government only rarely supported road construction directly until the end of the 19th century, it did make intelligent use of its power to designate post roads as the skeleton of a distribution network covering the nation.

Although the Supreme Court of the United States never directly addressed the question, a well-reasoned and influential 1838 opinion by the Kentucky Supreme Court seemed to cement a sweeping role for the post road power of Congress. It said that the postal power “being necessarily exclusive, plenary and supreme, no state can constitutionally do, or authorize to be done, any act which may frustrate, counteract, or impair the proper and effectual exercise of it by national authority.... [A]s roads and good roads are indispensable to the effectual establishment of postroads, the supreme power to ‘establish postroads’ necessarily includes the power to make, repair and preserve such roads as may be suitable....”²⁹

By then the constitutional argument had receded in the face of growing public demand for postal service as the nation grew and expanded to the south and west. Every new settlement petitioned at the earliest opportunity for designation as a post office and for access by a post road. Members of Congress were only too glad to support these requests, and constitutional objections gradually diminished. “Each congressman was eager to open up his own district, and the best way to do so was to extend post roads to rather unlikely places,” observed a postal historian. “The post road was the early nineteenth century equivalent of the ‘pork barrel.’”³⁰ The South, where suspicion of national government was highest, made the most clamor for postal access.³¹ By 1840, there were 155,000 miles of post roads connecting 13,468 post offices linking nearly every settlement in the country to every other.³²

Once a road became a post road, local settlers were bound by the postal law of 1825 to keep it in good repair and free of obstructions, at the risk of losing the post road designation.³³ When free mail delivery to homes and businesses began in some of the larger cities in the 1860s, smaller towns and then rural areas also wanted it. Congress gradually authorized delivery to smaller and smaller cities, so that by 1887 delivery was authorized in cities as small as 10,000. At his own discretion, the postmaster general could extend delivery to even smaller towns. The Post Office made this service conditional on towns building and maintaining good streets and sidewalks and numbering their houses.³⁴

²⁸ Ibid., pp. 68-9.

²⁹ Ibid., p. 80, citing *Dickey v. Maysville, Washington, Paris, and Lexington Turnpike Road Co.*, 7 Dana (37 Ky.) 113 (1838).

³⁰ Gerald Cullinan, *The United States Postal Service*, (New York: Praeger, 1973), p. 46.

³¹ Fuller, *The American Mail*, p. 83.

³² Kappel Commission, Annex, Vol. 3, p. 1.11.

³³ Fuller, *The American Mail*, p. 86.

³⁴ Ibid., p. 74.

Delivery to rural areas was also made conditional on maintaining good roads along the delivery routes. By threatening farmers with the loss of their mail service if they failed to keep their roads in good repair, the Post Office made southern farmers road conscious and helped force them into a national good-roads movement. As early as 1899, the Post Office Department declared that no rural delivery routes would be established in places where the roads were not passable throughout the year, and hundreds of rural delivery route petitions were rejected because of poor roads.³⁵ “At first,” writes postal historian Fuller, “the good-roads movement merely aimed at teaching farmers how to improve their roads enough to prevent the loss of their rural mail routes; but when good road building and repair seemed beyond the capability of local governments, national aid for local road building became the movement’s principal goal.” Whatever vestige of constitutional concern over limits to the postal road clause had disappeared by 1916, when Congress enacted legislation “to provide that the United States shall aid the States in the construction of rural post roads.”³⁶ Without the post road clause in the Constitution, and adept, sustained use of it over most of the nation’s history, it is safe to say that our national road network would be considerably less developed than it is today.

The Mail Enabled a Takeoff in Communication

The domination of the mail by newspapers, heavily subsidized by very high postage rates for letters and a lingering sentiment that postal service should pay its own way, did not begin to change until 1845. Although influenced to some extent by the cheap postage movement that originated in England, the issue was forced more directly by emergence of a private courier delivery service between major cities that sharply undercut official postage rates.³⁷ Congress revamped the postage scale that year to 5 cents per half ounce for a distance of 300 miles or less, and 10 cents for longer distances. Another law in 1851 eliminated the distance distinction, provided for prepaid postage at the rate of 3 cents for a half ounce to anywhere in the country, prohibited private express competition, and made correspondence “a fundamentally affordable activity” for the first time in our history, bringing the expanding system of post roads within the grasp of millions.³⁸ Transforming the post from a broadcast medium for spreading news to an interactive communications network made post offices a place where ordinary people congregated and helped transform the nature of public architecture.³⁹

The institution of cheap postage greatly increased use of the mails and consequently the magnitude of the challenge to transport, sort, and deliver a rapidly growing volume of mail, increased even further by an 1885 reduction in rates to 2 cents for a full ounce. Clyde Kelly, a Member of Congress who specialized in postal affairs and wrote the first

³⁵ Wayne E. Fuller, *RFD: The Changing Face of Rural America*, (Bloomington: Indiana University Press, 1964), pp. 182-3.

³⁶ Fuller, *The American Mail*, pp. 106-7.

³⁷ Lucille J. Goodyear, *Spooner vs. U.S. Postal System*, American Legion Magazine, January 1981, <http://www.lysanderspooner.org/STAMP3.htm>.

³⁸ David Henkin, *The Postal Age*, (Chicago: University of Chicago Press, 2006), pp. 2 and 22.

³⁹ *Ibid.*, p. 66.

comprehensive analysis of postal policy, believes that the postal department's response to the huge increase in demand had profound implications for the nation's economic development. "The United States Postal Establishment," he wrote in 1931, "originated the quantity production idea, which is the basic principle underlying the second great industrial revolution." Quantity production is the economic law that the greater the volume of a standard product or service, the lower the unit cost. Instead of setting prices based on adding the highest profit a producer could hope to make to his established cost, under quantity production the producer assumes that sales and revenues can be increased as the price is lowered. Although that concept led the American automobile industry to mastery of the world market when Kelly was writing, he claims that the idea did not arise spontaneously but "was generated by the United States Postal Service. Lower unit cost through the increased volume due to decreased prices was patiently and persistently proved by the Post Office for half a century before its implications were realized and put into practice by private industry."⁴⁰

Nurturing the Telegraph

Although road improvements made mail delivery quicker and more dependable, a growing market economy provided competitive advantages to those with the earliest access to information. An early postmaster general, John McLean, was a visionary who first promoted a role for his department in developing the postal telegraph. "If it were possible to communicate by telegraph all articles of intelligence to every neighborhood in the Union" he declared as early as 1827, it would be "proper to do so." He was thinking then of an optical telegraph such as the one developed in France, consisting of a network of line-of-sight signaling devices on towers. If properly staffed and if the weather cooperated, operators could transmit messages from tower to tower at a rate of 250 miles per day.⁴¹

Congress failed to fund McLean's vision, but it influenced the thinking of Samuel F.B. Morse, the inventor of the electric telegraph. Morse saw his invention as belonging in the public domain and more specifically as part of the General Post Office.⁴² The famous message "What hath God wrought?" flashed from the Capitol to Baltimore on a telegraph line under de facto control of the Post Office on May 24, 1844.⁴³ In 1845, Congress appropriated \$8,000 for maintenance of the telegraph line, placing it under supervision of the postmaster general, and a year later telegraph lines had been extended to New York, Boston, Buffalo, and Philadelphia. The postmaster general urgently recommended government ownership of the telegraph, and Morse offered to sell his invention to the government for \$100,000 to prevent its falling into private hands.⁴⁴

⁴⁰ Kelly, pp. 88-9.

⁴¹ John, pp. 86-7.

⁴² Ibid., p. 87.

⁴³ Ibid., p. 88, and U.S. Postal Service Historian, "Telegraph: Early Postal Role," May 2008, <http://about.usps.com/who-we-are/postal-history/telegraph.pdf>.

⁴⁴ Fuller, *The American Mail*, p. 174.

But Congress balked at further appropriations, on the grounds that its own demand did not justify substantial investment, and the postmaster general was forced to sell the government lines in 1847.⁴⁵ Amos Kendall, a former postmaster general, partnered with Morse and obtained the capital that allowed the telegraph to spread throughout the world.⁴⁶

The postmaster general urged incorporation of the telephone and telegraph systems into the postal establishment from 1913 to 1915, arguing that “the first telegraph line in this country was maintained and operated as a part of the postal service, and it is to be regretted that Congress saw fit to relinquish this facility to private enterprise.”⁴⁷ President Woodrow Wilson placed the telegraph under control of the postmaster general during World War I, but Congress elected to return it to private industry in 1919, finally breaking in this country the link between postal and telegraph messaging that has persisted in most other parts of the world.

Carrying the Mail Reined in Power of the Railroads

The national government did not directly subsidize or invest in the development of railroads, but it provided substantial benefits in surveys, rights of way, grants of land, and as much as \$5 million in tariff relief in the 1830s, based on the great benefit that railroads could bring to carrying the mail. “Since this had been done for the railroads so that they might be used to improve the carrying of the mails,” writes one historian, “it came as a shock to postal authorities to learn that railroad managers, like the stagecoach operators, were determined to squeeze every penny they could from the Post Office.”⁴⁸ The postmaster general’s report for 1834 was the first to urge use of the railroads for transportation, but he warned that they “may become exorbitant in their demands and prove eventually to be dangerous monopolies.”⁴⁹

This proved to a prescient warning, as the railroads used their monopoly to treat the Post Office “like a cast-off beggar,” charging extremely high rates — 200 to 300 percent more than the cost of stagecoach transportation.⁵⁰ Although Congress had authorized paying as much as \$75 per mile per year for carrying the mail (25 percent more than stages were paid), the railroads demanded and got up to \$320 and provided abysmal service in the bargain.⁵¹

The Post Office provided some counterweight to the railroads’ monopolistic tendencies, one of the most persistent political issues of the 19th century. For example, in 1838 Congress passed legislation declaring every railroad in the United States to be a post road.⁵² The Department succeeded in requiring trains to run at night, over railroad

⁴⁵ Headrick, p. 205.

⁴⁶ U.S. Postal Service Historian, <http://about.usps.com/who-we-are/postal-history/telegraph.pdf>.

⁴⁷ Kappel Commission, Annex, Vol. 3, p. 1.26.

⁴⁸ Fuller, *The American Mail*, pp. 158-9.

⁴⁹ Kelly, p. 126.

⁵⁰ *Ibid.*, p. 127.

⁵¹ Cullinan, p. 63.

⁵² Kelly, p. 126.

opposition, and also laid down regulations on the speed of trains that benefitted travelers as well as the mail. President Theodore Roosevelt, in 1907, threatened to bring railroads under federal control to increase their efficiency “under that clause of the Constitution granting the national government power to establish postroads.”⁵³

The Department carried on a decades-long dispute with the railroads over what they charged for moving the mail. From the 1870s to 1912 it was a matter for discussion in every Congress, and five major investigations of the issue were carried out in that time.⁵⁴ Even though costs for passengers and freight came down steadily as efficiency increased, mail transportation rates fixed in the 1870s and based on weight were not changed. In 1910 the mail was being charged five times what an equivalent amount of freight would cost.⁵⁵ Finally, in 1916, as a product of the Progressive movement, Congress changed the law to allow the Post Office to pay according to the space used rather than the weight of the mail, and put rates in the hands of the Interstate Commerce Commission, dramatically reducing costs even as volume was increasing with the advent of Parcel Post. The railroads’ opposition may have been muted by the threat of even more drastic action: A prominent political scientist concluded in a book published that year “if Congress decides to nationalize the railways of the country it may constitutionally do so under the power to establish postroads.”⁵⁶

Despite the contentious nature of its relationship with the railroads, the Post Office’s increasing use of the rails not only improved service but also contributed to the development of this vital industry.⁵⁷ Indeed, passenger travel by rail survived longer than it otherwise would have because mail travelled on passenger trains and helped compensate for lost passenger traffic. In 1966, mail revenue accounted for 35 percent of all revenue from passenger train operations.⁵⁸

Parcel Post was instituted in 1913 over the prolonged opposition of the railway express companies, which fought to preserve the 4-pound limit on what could be mailed, and of small-town merchants who correctly foresaw a competitive threat from a national marketplace. The express companies did not deliver in rural areas, where 54 percent of Americans still lived in an agricultural economy. Although the express companies were offshoots of the railroads, their corporate structure was separate and this exempted them from regulation by the Interstate Commerce Commission until 1906, resulting in a complicated and expensive rate structure.

The institution of rural free delivery, which became fully established in 1902, created a delivery infrastructure that was readily adaptable to Parcel Post. Rural mail carriers found that they could augment their income by using space in their wagons to bring parcels and packages to patrons along their routes, an unofficial experiment that showed Parcel Post was useful and profitable.⁵⁹ Parcel Post was endorsed in the

⁵³ Rogers, p. 150.

⁵⁴ Fuller, *The American Mail*, p. 184.

⁵⁵ *Ibid.*, p. 186.

⁵⁶ Rogers, p. 152.

⁵⁷ Cullinan, p. 63.

⁵⁸ Kappel Commission, vol 3., 1.17.

⁵⁹ Fuller, *RFD: The Changing Face of Rural America*, pp. 115-6.

Democratic, Republican, and Progressive party platforms in 1912, and once launched, it provided the foundation for a great mail order industry. Although developed and promoted as a boon to farmers, it also proved valuable to city stores. Sears Roebuck & Company received five times more orders in 1913 than in 1912.⁶⁰ By 1931, a contemporary writer called Parcel Post “the greatest distributing organization on earth,” accounting for 70 percent of the volume of the mails with 800 million parcels delivered yearly.⁶¹

Air Mail Launched Commercial Aviation

The Post Office Department was the first entity in the national government to discern the promise of air transportation. The War Department had turned down offers from the Wright Brothers on three separate occasions, and by 1908 the national government owned only one dilapidated airplane. The Post Office displayed more interest, however, and authorized the first experimental mail flight on Long Island in 1911. The pilot was unpaid but the postmaster general gave him a dollar from his own pocket “to make this arrangement official.”⁶² The Department asked for appropriations from Congress to support air mail beginning in 1912, but a skeptical Congress refused for four straight years. Nevertheless, the Department authorized air show demonstrations in many parts of the country to promote the promise of air delivery, and in 1916 Congress finally agreed to provide a \$50,000 appropriation, followed in 1918 by an appropriation of \$100,000 to establish the first experimental air route, between Washington and New York.⁶³ That same year the U.S. Aerial Mail Service was established, first carrying the mail only by day, but within a few years by night as well.

The Aerial Mail Service opened airfields, towers, beacons, weather stations, and communications facilities to support the extension of its routes, and it welcomed offers from cities to build their own facilities as a means of attracting air mail service. Air mail pilots established many flying records in the early days, the most celebrated of whom was Charles Lindbergh.

In 1925, Congress passed the Kelly Act “to encourage commercial aviation and to authorize the Postmaster General to contract for mail service.”⁶⁴ This policy change ended government mail flights by 1928 but effectively launched the commercial air industry, which was totally dependent on mail contracts in its early days.⁶⁵ The postmaster general became the most powerful figure in civil aviation, but in general used his power to encourage larger planes and passenger travel, perceiving that growth of the commercial industry would eventually decrease the need for government subsidies, which were substantial.⁶⁶ As early as 1931, Congressman Kelly could assert that “commercial aviation in the United States has practically been created and

⁶⁰ Ibid., p. 254.

⁶¹ Kelly, p. 187.

⁶² Carroll V. Glines, *Airmail: How it All Began*, (Philadelphia: Tab Books, 1990), p. 34.

⁶³ Ibid., p. 39.

⁶⁴ *The Air Mail Act of 1925 (Kelly Act)*, Public Law 68-359, February 2, 1925.

⁶⁵ Cullinan, p. 135.

⁶⁶ Glines, pp. 95 and 97.

maintained by the postal service. Today a great industry, with billions invested, exists largely because of the helping hand of the postal service."⁶⁷

The commercial air industry has become a backbone of the nation's transportation infrastructure, and to a great extent it owes its early existence to the Post Office that nurtured its development in the face of congressional skepticism. Even today, the air transportation system that allows passengers and freight to reach the remote villages of Alaska is supported in great measure by the Postal Service through the Alaska Bypass program.

The Postal Infrastructure Served Other National Purposes

As the Postal Service extended to every corner of the country, it became the unit of national government with by far the largest presence, reach, and contact with the citizenry. Other departments took advantage of its far-flung presence to help meet their own missions. In many small cities the Post Office building became the federal building, providing a home for outposts of other federal agencies that would otherwise be isolated and dispersed. The Post Office undertook tasks for other agencies as well, such as alien registration and address reporting, draft registration and military recruitment, peddling savings bonds and migratory bird stamps, and distributing income tax forms.⁶⁸ The Postal Inspection Service enforced laws against fraud, gambling, smut, and copyright violations, and cooperated with other law enforcement agencies to police crimes that only tangentially involved the mails.⁶⁹

Most of these activities were arrangements within the executive branch, but Congress too found it useful to deploy postal resources to meet non-postal objectives, when it established a postal savings system on January 1, 1911. Long in legislative gestation and fiercely opposed by the banking industry, the legislation aimed to provide a safe, convenient, and unquestionably solvent alternative for small savers who had no banking relationship.⁷⁰ The system paid two percent interest per year. The minimum deposit was \$1, the maximum, \$2,500. Postal savings became very popular during the Great Depression, when many banks failed, and deposits peaked in 1947 at almost \$3.4 billion.

Eventually, the postal banking system had served its purpose. It had accustomed millions of Americans to the savings habit and made them attractive customers for the banking industry, which added branches and opening hours, raised the interest it paid on savings, and gained government insurance against bank failure. Postal savings deposits declined. The Post Office was running one of the largest banks in the nation,

⁶⁷ Kelly, p. 166.

⁶⁸ Richard B. Kielbowicz, "Preserving Universal Postal Service as a Communications Safety Net," *Seton Hall Legislative Journal*, 2006: p. 398 and Cullinan, pp. 196-9.

⁶⁹ Richard B. Kielbowicz, "Universal Postal Service: A Policy History, 1790-1970," prepared for the Postal Rate Commission, November 15, 2002, pp. 45-6.

⁷⁰ Jean Reith Schroedel and Bruce Snyder, "People's Banking: The Promise Betrayed?" *Studies in American Political Development*, 1994: pp. 173-93.

as a side line, and the reasons that had justified it had largely disappeared.⁷¹ The postal savings system was officially discontinued by an act of Congress in 1966.

By the 1950s, the Post Office was facing operational deficits and in defense it began to focus on the costs of providing so many services and hidden subsidies to other departments of government. Large users of the mails put the costs as high as \$392 million annually.⁷² Postmaster General Summerfield secured legislation in 1953 that allowed the Department to segregate hidden subsidies in its accounting and charge them to the proper departments. For example, airline subsidies were assigned to the proper agencies and Congress and the departments began to be charged for their postage. Once it was realized that using postal resources had costs, other departments became more cautious about using them.⁷³ By the time the Kappel Commission reported in 1968, the value of unreimbursed non-postal services to other government agencies was down to \$26 million per year. The Commission cited this as evidence that the Post Office Department was no longer “a major policy arm of the Government,” and therefore should not be represented in the Cabinet.⁷⁴

Postal Innovations Are Adopted by Private Sector

Use of the national postal system by the private business sector as a customer is well known, as is the oft-quoted statistic that mail-related businesses generate \$1.1 trillion in services and sales, provide some 8.7 million jobs, and account for roughly 7 percent of the nation's gross domestic product.⁷⁵ However, there is another way the Postal Service has helped the commercial sector, and that is by generating innovations that commercial entities can put to their own uses. For example, we have already mentioned former Congressman Clyde Kelly's assertion that the Post Office deserves credit for first demonstrating the quantity production principle which undergirds modern consumerism.

Another example is reported by Richard John in his exploration of the postal system as an agent of change.⁷⁶ Abraham Bradley, Jr., a Connecticut lawyer and topographer who became assistant postmaster general in 1800, conceived and produced an innovative set of maps that soon became the country's most familiar and best used. These maps portrayed every post road in the country and included the schedules of all stagecoaches that served post offices along the way. They were displayed in every post office and included in Jedediah Morse's definitive *Geography of the United States*. “More than almost any other document from the period,” writes John, “Bradley's maps helped stamp the public imagination with an image of the geographical extent of the United States and so hastened the transformation of the ill-defined northern, western, and southern frontier into a clearly demarcated border.” Even today, Bradley's maps are

⁷¹ Cullinan, p. 194.

⁷² Ibid., p. 199.

⁷³ Ibid., pp. 161-2.

⁷⁴ Kappel Commission, p. 47.

⁷⁵ The Direct Communications Group, *The Mailing Industry Jobs Study*, March 2011, http://envelope.org/file_depot/0-10000000/0-10000/1461/conman/2010+Mailing+Industry+Job+Study.pdf, pp. 2-3.

⁷⁶ John, *Spreading the News*.

regarded as the single best source of geographical information on the United States during the 1790s.⁷⁷

Modern-day comparisons exist in the national address database maintained by the Postal Service and in the pervasive influence of the Zone Improvement Program developed by the Postal Service, now known ubiquitously as the ZIP Code. In addition to its intended use for guiding the national mail distribution patterns, the ZIP Code is used extensively by industry for marketing research and decisions, on the congressional web site to help constituents identify their representative in Congress, by public health statisticians to investigate differential health conditions, by retailers to direct customers to their nearest locations on the Internet, and as an essential part of the address verification system that combats credit card fraud. The Census Bureau organizes data into ZIP Code tabulation areas. The state designations decided on by the Postal Service have become the default national abbreviation style, displacing the old Associated Press standard where MS was Miss. and MN was Minn. That the ZIP Code retains its utility today is exemplified by its adoption by Facebook to allow advertisers to target their messages and lonely singles on social media web sites to find similarly inclined individuals in their own areas.

The Postal Service and the express package industry are generally portrayed as competitive rivals, but postal innovations and resources have contributed significantly to the development of companies such as UPS and FedEx. The express companies use the postal addressing and location scheme, of course, and often put their packages into the mail stream for the “last mile” of delivery. FedEx is the Postal Service’s largest contractor, mostly because it uses its otherwise idle fleet of airplanes to carry mail during the day and its own packages at night. The concept of intermodal rail transportation, the dominant growth force in the industry today, was conceived of specifically for the Postal Service to ship mail, but now primarily benefits UPS as the largest user of intermodal rail. The express package industry is regarded today as a model of private industry, and often compared favorably to the Postal Service, but it would be less successful without the ability to use postal resources and innovations to its own ends. Finally, it should be noted that the Postal Service has spawned, through cooperative relationships with companies engaged in postage meters and mail processing technology, and by providing worksharing discounts, an economically significant presorting and mail services industry.

Is the Postal Service More than a Business?

The Kappel Commission, in 1968, taking note of the decline in individual correspondence and the growth of business and advertising mail, as well as the negative effects of political involvement, concluded that “the Post Office is a business.”⁷⁸ If it were being established today, the Commission noted, “it might well be operated by a privately-owned regulated corporation not unlike the companies which operate other

⁷⁷ Ibid., p. 70.

⁷⁸ Kappel Commission, p. 47.

communication and transportation services in this country.” Indeed, a majority of the commissioners (mostly themselves from the business community) favored privatization if private investors could be found.⁷⁹

The Commission recognized the “vital role” the Post Office had played in the development of “the new nation,” but concluded that all of this was at an end. The nation had a plethora of communication and transportation networks that needed no subsidies and were regulated by other agencies, unreimbursed services to federal agencies were minimal, and “the Federal Government no longer needs the local post office to make its presence known.”⁸⁰ From this starting point, the Commission recommended that users of the Postal Service should pay its costs, that appropriations (subsidies) for public services should be eliminated, and that it should be strictly insulated from the other functions of government.

Much of postal history since the Kappel Commission report can be read as an attempt to realize its vision that the Postal Service is a business, rather than an instrument of government to achieve broad national purposes. The 2003 President’s Commission reiterated that theme and recommended that the Postal Service “stick to its core mission” and provide “additional governmental services (such as passports) [only] when in the public interest and when the Postal Service is able to recover the full costs of providing such services.”⁸¹

When the growth in mail volume that financed this conception peaked in 2006, the limitations of the “strictly a business” model have gradually become apparent. As Postmaster General Donahoe noted recently, if the Postal Service were indeed a business it would now be in bankruptcy proceedings. Now that the business rationale for the core mail delivery function of the Postal Service has come under technological and competitive attack, perhaps there should be a renewed debate over whether the unique capabilities and resources of the Postal Service can and should be put to other national uses as well.

Congressman Clyde Kelly, a Republican, would certainly argue today that the Postal Service is a national asset that should be deployed to address contemporary problems facing the nation. He concluded in his sweeping volume on postal policy that

Through all past history, whatever political party was in control of the Government, no matter whether the administration or Congress was conservative or progressive, the Post Office has been used in new ways for the promotion of the general welfare.... When new conditions arose where additional benefits could be extended through this nation-wide

⁷⁹ Ibid., pp. 53-4.

⁸⁰ Ibid., p. 46.

⁸¹ President’s Commission on the U.S. Postal Service, *Towards Postal Excellence: Making the Tough Choices to Preserve Universal Mail Service*, (Washington, D.C.: 2003), <http://govinfo.library.unt.edu/usps/offices/domestic-finance/usps/pdf/freport.pdf>, p. 28.

enterprise, there was no hesitation in following the path of national progress.⁸²

Kelly was writing in 1931 when the Post Office was extending commercial air service throughout the country with its contracts and regulatory authority, was heavily supporting rail transportation, was running the country's most secure depository savings institution, was promoting road improvements to bring mail delivery to the most isolated rural areas, was providing stable employment to hundreds of thousands in the depths of the Great Depression, and was using its resources to help many other agencies accomplish their missions.

The challenges facing the nation in 2012 are different from those of the past, but perhaps no more daunting than the challenges of developing a new nation and civilizing a continent. Is there a role for the Postal Service responding to these new needs?

New Challenges, New Opportunities?

We are in the midst of a digital revolution that is transforming communications. The backbone of this revolution — the Internet — is decentralized and fragmented, providing tremendous strength and resiliency but also raising concerns.⁸³

- Some citizens are “digital refugees” — unable or unwilling to take part fully in this new communications environment. As communications and commerce move increasingly online, these refugees may no longer be able to access the historic infrastructures that previously connected them to their fellow citizens. Many are rural residents, who have long relied on the Postal Service to link them to rest of the country.
- There is no overarching framework to help individuals store and manage the elements of their digital life. The digital fragments of people's personal and business relationships are often scattered across numerous websites all over the Internet that may go out of business at any time.
- Digital communications and transactions do not always provide adequate levels of privacy, confidentiality, and security. Every day, there is another announcement that a website has been compromised and personal information stolen. In transactions, it is not always possible to verify that people are who they say they are.
- Lastly, there is no universal, last resort provider to ensure that all have neutral access to important digital infrastructure resources.

⁸² Kelly, pp. 168-9.

⁸³ The disruptive effects of the digital revolution are discussed more fully in U.S. Postal Service Office of Inspector General, *Meeting America's Communications Needs*, Report No. RARC-WP-12-009, April 27, 2012, http://www.uspsig.gov/foia_files/RARC-WP-12-009.pdf, pp. i-ii and pp. 2-3.

The old universal service structures may not be sufficient to meet these concerns. Moreover, beyond the current digital revolution, new revolutions are arriving. Mobile Internet is the frontier of online access. Globalization and urbanization continue; communities disconnected from the global “super grid” are at risk of being left behind. Additive manufacturing — the three-dimensional printing of items using digital blueprints and raw material inputs — has the potential to digitalize goods as earlier technologies digitalized information.⁸⁴ Widespread adoption of this technology would completely transform the current flow of goods and commerce.

Paul Starr, in *Creation of the Media*, calls moments of national decision making in response to new events and technologies “constitutive moments.”⁸⁵ At this constitutive moment, the Postal Service may be well-positioned to fill certain gaps in infrastructure as it has so often in the past. The Postal Service’s longstanding role in the physical world leaves it uniquely qualified to ensure robust, neutral, and secure links across the nation. A few examples illustrate:

- By providing safety net services in both the digital and physical realms, the Postal Service could continue its tradition of binding the nation together and keep digital refugees connected to communications, commerce, and the government.⁸⁶
- As custodian of the nation’s address infrastructure, the Postal Service could offer a secure eMailbox that links a current physical address to a permanent electronic address for every individual or business and combine it with an eLockbox that provides an archive for people’s sensitive legal, medical, and financial information. These services could be part of an open platform to which private sector providers could add additional applications.⁸⁷
- The Postal Service’s history, reputation for trustworthiness, and vast nationwide infrastructure put it in an ideal position to offer digital identity, authentication, and verification services. These services would make it easier for individuals to transact securely across the distance of cyberspace.⁸⁸

Given the possibilities, it is not hard to envisage, through the application of imagination and leadership under the appropriate legal framework, that the Postal Service could continue to foster national infrastructures for the 21st century by bridging gaps and building platforms. The Postal Service would be simply extending the role it has filled for more than 200 years.

⁸⁴ While final goods would remain physical objects, they could be printed locally, avoiding long-distance transportation.

⁸⁵ Paul Starr, *The Creation of the Media*, (New York: Basic Books, 2004).

⁸⁶ For more information on ways the Postal Service can assist in building U.S. infrastructure, see U.S. Postal Service Office of Inspector General, *Meeting America’s Communications Needs*, Report No. RARC-WP-12-009, April 27, 2012, http://www.uspsoidg.gov/foia_files/RARC-WP-12-009.pdf and *The Postal Service Role in the Digital Age Part 2: Expanding the Postal Platform*, Report No. RARC-WP-12-009, April 19, 2011, http://www.uspsoidg.gov/foia_files/RARC-WP-12-009.pdf.

⁸⁷ U.S. Postal Service Office of Inspector General, *eMailbox and eLockbox: Opportunities for the Postal Service*, Report No. RARC-WP-12-003, November 14, 2011, http://www.uspsoidg.gov/foia_files/RARC-WP-12-003.pdf.

⁸⁸ U.S. Postal Service Office of Inspector General, *Digital Identity: Opportunities for the Postal Service*, Report No. RARC-WP-12-011, May 29, 2012, http://www.uspsoidg.gov/foia_files/RARC-WP-12-011.pdf.