CHAPTER 9

From Franklin to Facebook

The Civic Mandate for Communications

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It has become a cliche to predict that the most fundamental innovations in information technology in the twenty-first century will originate in the garage of some teenage entrepreneur. While this prediction is intuitively appealing, it is almost certainly wrong. No one can predict the future, and forecasting is notoriously inexact. Yet we will have a better chance of avoiding detours, wrong turns, and traffic jams if we have in front of us a road map of where we have been.

In the past two centuries, the vast aggregations of power and authority known informally as "big government" have exerted a potent and enduring influence on communications networks in the United States. Three governmental institutions have been especially consequential: the postal system; the regulatory agency; and the Internet. The postal system and the Internet are federal institutions; regulatory agencies, in contrast, have derived their authority not only from the federal government but also from the states. Each of these institutions had its greatest influence in a different century: the postal system in the 1800s; the regulatory agency in the 1900s; the Internet today. All had certain features in common. None originated in anyone's garage, and each was a product less of market incentives or technological imperatives than of political fiat.

Communications Networks in a New Republic:
The Postal System

The informational environment in which we live today was by no means coeval with the United States. Rather, it is the product of more than two centuries of creative statecraft.

The United States was born during a war of independence against Great Britain that began in 1775. The government was new; the informational environment was not. Few lawmakers envisioned that communications networks in the new republic might assume a form markedly different from those in monarchial Great Britain. All this would change in the years immediately following the adoption of the federal Constitution in 1788. If the people were sovereign, as the new Constitution proclaimed, then it seemed self-evident that they would need to be well informed. In the absence of an informed citizenry, it would be impossible to sustain the bold experiment in representative government that the framers of the federal Constitution had envisioned and lawmakers had sworn to sustain.

How could lawmakers foster the creation of an informed citizenry? One proposal fell by the wayside: nowhere in the Constitution was Congress authorized to establish a national university. Another proposal became the opening clause of the First Amendment to the Constitution: "Congress shall make no law respecting the freedom of the speech and of the press." The ideal of a free press antedated the First Amendment; never before, however, had this ideal been enshrined in a document invested with the authority of fundamental law. In no sense was the First Amendment an expression of big government. It was, after all, a restraint on government power. Even so, it is worth recalling that it was the federal government that had restrained itself.

1
In the twentieth century, the free press clause of the First Amendment would become a formidable legal weapon. In large part, this is because jurists interpreted the Fourteenth Amendment, which was adopted in 1868, to extend its jurisdiction to the states. This innovation—a triumph of big government—transformed the First Amendment from a constraint on the federal government into a constraint on governmental institutions at all levels: federal, state, and local.

Even schoolchildren know about the First Amendment. This is true even though, for most of the country's history, it had no discernible influence on jurisprudence: the first major constitutional law case to hinge on the free press clause would not be decided until the First World War. Yet only specialists in early American history have heard of the Post Office Act of 1792. This is unfortunate, since the act did more than the First Amendment to create the informational environment in which representative government would flourish in the nineteenth-century United States.

The post office was not new in 1792. The facilities it provided for the circulation of information, however, remained almost entirely confined to an exclusive clientele, just as the colonial post office in British North America had been before the War of Independence. In fact, the post office that Benjamin Franklin had administered in 1775 as the first postmaster general for the rebellious American colonies was largely identical to the post office that Franklin had administered for many years before the war as a placeman for the Crown. And it was much the same post office that the new government had at its disposal during the War of Independence (1775–81), the framing of the federal Constitution in 1787, and the debates over the ratification in the winter of 1787–88. The institution had yet to be transformed into a system invested with a civic mandate to keep the citizenry well informed. All this would change with the enactment of the Post Office Act of 1792.

Prior to 1792, postal administrators had been constrained both in theory and practice. In theory, they lacked an unambiguous mandate to create post routes that lay entirely inside individual states and had no mandate whatsoever to facilitate the circulation of newspapers, then as now a major medium for the broadcasting of information on public affairs. Even had such a mandate existed, they had good reason, in practice, to be wary of new departures. Interior routes and newspaper conveyance were expensive and could not be expected to cover their costs. Postal administrators were judged on their ability to balance the books: if they ran a deficit, they were presumed to have been derelict in their duty.

Only federal legislation could break this impasse. The Post Office Act of 1792 transformed the informational environment in three ways. First, it created a mechanism to expand the route network rapidly into the hinterland; second, it admitted newspapers into the network at highly advantageous rates; and third, it established the privacy of personal communications as a civic ideal.

The mechanism that hastened the rapid expansion of the route network was seemingly prosaic. Instead of leaving control over the designation of new post routes with postal administrators, as had been the norm before 1792, the Post Office Act of 1792 shifted control to Congress. This shift might sound trivial, but it was not. Congressmen were eager to please their constituents, and constituents were eager to obtain access to postal facilities.

The consequences were profound. By 1828, the United States boasted the largest postal route network in the world, a fact that impressed European travelers like Alexis de Tocqueville, and that created the technical preconditions not only for the election of Andrew Jackson, the first president to regard himself as a tribune of the people, but also for the flourishing of voluntary associations, which Tocqueville would hail as a defining feature of the democratic culture that had taken root in the United States.

The communications network that lawmakers created was distinctive both in scale and scope. The post-1792 postal system
conveyed not only letters but also newspapers, the primary medium for the circulation of information on public affairs. Here, too, the critical innovation was political, and, here, too, the key shift was embodied in a clause of the Post Office Act of 1792.

Lawmakers agreed that the mail should be open to anyone willing to pay the stiff congressionally mandated fees. For certain favored postal patrons these fees were waived. Lawmakers, for example, granted themselves the right to send an unlimited number of items at no cost through the network, a perquisite known as the “franking privilege.”

The expansion in the mandate of the postal system to embrace newspapers as well as letters proved to be more controversial. Small numbers of newspapers had circulated in the mail for decades, primarily through the courtesy of lawmakers who sent them to constituents postage-free. But this practice remained customary and lacked the force of law. The postal system, remarked one postal administrator in 1788, had been established “for the purpose of facilitating commercial correspondence”; and, as a consequence, it had, “properly speaking, no connection with the press.”

The Post Office Act of 1792 put the conveyance of newspapers on an entirely different basis. Henceforth, every newspaper in the country, independent of content or place of publication, had the right to circulate in the mail at extremely low rates. To send a two-page letter from Boston to Savannah, Georgia, cost a merchant 50 cents in postage, a considerable sum; if, however, an editor sent a newspaper over the same route, the fee was a mere 1.5 cents. This was true even though newspapers were ordinarily much heavier than letters and, thus, more expensive to convey.

The results were predictable. Newspapers clogged the mail bags. In any given year, newspapers made up as much as 95 percent of the weight of the mail while generating no more than 15 percent of its revenue. While newspaper conveyance posed a challenge for postal administrators, it was a great boon for ordinary Americans. For the first time it became possible for individuals living far from the seat of power to remain well informed about public affairs without having to meet in person with their representative. Within a remarkably short period of time, politicians figured out how to manipulate the new media by staging the artful journalistic spectacles that a later generation would dub “media events.”

Among the most resourceful of the many groups to take advantage of the new communications network were the organizers of voluntary associations advocating causes ranging from temperance to women’s rights. These voluntary associations, which often had a religious cast, were the first organizations to blanket the country with an identical message, a defining feature of “mass media.”

One of the most notorious of these media events unfolded in 1835 when, to the horror and consternation of the country’s slaveholders, an intrepid group of New York City–based abolitionists mailed thousands of unsolicited tracts to slaveholders advocating the immediate, uncompensated emancipation of slavery.

The Post Office Act of 1792 transformed not only the mandate of the postal system but also its character. European postal administrators routinely opened correspondence to monitor subversive activity. These surveillance techniques were familiar to American lawmakers. John Adams, Thomas Jefferson, and John Jay had each served as diplomats in Europe during the revolutionary era, and, while abroad, had grown accustomed to postal surveillance. Once the United States established its independence, lawmakers vowed that its government would renounce this tool of statecraft as a vestige of the monarchical past. Henceforth, or so the Post Office Act of 1792 decreed, it would be illegal for any government official to open anyone’s mail.

The civic mandate of the postal system was broad, dynamic, and open-ended. Beginning in 1792, it embraced information on public affairs; by the 1820s, it had expanded to include information not only on public affairs but also on market trends; and by the 1840s, it had expanded once again to include information not only on public
affairs and market trends but also on personal matters. By 1913, with the advent of parcel post, it would expand even further to embrace the conveyance not only of information but also of goods.

Prudent lawmakers had traditionally warned that the circulation of information might threaten established institutions, and the United States in the nineteenth century was no exception. The critical issue was slavery. In much of the United States, slavery enjoyed the protection of a welter of state laws, and in those states where it remained a pillar of the economy, slaveholders feared that the circulation of information might jeopardize their livelihood. The circulation of information on the slavery issue had the potential not only to foment a slave rebellion but also to foster public discussion. And public discussion, or so slaveholders feared, might persuade the non-slaveholding majority to renounce the “peculiar institution.”

Thomas Jefferson is often hailed as a libertarian hero. Yet it was Jefferson’s anti-abolitionist heirs who were the most adamant in blocking the circulation of information on the slavery issue. Had Jefferson lived to witness the abolitionists’ mail campaign of 1835—he had, in fact, died nine years earlier, in 1826—he, too, might, as a proponent of states’ rights, have applauded the draconian state and local laws banning the circulation of information on the slavery issue. In most states, these laws would remain vigorously enforced until the Civil War. Only big government could lift this cordon sanitaire, and in the pre–Civil War period, federal lawmakers deferred to their colleagues in the states. Antimonopoly became a rallying cry, with New York state leading the way. The New York Telegraph Act of 1848 made it easy to charter a telegraph company and popularized the presumption that telegraph managers should be free to charge whatever the market would bear. Similar laws were enacted shortly thereafter in many states. Market competition, state lawmakers assumed, was a better regulator than political fiat, and antimonopoly a compelling civic ideal.

The legacy of antimonopoly was far-reaching. Hemmed in by potential new entrants, incumbent telegraph operating companies...
pursued a business strategy that was narrow and restrictive. The dominant telegraph network provider, Western Union, had no interest in providing a mass service for the entire population, as its president declared in testimony before Congress in 1890. If ordinary Americans wished to communicate over long distances, they could send a letter. The Post Office Department, buttressed by a civic mandate that was broad, dynamic, and open-ended, provided a mass service for the entire population; Western Union, constrained by antimonopoly legislation, remained for many decades the provider of a specialty service for an exclusive clientele of merchants, newspaper editors, and the well-to-do. Western Union would not recast its business strategy until 1910, when, partly in response to federal legislation that put telegraph companies under the jurisdiction of a federal regulatory agency and partly as a result of a change in management, telegraph managers reversed course and expanded their mandate for the first time to provide facilities for the many as well as the few.

The federal government played only a minor role in the early history of the telephone, with the major exception of patent rights. The first telephone exchange, which went into operation in 1878, was operated not by the Post Office Department—as Morse's first telegraph line had been in 1845—but by a state-chartered corporation. The first exchanges were highly localized, and their interconnection into a nationwide network took decades. Telephone inventor Alexander Graham Bell never lobbied Congress to establish a government telephone network, and in the period before 1900 few Americans, other than academic economists and certain frustrated business users, envisioned that the telephone might one day be regulated by a federal agency.

The telephone and telegraph emerged in an age in which the scope of state regulatory agencies remained confined to the publication of financial data. Yet here the similarity ceased. Big-city telephone operating companies were regulated from the outset by city councils, which, in return for providing operating companies with the necessary licenses to string wires over busy city streets, set rate caps and mandated performance standards. Few cities established a designated telephone bureau to regulate telephone service. Yet in all of the country's major cities, as well as in thousands of towns, city councils monitored the performance of telephone operating companies to ensure that they fulfilled their franchise obligations.

Franchise regulation obliged telephone managers to keep rates low and performance standards high. It also encouraged them to institute calling plans tailored to small users and to extend a basic level of service to underserved neighborhoods, innovations that both telephone managers and telephone users had initially resisted on account of their high cost and disruptive potential.

Telegraph service in 1900 remained a specialty service for the few. Telephone service, in contrast, was well on its way to becoming a mass service for the many. Paradoxically, the newer of the two electrical communications media was popularized first. Big government—in the form of city-based regulation—helps explain why. Market incentives and technological incentives cannot explain this surprising outcome; the key, rather, was political fiat.

The popularization of telephone service in the nation's big cities was risky. The construction of the switching equipment necessary to expand access to the network was expensive and the financial return uncertain. In many cities, including New York and Chicago, the financial extortion of telephone operating companies by unscrupulous aldermen posed a recurrent challenge. A further challenge was posed by the possibility that city officials might franchise a new entrant to compete with the incumbent. By transforming telephone service into a mass service, telephone company managers captured the moral high ground and cultivated a political base that insulated them against the vicissitudes of municipal politics.

In 1913, the US attorney general sued the dominant telephone holding company, American Telephone and Telegraph, for
illegally monopolizing the business of electrical communications. Bell had recently acquired a major financial stake in telegraph giant Western Union, giving it a dominant position not only in the telephone but also in the telegraph. To prevent the Justice Department lawsuit from going to trial, Bell agreed in the following year to sell its holdings in Western Union and to cooperate with the many rival non-Bell telephone operating companies to create an interconnected nationwide telephone network. This political settlement transformed the telephone business into the legally sanctioned cartel that it would remain until the Justice Department broke it up in 1984.

The civic ideal that informed the Justice Department–Bell settlement was not market competition but market segmentation. Justice Department officials had no interest in atomizing the telephone business to revive market competition; rather, they built a firewall between the telegraph and the telephone business to discourage excessive concentrations of power.

In the seventy-year period between 1914 and 1984, telephone rates and performance standards were determined not by market competition but by political fiat. State regulatory agencies supplanted city councils as the primary regulatory forum beginning around 1907. The telephone business in this period was highly stable, yet in no sense stationary. To foster research and development in wired communications while containing the looming threat posed by disruptive innovations such as radio, Bell plowed millions of dollars into Bell Laboratories, a world leader in research and development that Bell established in 1925. The transistor, the first communications satellite, the UNIX computer operating system (a key component of the Internet), and many other vital components of the digital communications networks of the present-day United States were invented at Bell Labs. The willingness of Bell to invest so heavily in research and development—creating what was, in effect, a national laboratory—would have been inconceivable had lawmakers not transformed the telephone business into a cartel that guaranteed Bell a steady return.

Communicating over the Airwaves: Radio and Television

The cartelization of the telephone business established a precedent that would shape the regulation of a very different communications medium—namely, radio. In the Radio Act of 1927, a cornerstone of communications policy today, Congress extended the principle of government ownership from a city’s streets to the airwaves. To minimize the problem of frequency interference, a major technical challenge, lawmakers permitted radio stations to license a portion of the electromagnetic spectrum. The spectrum itself, however, like a city’s streets, remained public property. The self-confidence with which Congress claimed ownership over the airwaves was informed by the time-honored presumption that the federal government had an expansive civic mandate in the realm of communications. It also built on the recent public policy debate over municipal franchises in transportation, communications, water, and energy. In this debate, municipal franchise corporations were recast as “public utilities,” a new concept dating from the 1890s that would provide a template for the regulation of radio and television in the decades to come.

The regulation of the electromagnetic spectrum devolved first upon the Federal Radio Commission, and, beginning in 1934, upon its successor, the Federal Communications Commission (FCC). The FCC remains the regulatory agency responsible for licensing radio and television stations today. No other governmental institution has done more to encourage broadcasters to promote the public good.

Had Congress established a government-owned and operated broadcast network comparable to the British Broadcasting Corporation, not only radio and television but also the Internet might have been more centrally administered. With the Radio Act of 1927, lawmakers opted instead for planned decentralization, creating the mixed public-private informational environment characteristic of American communications policy ever since.
The cartelization of the telephone business had the further consequence of blocking the establishment of a telephone-radio monopoly. Lawmakers wary of concentrated power repeatedly warned in the 1920s that Bell might use its dominant position in the telephone business to control radio. Radio was a new medium, and Bell feared that the “wireless telegraph” might render valueless Bell’s huge investment in a wired telephone network. To parry this threat, Bell made a major investment in radio research and held a valuable portfolio of radio patents. The NBC radio network originated as a Bell subsidiary, and for a time, it appeared likely that Bell might become as well entrenched in the radio business as it had become in the telephone business.

This nightmare scenario for lawmakers was forestalled when, in another section of the Radio Act of 1927, Congress extended to radio the principle of market segmentation. Telephone companies, Congress decreed, could own and operate the wired communications network over which radio signals were transmitted but not the radio stations that created the programming. Had Bell been an ordinary business regulated by market competition rather than political fiat, lawmakers would have found it much more difficult to prohibit it from entering into this promising new market and virtually impossible to enforce the telephone-radio divide.

Market segmentation is a civic ideal that lawmakers have repeatedly invoked to limit concentrations of power. When Congress prevented Bell from owning radio stations, it reaffirmed a principle that was as old as the republic. Had market segmentation not been a civic ideal, the Post Office Department might have retained control of the telegraph in the 1840s; the telegraph might have retained control of the telephone in the 1870s; the telephone might have retained control of the telegraph in the 1910s; and the telephone might have retained control of radio in the 1920s. Lawmakers have repeatedly opposed mergers that permit an entrenched organization to gain control of a new medium, another example of the influence of governmental institutions on American communications.

Communicating in the Digital Age

The computer, like the atomic bomb, was a legacy of federal investment in wartime. It emerged, as did so many of the innovations that we take for granted today, in the hothouse of innovation spawned by the Second World War. The Internet was also a product of military mobilization, though from a slightly later era. It was a product of the Cold War, a four-decade-long smoldering conflict between the United States and the Soviet Union during which policy makers in both countries feared that the world might soon be devastated by a nuclear cataclysm.

Like so many major innovations in communication—including radar, communications satellites, and the computer—the Internet originated not in some teenager’s garage but, rather, in a government agency. Commercial considerations played no role in its inception, a fortunate fact, since, had commercial considerations been present, they might have discouraged government engineers from devising protocols to facilitate interconnection, a defining feature of the Internet today.

The Internet was not invented to ensure the survivability of American telephone networks during a nuclear attack. This myth, deeply entrenched in the popular imagination, is an oversimplified and misleading explanation of a complex reality. Yet it does contain a kernel of truth. The Internet was a product of Cold War military planning. And, in particular, it was designed to speed up the calculations necessary to accurately fire intercontinental ballistic missiles, a task that taxed the computational power of the nation’s largest computers.

Computational power in the 1960s was so limited that government scientists hit upon the expedient of linking together high-speed mainframe computers at universities located thousands of miles apart. Mainframe computers were originally
self-contained; to interconnect them, government scientists had to invent protocols flexible enough to accommodate diversity. The invention of these protocols was a technical triumph. So, too, was the physical linkage of distant computers into a single network. Interconnection was facilitated by the common assumption that the long-distance Bell telephone network had excess capacity, and therefore that utilizing this network to send messages from computer to computer was cost-effective.11

None of the Internet-based innovations that we take for granted today—not Facebook, not Twitter, and not Google—could have emerged had the Internet been designed by a private corporation and not a government agency. The Internet was a by-product not of market competition but, rather, of the interdisciplinary, collaborative, knowledge-based research culture of the Cold War military-industrial-academic complex, a culture spawned by political fiat and sustained by federal funding. Unlike even the largest and most powerful of corporations, the military was unconstrained by the financial considerations that would have limited a commercially owned and operated network to a narrow range of applications in a limited domain. In the 1960s, federal administrators seriously considered turning over the administration of the Internet to AT&T, an acronym by which Bell was commonly known. AT&T rejected the proposal, fearful that it might become subject to unwanted regulatory scrutiny. Fortunately, big government prevailed. Paradoxically, and to a degree that free-market fundamentalists may find incomprehensible, it took a huge government bureaucracy to invent a communications network that was flexible, decentralized, and inclusive.12

Planned decentralization is a time-honored American civic ideal. It shaped the design of the federal Constitution, the structuring of the Post Office Department following the enactment of the Post Office Act of 1792, and the regulation of the nation’s broadcast networks by the Federal Communications Commission. It is also a defining feature of the Internet, a direct result, paradoxically, of the heterogeneity of the nation’s mainframe computers.

The commercialization of the Internet in the 1990s coincided with a sea change in conventional assumptions concerning government-business relations. For much of the twentieth century, lawmakers assumed that the FCC would regulate the nation’s dominant communications networks—first the telephone and telegraph, then radio and television—in accordance with a civic mandate enshrined in federal law. To the chagrin of media critics, lawmakers never funded public radio or television on the scale that its supporters requested or that exists today in Great Britain, Canada, and Scandinavia. Yet federal regulators did shape the programming that broadcasters created. For almost four decades, for example, the FCC enforced, and the courts largely sustained, a “fairness doctrine” that required radio and television stations to broadcast opposing views on controversial public issues. This doctrine took inspiration from the founders’ presumption that the government had a civic mandate to provide the citizenry with access to information on public affairs. This mandate, the FCC ruled in 1949, overrode the broadcaster’s right to air whatever opinions it might see fit. All this began to change in the 1970s, with the revival of the nineteenth-century faith in market competition as a civic ideal. In 1987, the FCC abolished the fairness doctrine, hastening the rise of the partisan, vituperative, and more than occasionally irresponsible radio and television broadcasting that is such a ubiquitous feature of the informational environment today.13

Lawmakers in the years to come will continue to make basic decisions regarding the structure of the nation’s communications networks. If current trends continue, public debate will be dominated by the presumption that the market is a better allocator of resources than the state. Lawmakers have favored market competition over political fiat at certain points in the American past. Market competition, for example, was a cornerstone of communications policy regarding the telegraph, a
circumstance that helps explain why the telegraph, unlike the mail, newspapers, radio, television, or the Internet, has ceased to exist. Yet market competition has rarely been the norm. From a historical perspective, the critical issue for the lawmakers of today and tomorrow is not whether the federal government will intervene in the realm of communications. Rather, the critical issue is how it will intervene and on whose behalf.

Historians make poor prophets. Still, if we are to honor the legacy of the founders of the republic, we would do well to recall that for most of our history, lawmakers presumed that they had a civic mandate to coordinate the nation's communications networks. Promotion, regulation, and innovation were the three primary strategies lawmakers relied on; planned decentralization and market segmentation—and not market competition—were the most characteristic tools.

In communications, big government has been not the exception but the rule. The informational environment we enjoy today owes less to the inventive genius of teenage entrepreneurs toiling away in their parents' garage than to the creative statecraft of lawmakers committed to limiting arbitrary power and sustaining the informed citizenry necessary then and now to sustain the founders' bold experiment in representative government.


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