

# The Only Constant Is Change

TECHNOLOGY, POLITICAL COMMUNICATION,  
AND INNOVATION OVER TIME

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## The Social and Technological History of Political Communication Change

It is uncontroversial to state that the internet has revolutionized many aspects of our social world. However, when we take a step back, placing the internet into broader historical context, we begin to see it as the latest in a dramatic line of technological advances in communication media. During the past three centuries of American political history, mass media evolved from print to wired transmission like the telegraph and wire service, to wireless radio and television broadcasts, and now digital technology. Meanwhile, political actors from presidents to concerned citizens have experimented with using these new technological tools to aid their political communication strategies. Though many of these trials were unsuccessful, others have led to political communication revolutions (PCRs) that have permanently shifted the way that political communication is conducted in America.

The evolution of communication technologies from the beginning of colonial America up until today has been continuous, though far from gradual. Taken separately, the newspaper, telegraph, telephone, radio, television, internet, and all of their variations seem to create a story of sudden leaps forward in communication capabilities with nearly limitless social and political ramifications. The apparently jolting thrusts toward modernity were far from random. In fact, historical analysis suggests that clearly identifiable patterns can help determine when and why many of these social changes actually took place.

This process starts with the changes in technology and the emergence of new mediums, which have clearly reshaped our social world. The beginning of any technological innovation is ideation, the process of conceiving of a new communication technology. This moves the technology from basic scientific competence to the level of technological performance, meaning that the processes of science can be used to test possible solutions. Ideation may occur years before any real technological breakthrough is apparent. For example, three decades before the first working telegraph, the thought was conceived



in Germany. In France, the first ideation of the telephone occurred more than twenty years before Alexander Graham Bell started working on it. And the idea of the television was suggested in 1877, seventy-five years before it became a common household item.<sup>1</sup>

Following ideation are several steps of actually building and reforming machines themselves. The initial devices built toward fulfilling the purpose conceived during ideation are prototypes. Prototypes could blossom or wither depending on a combination of forces that combine to propel or obstruct the development of any such device. Communications professor and media scholar Brian Winston calls this amalgam of forces the *supervening social necessities*. Supervening social necessities can take three general forms. First, they can include the consequences of other technological innovations, as was the case when the telegraph suddenly gained great utility with the development of the railroad. Second would be a series of social forces or changes in society that make an innovation much more important—such as the telephone, which arose first as a result of the development of the modern office. Finally, there are supervening social necessities that grow directly out of commercial practices pushing the need for new technologies on the public.<sup>2</sup>

These social forces transform the circumstances in which the prototypes are developed and, at times, create fertile ground for innovation. At these times certain prototypes are fostered and become inventions.<sup>3</sup> Because inventions are impacted by the same supervening social necessities, they often occur around the same time, as when Bell and his rival Elisha Gray filed patents for a speaking electric telephone on the exact same day in 1876.<sup>4</sup> Inventions move into the marketplace where they are further acted upon by conflicting forces. On one hand, the belief in progress and the supposed need for the new technology presses for the development and dissemination of the new product; on the other, the new invention must conform to current social and commercial patterns.<sup>5</sup> For instance, a cable company today would not create a new version of the internet that made cable television obsolete, but that same company would embrace an innovation that could enhance its existing services and products, or seek to merge with internet providers, telephone companies, or content creators, as we have seen in increasing numbers during recent years.<sup>6</sup>

The result is a jerky process of advancement, which can be seen repeating itself over and over throughout communications history. This pattern is theorized by historians such as Fernand Braudel as a conflict between brakes and accelerators being applied to technological progress. The accelerators are the supervening social necessities themselves, and the brakes can take the form of social, political, or legal constraints that help to slow the diffusion process.

Constraints may be applied in order for society and major organizations and institutions to be able to absorb the new technology successfully, or they may be present simply to maintain stability and the current status quo. These constraints are, in many ways, more powerful than the accelerators and often are in place primarily because the status quo works for many people and is a difficult and risky status to challenge.<sup>7</sup> This entire process—which includes ideation, prototypes, inventions, social necessities, and social or political constraints—moves society forward, at times reaching apparent levels of equilibrium before wrenching itself forward again.

## Information and Communications Technology Development through the Lens of the Political Communication Cycle

For the purposes of this book it is important to view the process of technological development by analyzing the ways that it has or has not affected various forms of political communication. The result is an undulating pattern of political communication advancement and stability growing out of information and communications technology (ICT) innovation. In fact, these periods of equilibrium and sudden forward jolts correspond to the concepts of political communication orders (PCOs) and PCRs, respectively, which together make up the political communication cycle (PCC). Just as the social impact of new ICTs requires a social or commercial need to develop, there must be a supervening political need that causes political actors to use the new ICT for political purposes in order for a PCR to occur. In this regard all ICTs are not made equal: some have fit political needs and thus political actors have used them to innovate vast swaths of American political communication activities, while others, though pivotal in terms of their social utility, have remained marginal in terms of their political impact. For our purpose here, ICT innovations must be reframed and viewed through the lens of the PCC.

A PCR, introduced in the last chapter, is a period of permanent disruptive change in political communication activities, which serve as the transitions between relatively stable periods labeled PCOs (see Figure 2.1). Each PCR has followed a general pattern, together known as the PCC. The PCC has three main phases: the technological imperative, political choice, and stabilization phases. In this chapter I provide a historical narrative that clearly links the changes in political communication through American history to the four PCOs—labeled the Elite, Mass, Broadcast, and Information PCOs—and the three PCRs that disrupted them (see Figure 2.2).

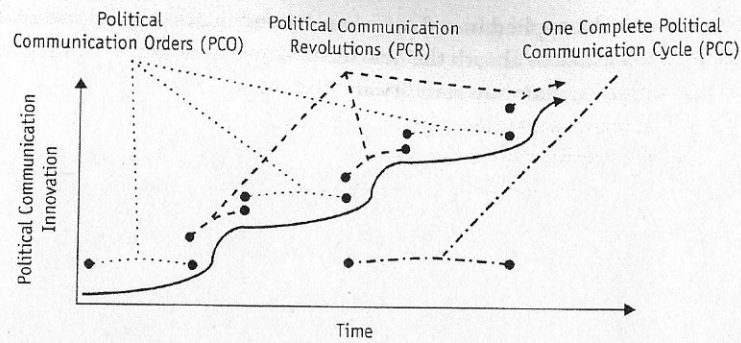


Figure 2.1 Political Communication Orders and Revolutions over Time

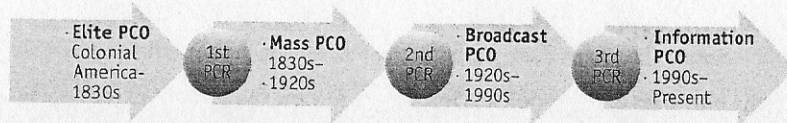


Figure 2.2 Timeline of Political Communication Orders and Revolutions

## The Elite Political Communication Order

The first PCO in American history, the Elite PCO emerged at the same time as the young country. It should not surprise anyone looking at the limitations in transportation and communication technology during the colonial era and early years of the new nation that most political communication was conducted in person. A politician who wanted to connect with the public made speeches or participated in local community events. The political news coverage and communication that did not occur face-to-face was printed. Many eager and hardworking printers sought to share news with local business and wealthy citizens. Although most printers in the late eighteenth century printed a wide variety of items, by far their most important business was newspaper production.<sup>8</sup>

While printers enjoyed more prominence than most artisans in colonial America, and occasionally earned local acclaim, their visibility rarely translated into influence.<sup>9</sup> Further, the actual printing process was a labor-intensive, difficult, filthy, and dangerous job, limiting any printer's ability to climb the social ladder. The first task for a young printing apprentice would be to prepare the sheepskin balls used to ink the type. The skins were soaked in urine, stamped continuously for softness and then wrung out by hand. Next, ink was created, often by boiling soot in varnish, creating hazardous and nauseating

fumes, and enough filth to cover everyone in the print room.<sup>10</sup> This reality was far from the nostalgic image of early printers simply disseminating ideas and changing the world. The actual newspaper production process was only slightly better. A typical four-page colonial newspaper, like the *Pennsylvania Chronicle and Universal Advertiser*, began with up to sixteen hours of setting type, followed by the repeating process of wetting and pressing copy onto each side of each sheet. The most experienced print men of the era could complete around 240 sheets per hour. Altogether, even a small rural weekly newspaper would require a day and most of a night of nonstop labor to produce each week's paper, and much longer for papers with larger circulation.<sup>11</sup> Yet even with these difficult circumstances, there were often many more printers willing to produce newspapers than there were literate subscribers with enough money to pay for the publication.

Newspapers have always been political. In fact, the first newspaper of the American colonies grew out of the first intercolonial political event, the multiple rebellions against the Dominion of New England in response to the Glorious Revolution of 1688–1689.<sup>12</sup> In an attempt to calm the public, the reestablished government of Massachusetts Bay issued *The Present State of New-English Affairs*, a broadside that looked exactly like the front page of a London newspaper, with the subheading "This is Published to Prevent False Reports."<sup>13</sup> *The Present State of New-English Affairs* served as a model for colonial newspapers in that only newspapers under the influence of local elites could survive.

This practice was the established norm when Benjamin Harris, a high-minded and rebellious Puritan journalist who had fled King James II's crackdown on the press, published the first independent newspaper in the colonies meant for regular publication. On September 25, 1690, Harris published a three-page paper titled *Publick Occurances Both Forreign and Domestick*. The newspaper was published in Boston, a bustling political and trading center with a population of around seven thousand at the time. The paper included information from London, a bit of American news, and some commentary.<sup>14</sup> *Publick Occurances* was intended to become a monthly publication, but four days after the first issue appeared, the governor and council met and declared their "high resentment and disallowance of said pamphlet and order[ed] that the same be suppressed and called in: strictly forbidding any person or persons for the future to set forth anything in print without the license first obtained."<sup>15</sup> The paper had been shuttered because it dared to print interpretations of fact without the advice or official approval from the Massachusetts leaders.<sup>16</sup>

Printers in the American colonies heard the message loud and clear. It took another fourteen years before another newspaper was attempted, this time taking a much more cautious approach. The *Boston News-Letter*, first published in



1704, was the first American newspaper to make it more than one publication, largely because it carried the declaration "Published by Authority." Boston postmaster John Campbell gained the required government permission to print his publication by allowing British authorities to vet each issue before it was published.<sup>17</sup> The *News-Letter* was designed entirely for the local political elite of Boston, connecting them with the news from London, and occasionally government-approved colonial news.<sup>18</sup> In 1719, Boston became the first city with two newspapers competing with one another, and by 1721, official government censorship of the newspapers had ended.<sup>19</sup> Yet the elite audience remained constant throughout the colonial era and was obviously a major element of the Elite PCO throughout and after the American Revolution.

During the eighteenth century, the population grew much faster than the expansion of the newspaper, at least until the revolutionary era (see Table 2.1).<sup>20</sup> Newspapers came into their own as a political weapon during the build-up to the American Revolution, and the printing of newspapers and number of subscribers grew quickly during this time. From 1760 through the revolution, the number of newspapers printed more than doubled, increasing at more than twice the rate of population growth.<sup>21</sup> The newspapers were a fundamental tool stoking anti-British aggression and were used extensively as a propaganda machine throughout the revolutionary era. Further, the extensive writing by a handful of white, male political and business elites using the pseudonyms

Table 2.1 Growth of Population and Newspapers in American Colonies/  
States, 1704–1780

Year	Population	Number of Papers
1704	300,000	1
1720	500,000	3
1725	1,000,000	5
1750	1,207,000	12
1760	1,610,000	21
1770	2,205,000	29
1774	*	37
1775	2,803,000	48
1776	*	37
1780	2,580,000	38

\* Unknown

of classical heroes or invented characters allowed a very small number of the rebellious elite to speak in the guise of the public, assuming the voice of the people at large.<sup>22</sup>

Among the growing volume of revolutionary ideas emanating from American print shops, Thomas Paine's anonymously printed monograph, *Common Sense*, sparked by the ideas of his friend Dr. Benjamin Rush, presented the most powerful argument against the British.<sup>23</sup> Published first on January 10, 1776, it became the most widely sold publication in the colonies to date, reportedly selling 120,000 copies in the first three months and over half a million in the first year.<sup>24</sup> David Ramsey, who witnessed the war firsthand and wrote a history of the American Revolution in 1789, aptly stated the importance of printed documents like *Common Sense* and the numerous newspapers that emerged during the era when he wrote, "In establishing American independence, the pen and the press had a merit equal to that of the sword."<sup>25</sup>

Unlike later ICTs, the political utility of the newspaper was never in question. Political printing, especially during the American Revolution, became both powerful and popular and started to emerge as a primary means of political communication. Arguably the best examples of the strategic use of the newspaper in US history were the series of eighty-five essays written anonymously under the name Publius by Alexander Hamilton, James Madison, and John Jay extolling the virtues of the newly written US Constitution and arguing for its ratification. These essays, later collected and named the *Federalist Papers*, explained the rationale and merits of the Constitution and are often described as the most thorough and influential commentary ever written about the document. But at the time they were designed as persuasive arguments, intended for the public but specifically those political elite who would be voting on ratification in each state. From October 27, 1787, to May 28, 1788, these essays were published in four New York City newspapers: the *Independent Journal* (or *General Advertiser*), the *New-York Packet*, the *Daily Advertiser*, and the *New-York Journal and Daily Patriotic Register*. Four newspapers were used because most urban papers were only published twice a week at that time and the authors wanted to reach as many people as rapidly as possible.<sup>26</sup> The eighty-five essays were written quickly, published in the span of 215 days, averaging one essay every two and a half days. While the essays were addressed to the people of the state of New York and initially published in New York City papers, they were quickly reproduced by newspapers across the young nation, and their direct influence is thought to have been just as significant outside of New York as within the state.<sup>27</sup>

The *Federalist Papers* perfectly epitomized the Elite PCO, as the most powerful voices in American politics used the printed press to successfully influence support of political elites across the nation necessary to win the ratification



debate. Significant concerns about the new Constitution were written by the Antifederalists of the era, but were minimized by the Federalist Papers. By the time the eighty-fifth and final essay was published, eight of the nine required states had already ratified the Constitution, and less than a month later, on June 21, 1788, New Hampshire became the ninth state to ratify, making the Constitution official.<sup>28</sup>

Following the American Revolution, printing presses spread to most major towns in America. These early papers were mainly weeklies until the first daily, the *Pennsylvania Packet and Daily Advertiser*, was published in 1784. As the title would suggest, commercial interests dominated much of the early newspaper industry. The word "advertiser" was included in the title of five of the eight dailies published in 1790 and twenty of the twenty-four published in 1800. After 1800, advertising generally filled more than half of the space in American newspapers, regardless of the publication's name.<sup>29</sup> The prevalence of advertising suggests the influence of commercial interests over newspaper content, which remained a constant through the first half of the nineteenth century.

While commercial interests played a major role in newspaper content, partisan politics were arguably the most influential force shaping early American newspapers. Until the very end of the eighteenth century, the printing trade and journalism were essentially one and the same. However the two trades began to split and specialize as professions starting in the 1790s.<sup>30</sup> While printing remained an economically and mechanically rooted trade, the emerging journalism profession was very politically active. From the 1790s on, any politician who thought about campaigning, launching a new movement, or reaching people in a new geographic region understood that they needed a newspaper to do so. Partisan newspapers grew early in the battle between Alexander Hamilton's Federalist Party and the opposition party led by Thomas Jefferson and James Madison that would soon become the Republican Party. By the election of 1800, the first featuring the two parties, eighty-two different opposition papers were either explicitly supporting the Republican Party or leaned heavily pro-Republican.<sup>31</sup> Even after the incumbent Federalists of John Adams were soundly defeated by Thomas Jefferson and his opposition Republicans, in what is often referred to as the "revolution of 1800," new partisan papers were published supporting each party over the next fifteen years, although Federalist influence declined quickly after Adams's defeat.<sup>32</sup>

According to the exhaustive *History of Printing in America* published by Isaiah Thomas, there were over 350 newspapers printed in the United States in 1810, nearly 85 percent of which were classified by party affiliation.<sup>33</sup> Parties began to control newspapers directly starting in 1828, relying on them as their means to advocate for policies and gain supporters. Usually the formation of a new party or the breakdown of partisan alliances led directly to the launch of a

new newspaper to give voice to the new party.<sup>34</sup> Political communication was embedded into the fabric of early American newspapers, but the newspaper needed to reach a much broader audience in order to gain the political viability necessary to start the first PCR in American political history.

## The Mass Political Communication Order

As the number of newspapers grew, so did the audience size. By the 1820s, the newspaper business had grown exponentially both in terms of newspapers published and readership. While there were approximately 37 newspapers publishing in the United States at the time of the signing of the Declaration of Independence in 1776, there were just over 100 in 1790, nearly 600 by 1820, and 1,258 in 1835.<sup>35</sup> The extraordinary growth of newspapers and the development of the first PCR were due to a combination of political, social, and technological factors. Political participation and literacy rates increased at the same time that a series of technological innovations dramatically altered the printing industry during the first half of the nineteenth century. Up to that point, printing still closely resembled the wooden hand press, invented by Gutenberg in the 1440s. In the early nineteenth century, iron presses replaced wood presses, although they were still operated by hand. The iron presses were no faster than previous versions, but they were more reliable and produced higher-quality impressions.<sup>36</sup>

The mechanization of the printing process led to the extraordinary expansion of newspaper printing and changes in how the press was used for political communication. This process started with the development of the steam-powered press and then by moving to a cylinder press. Frederick Koenig, who invented a steam-powered press in 1811 in London, pioneered both of these innovations.<sup>37</sup> Koenig's steam-powered cylinder press was set up in secrecy and used to print the *London Times* starting on November 29, 1814. It was announced with a remarkable editorial crediting this innovation as "the greatest improvement connected with printing, since the discovery of the art itself."<sup>38</sup> The construction of this new mechanized press was even kept secret from the skeptical pressmen who worked the machines. They were welcomed at 6 a.m. on November 29, 1814, by an announcement that the paper had already been printed, that any violent rebellion would be put down immediately, and those who reacted in a calm manner would continue getting paychecks until new employment could be found. This press produced roughly one thousand sheets per hour per side, approximately ten times faster than the best flatbed press at the time. This technology eventually started to make its way across the Atlantic. The first book printed by a steam-powered press in America took place in 1823, and steam-powered printing became standard by 1840.<sup>39</sup>



The speed and volume of Koenig's cylinder press initially outpaced the need of most publishers, and newspaper and magazine printers adopted the cylinder press slowly. As readership expanded and costs decreased, the higher-volume cylinder presses became more practical. The first two-cylinder press, known as the "Hoe Type Revolving Machine" and created by David Napier, was used to print the *Philadelphia Public Ledger* in 1847. This marked a dramatic improvement in the speed and quality of printing and became the industry standard within a few years.<sup>40</sup>

Equal in importance were developments in papermaking that occurred around the same time. Paper generally accounted for the highest cost for any newspaper, often making up more than 50 percent of the costs of printing.<sup>41</sup> One reason for its high cost for early printers was the scarcity of paper, which was made primarily from repurposed rags until the second half of the nineteenth c. In 1799 N. L. Robert patented the Fourdrinier paper-making machine, which dramatically improved paper making. This new paper-making process was introduced in the United States in 1827, reducing printing costs and helping to fuel the first major PCR.<sup>42</sup> Following this refinement in paper making, newspapers expanded quickly, especially dailies. But once wood pulp was used in paper making starting in 1866, reducing the cost of paper by as much as 80 percent, the number of newspapers and circulation per capita soared.<sup>43</sup>

Before 1833 the only way to access newspapers was through subscriptions, and by the mid-1820s there were over fifty newspaper subscriptions for every one hundred households, up from eighteen to nineteen in the 1780s.<sup>44</sup> The late 1820s and 1830s marked a remarkable period during which political, social, and technological changes helped to form a revolution in journalism, marked most clearly in the penny press, which fundamentally changed the role of American newspapers as a tool to achieve political communication goals.<sup>45</sup>

The elite status of newspapers started to crumble on September 3, 1833, when Benjamin Day took the gigantic leap of selling his newspaper, the *New York Sun*, to an anonymous and heterogeneous population on street corners for the price of one penny.<sup>46</sup> The *penny press*, as the early mass-marketed newspapers would come to be known, was a major shift both in the type of news being offered and the audience who read it. This business innovation helped to usher in the first PCR in American history. The penny press targeted the newly literate middle and working classes.<sup>47</sup> It was much cheaper than the majority of subscription dailies that existed previously, costing on average one-sixth the price. The lower production costs and more efficient printing presses allowed this new business model to take hold. Other advances, such as home lighting, encouraged more people to read in their homes at night and contributed to the growth of the first mass medium.<sup>48</sup>

Though all of these innovations helped increase the number of people reading newspapers, one of the most important developments leading to the first PCR was not an advance in technology but in infrastructure. Both the dramatic increase in the capabilities and size of the US Post Office and the preferential treatment given to newspapers played a central role in the expansion of the newspaper industry.<sup>49</sup> The turning point occurred with the Post Office Act of 1792. The 1792 Act had two principal features that directly promoted newspaper distribution. First, the act admitted every newspaper into the mail, provided that it paid a nominal fee.<sup>50</sup> No other class of mailable items received such favorable rates. This government subsidy for newspaper dissemination had an enormous effect. Prior to the act, the delivery of newspapers through the mail only occurred for members of Congress sending a newspaper to a constituent or between newspaper printers. This norm of free printers' exchange, a custom carrying over from the colonial era, allowed printers to see and copy what other newspapers had covered without paying a fee for the newspaper or news itself. The second important aspect of the Post Office Act was to put this printers' exchange policy on legal footing, codifying it and protecting it from future litigation.<sup>51</sup>

As a result of the Post Office Act, the total volume of newspapers that printers sent to subscribers through the mail grew exponentially. By 1800, 1.9 million newspapers were transported through the postal office, 6 million in 1820, 16 million by 1830, and 39 million by 1840. Perhaps even more striking is that by 1830 there were over 1.5 newspapers sent through the mail per capita, increasing to 2.7 in 1840, approximately the same as the number of letters transmitted per person. The extremely inexpensive postage for newspapers removed the financial and geographic limitations restricting the printers of the Elite PCO and was so influential that historian Richard R. John suggests that this amounted to a communication revolution in and of itself.<sup>52</sup>

At the same time that newspaper circulation was growing, nationwide political participation was also skyrocketing. Western states admitted to the Union after 1815—including Indiana (1816), Illinois (1818), and Missouri (1821)—adopted state constitutions that allowed for universal male suffrage, replacing the property ownership requirement that had limited suffrage in most states. Nearly every other state followed suit during the 1820s, and political participation grew dramatically as all classes were included in the political business of America for the first time.<sup>53</sup> The best indication of this expanding political participation was the incredible growth in the popular vote during the twenty years coinciding with the first PCR. In 1820 just over 108,000 votes were cast in the presidential election, a total that would increase more than tenfold by the election of 1828 and balloon to over 2.4 million in 1840.<sup>54</sup> While the population grew by 177 percent during that twenty-year period, the popular vote

grew by an astounding 1,250 percent, over seven times the rate of population growth.

The political participation rate during this era was simply remarkable. The earliest record of voter turnout as a percentage of voter age population (VAP) was in 1824, when there was 26.9 percent turnout. This number nearly doubled to 57.6 percent in 1828; then, after staying relatively stable through 1836, it catapulted to 80.2 percent in 1840, a number unfathomable in modern politics.<sup>55</sup> Along with changing state suffrage laws, party politics evolved during this period, opening the political process to the public in a way it had never been before.

Within the context of this massive growth in political participation, the expanding reach of newspapers offered a growing opportunity to reach new and different political audiences, beyond the political and business elite. A substantial portion of American households could participate in the political process, and this dramatic expansion in political audience thus created a supervening political need that motivated political organizations to use the newspaper to reach the masses. Even those who were excluded from the political process, including white women and blacks, started publishing newspapers as far back as the 1820s.<sup>56</sup>

Together, the greatly expanded readership, increase in national political coverage, vastly expanded post office (along with its subsidization of newspaper distribution), and increased political participation created the first PCR leading into the Mass PCO. For the first time in its history, the majority of the American public, regardless of class, gained access to the newspapers as well as the political system, changing the strategies and methods of political communication forever. To be clear, increasing access to newspapers did not cause changes in suffrage rights and voting patterns. Instead, the expansion in political access and interest created a new type of political viability, making it much more attractive for publishers and political organizations to use the newspapers for a new political purpose, that of a mass political medium.

Different PCOs represent long periods of relatively stable political communication activities, both in terms of the relationship between political actors and the public, along with the tools that they use. During the first PCR, newspaper access grew and its role within the political process changed. During the Elite PCO, newspapers were often identified with political causes or politicians. During this early period, newspapers were essentially advertisements for parties, politicians, and their platforms. The Mass PCO witnessed the gradual transition from the partisan press to more neutral and independent news reporting.<sup>57</sup>

In the early twentieth century, the emergence of public relations meant that information was given to the newspapers through publicity agents representing

the interests of their employers. It did not take long for government agencies and politicians to use these agents as well. As a result, reporters now had ready access to information, but that information was highly filtered.<sup>58</sup> Along with press releases and wartime propaganda, these publicity agents undercut the objective nature of newspaper reporting that had been growing through the early twentieth century. At that time, the full-scale effort to control what facts reached the journalists, and in turn the public, began.<sup>59</sup> These strategic actions taken by politicians are precisely the type of choices that lead to transformations in political communication once ICTs, like printing and newspapers, saturate society and become politically viable.

## The Broadcast Political Communication Order

The Broadcast PCO started to emerge during the 1920s and lasted through the 1990s, a period that included remarkable technological and political upheaval. This PCO emerged with the expansion of radio and later included television and eventually cable and satellite. The technological tools may have changed, but the form and function of political communication and the mainly unidirectional orientation of messages to the public remained constant. The effect of immediate and personal connection between political elites and the public was consistent, whether it was through the Franklin Roosevelt's fireside chats or the televised speeches of Ronald Reagan. Throughout this era, the image of politicians was central to their electability and often their effectiveness.

The impetus behind the second PCR and the emergence of the Broadcast PCO was the birth of radio. The earliest ideation of the radio can be traced back to Mahlon Loomis in 1872. Following some of Loomis's ideas, Guglielmo Marconi was credited with inventing the wireless telegraph in 1895.<sup>60</sup> Besides improving on earlier prototypes, Marconi also realized that shipping communication provided the social necessity for wireless radio. Naval communication in particular called for the radio for long-distance communication due to the growth in ironclad ships at the end of the nineteenth century. These ships were much more durable and powerful than traditional ships with wooden hulls, yet far less nimble, requiring greater distances between ships and communication capabilities beyond that of traditional flag signals. Thus, just as the railroad had created a need for the telegraph, improved shipping had made wireless communication a necessity.<sup>61</sup>

At the turn of the twentieth century, the public market for what would become the radio was still in development, as wireless first started to become popular outside of naval and shipping interests. Wireless amateurs popped up everywhere, filling the airwaves and listening in to naval signals. On Christmas



Eve 1906, Reginald Aubrey Fessenden, a Canadian-born inventor, became the first to successfully transmit the human voice.<sup>62</sup> The radio itself became a public communication fixture only after two dramatic events paved the way. During the Titanic disaster in 1912, American Marconi operator David Sarnoff picked up distress signals in New York, bringing radio to the forefront of public interest and prompting Congress to pass legislation requiring radio transmitters on all ships with over fifty passengers.<sup>63</sup> Second was World War I, which created the need for coordinated radio systems. The government forced all amateurs off the air during the war, taking control of the airwaves for coordination, intelligence, and wartime propaganda, a specific and powerful political communication goal.<sup>64</sup>

After the war, radio remained a hobby for many Americans, as some one hundred thousand amateurs again popped up, communicating with one another.<sup>65</sup> The fixation on point-to-point communication was the real brake suppressing the potential of wireless communication. Once the Radio Corporation of America (RCA) was formed in 1919, Sarnoff, its new president, set out to create a radio industry based on the open broadcast of news and entertainment and the sales of millions of home radio sets.<sup>66</sup> Thus, radio was conceived by its creators not as a public service but as a consumer product.<sup>67</sup> Spurred on by the popularity of Frank Conrad, an amateur who transmitted phonographic music from the top of his garage, Westinghouse built a large transmitter in East Pittsburgh to stimulate the sale of its home receivers in 1920. On November 4, 1920, station KDKA became the first radio station to broadcast regularly scheduled programs, when it transmitted progress reports of the Harding-Cox presidential election results.<sup>68</sup>

The number of radio stations exploded across the nation starting in 1922 due to improving economic times, the appearance of complete radio sets that required little home assembly, and newspapers devoting space to radio scheduling and announcements. In January 1922, there were 30 broadcasting stations on the air; the total jumped to 556 one year later. Also in 1922, AT&T linked stations by telephone wire, creating the basic condition for the modern network, allowing many stations to play the same program at the same time. By 1924, this network had connected 25 stations from coast-to-coast.<sup>69</sup> Overwhelming growth in the industry contributed to a growing number of legal and licensing issues and the need for government regulation. This need was met by the creation of the Federal Radio Commission (FRC) in 1927, which later became the Federal Communication Commission (FCC). The Radio Act, which created the FRC, was intended to put some controls on the commercial use of radio, stating that the airwaves were public and belonged to the people. Yet, this act and the FRC quickly moved to support the major industry players at the expense of local and private radio stations. At this point,

the basic structure of the broadcast industry was complete. Government regulation was in place. Operating on temporary licenses, many individual stations were linked by wire to form networks, and advertising supported the whole industry.<sup>70</sup>

Not surprisingly, along with the number of radio stations, radio use in America skyrocketed during the 1920s. In 1922, only 0.2 percent of American households owned radios. In 1925, the figure rose to 19.2 percent, and by 1930, 45.8 percent owned radio receivers. One decade later, in 1940, over 80 percent of households owned radios.<sup>71</sup> Sales of radios went from \$60 million in 1922 to \$843 million in 1929.<sup>72</sup> The nationwide radio network, which simultaneously broadcasted programs to a national audience, created a national culture in a way that had never existed. At the same time, the number of political broadcasts grew so quickly that norms were already starting to develop. During the election cycle of 1924, political messages on the radio had become widespread enough to lead the major broadcasting companies to develop a common policy on political broadcasting, focusing on major national figures and the two major parties.<sup>73</sup>

Though the first scheduled radio program was political in nature, it was not until a year later that politicians began experimenting with the use of radio for campaigning. In that year, New York City mayor John F. Hylan and his challenger Henry F. Curran both reached out to potential voters during the final two days of the campaign. The experiment in political communication was so new that Curran's campaign manager could not even provide the exact time of his remarks.<sup>74</sup> Not until 1923 could the broadcasters and radio companies offer politicians increasingly reliable service. These technological improvements combined with the widely supported ideological belief of radio exceptionalism. As historian Douglas Craig suggests, "This [combination of factors] convinced broadcasters that their own self-interest and radio's destiny as a bringer of civic improvement required radio to be available to those engaged in, or aspiring to, political offices. This confidence of technical development, radio exceptionalism, and broadcasters' self-preservation meant that radio was now ready to do political service."<sup>75</sup>

Woodrow Wilson was the first president to experiment with sending his voice over the radio, in 1919 to World War I troops, and Harding made more successful attempts in 1922 and 1923. But President Coolidge was the first president to use the radio as a means of political communication and advancement.<sup>76</sup> On December 6, 1923, Coolidge made the first presidential radio address to the general public. On the following day, the *New York Times* explained the connection that the audience had to the president: "Groups of New Yorkers were drawn together to listen intently to the words of their President, not as embalmed text, but as living things while he was in the very



act of speaking them. . . . No competent estimate was obtainable . . . of the number here who heard the message broadcast, but there was no discoverable instance of a person equipped with a receiving set who did not use it for the purpose."<sup>77</sup>

These early attempts paved the way for the 1924 election, the first with widespread strategic use of the radio by politicians and interest groups. In a preview of what would happen again with the introduction of television and the internet into politics, political campaigns became much more technologically savvy in the course of one or two national campaign cycles. Most analysts agree that the Hoover-Smith presidential race in 1928 was the first true radio campaign, with both sides understanding its nuances and utilizing it extensively. Nearly eighty radio addresses followed during President Hoover's four years in office. Next was Franklin Roosevelt, the unquestioned champion of radio politics, who took his broadcasting technique very seriously and completed dozens of addresses yearly, including his compelling and historic fireside chats.<sup>78</sup> FDR understood that the radio did not simply offer a new way to speak with the public, but had redefined the art of political communication and the relationship between politicians and the American mass audience. According to one Roosevelt radio address in 1932,

In the olden days, campaigns were conducted amid surroundings of brass bands and red lights. Oratory was an appeal primarily to the emotions and sometimes to the passions. . . . With the spread of education, with the wider reading of newspapers and especially with the advent of radio, mere oratory and mere emotion are having less to do with the determination of public questions under our representative system of government. Today, common sense plays the greater part and final opinions are arrived at in the quiet of the home.<sup>79</sup>

While these comments were rooted in the belief in radio's exceptionalism, they were also accurate in describing the effect of the second PCR spurred on by the radio.

Though the radio obviously offered substantial benefits to technologically proficient politicians, it was also championed as a democratizing force and potential centerpiece of a more equitable and accessible political process. This concept was used by Sarnoff, the president of RCA, who linked this unifying cultural force with democratic ideals and consumerism in his testimony before the FCC during the late 1930s. He described listening to radio not only as a sign of membership in a national culture but also as a patriotic act that fed other American free-market ideals. Sarnoff thus veiled himself in the rhetoric of social benefits of listening to the radio in order to build a defense against

antitrust legislation. He went on to suggest that radio "must be appraised by the effect it has upon the daily lives of the people of America—not only the masses who constitute a listening audience numbered in the tens of millions, but the sick, the isolated, and the underprivileged, to whom radio is a boon beyond price. The richest man cannot buy for himself what the poorest man gets for free by radio."<sup>80</sup>

Although the sources of information remained firmly in the hands of private companies, the broad political uses and access suggested by Sarnoff did hold some truth. For instance, messages and themes embedded into popular songs broadcast on radio helped to create organized insurgency and political mobilization among textile workers in the South during the Great Depression, even though they had no formal organization or union.<sup>81</sup> Additionally, the direct and personal connection between national politicians and the public through radio broadcasts did make many feel much closer to the political process, as exemplified by Roosevelt's fireside chats, which often offered little substance but increased support for the president and the New Deal.

The invention of the television was technically a spin-off of the radio, adding powerful visual images, and often described separately in terms of its impact on society. However, the changes in political communication brought through the television merely introduced a new stage to the Broadcast PCO because the fundamental relationship between the political actors and public as well as the institutions, regulations, and overarching communication strategies remained relatively constant. Following World War II, the development and diffusion of the television occurred quickly due to the ability to transition to it from radio. Television technology had already become sophisticated before the mass production of sets, and by 1948 there were about seventy stations and several million sets across the nation.<sup>82</sup> The network idea was already in place, and by 1951 a coast-to-coast television network had been established. Television quickly took over the dramas, soap operas, westerns, variety shows, and amateur nights that had been on the radio. Meanwhile, radio moved to the automobile and catered to audiences when television was unavailable. Even government regulations were already established as the FCC simply expanded its control over television.<sup>83</sup>

In terms of political reporting, early television offered limited news programming. The three main broadcasting companies through most of the early era were the National Broadcasting Company (NBC), the Columbia Broadcasting System (CBS), and the American Broadcasting Company (ABC).<sup>84</sup> From 1947 to 1956 NBC carved out only fifteen minutes for news programming five nights a week, later expanding to thirty minutes per day. While television news was not the most popular programming on television, it did create a block of time each day when anyone tuning in was receiving



political news, what Marcus Prior refers to as “politics by default.” Prior persuasively argues that this default political knowledge has faded as we have moved to a post-broadcast era where some stay up to date with political events by choosing to follow political events and many others opt out.<sup>85</sup>

Technological limitations reduced the potential political news coverage during the early television era. The inflexibility of early television cameras limited news footage to anything that was prearranged so that lights could be set up. As the smaller camera, detached recorder, wireless microphone, and VCR were developed, television news could dramatically increase the possibilities of television journalism.<sup>86</sup> However, the political focus of the television largely grew out of politics itself. While Presidents Truman and Eisenhower had both used the television to address the nation, President Kennedy was the first to use it strategically to campaign and govern.<sup>87</sup>

The presidential debates in 1960 between John F. Kennedy and Richard Nixon drew uninterrupted coverage from all three networks and attracted an estimated audience of 60 million to 75 million viewers.<sup>88</sup> As is famously repeated, the television viewers overwhelmingly felt that Kennedy had won the debates, while listeners on the radio believed the winner was Nixon. Less well known is the reality that limited empirical evidence exists to support the supposed viewer-listener disagreement in the 1960 debates.<sup>89</sup> Most of the evidence that did exist was anecdotal, other than one survey conducted by Sindlinger & Co., a market research firm, that published one magazine article titled “Debate Score: Kennedy Up, Nixon Down,” on November 7, 1960, with no mention of its methods.<sup>90</sup> Further, people who were more likely to listen on the radio might have been predisposed to oppose Kennedy. Some have pointed out that “by 1960, those who could listen to debates only on radio were far from a random lot. Situated for the most part in remote rural areas, they were overwhelmingly Protestants, and skeptical of Kennedy as a Roman Catholic candidate.”<sup>91</sup> While the concrete evidence of the extent of the 1960 viewer-listener disagreement is weaker than the common historical lore would suggest, there is no doubt that Kennedy prepared more for the visual component of the televised debates, or that politics and television have combined to place image at the forefront of American politics ever since.<sup>92</sup>

Political news coverage expanded during the 1960s following not only national politics but local and international events as well. The civil rights movement marked the first widespread use of television to attract outside attention to issues of injustice. Nonviolent protesters used civil disobedience to highlight the brutality of southern racism, knowing the cameras would capture images of police brutality for the entire world to see. This strategic use of television news coverage altered the public agenda, increased outside involvement, and forced the government to create and enforce civil rights legislation.

The protests and activism of the civil rights movement blended into the anti-war movement, as coverage of the fighting in Vietnam and unrest at home dominated news coverage through the end of the 1960s and early 1970s.<sup>93</sup>

The expansion of cable and satellite television has increased the number of choices, diversification, and partisan nature of cable news.<sup>94</sup> Access to television is nearly universal. With the twenty-four-hour news cycle generated by cable, the volume of political information available has increased dramatically.<sup>95</sup> Most Americans today who follow politics still get their political news from television, although political news consumers have been consistently shifting to online and mobile devices.<sup>96</sup>

Regardless of these changes in types of information and positions taken by television journalists on cable news, it is still used to broadcast political messages instantly to a mass American audience, much as the Broadcast PCO has since the 1930s. The years of the broadcast PCO witnessed massive technological, media, and political upheaval, and the political communication practices of that era evolved a great deal. Radio, television, and later cable and satellite each impacted the social fabric of American in substantial ways. Yet referring back to the definition of PCRs offered in the introduction, they did not fundamentally change the relationship between the sources and audiences of political messages and, in turn, the relationship between political elites and the public. The Broadcast PCO is likely the best demonstration of the evolutionary process of political communication practices that can occur even within a PCO, explored in depth in the case studies of political communication change of campaigns and social movements in chapters 5 and 6, respectively.

## The Current Information Political Communication Order

The internet itself is a large and complicated concept to define. Following the warning of Bruce Bimber, I avoid getting tangled up in the intricate breakdown of all elements of the internet today, because it will undoubtedly continue to change.<sup>97</sup> David Karpf, among others, has warned against treating the internet as a standalone medium. There is no doubt that the uses and applications of the internet have changed in remarkable ways. To distill all of these changes and the impact that they have had on political communication to a single conception of the ICT would be foolish and shortsighted.

The evolution of the internet, the web, and the many related applications, devices, and changing uses are all part of the broader story of the PCC and the emergence of the current order. Modern web-based political communication is clearly far from stabilized. However, norms of online political communication



have already started to develop. We are currently in the midst of a stabilizing period, in which the major changes in online political communication are becoming more entrenched, consistent, and regulated. But because the structure, development, and use of the internet is fundamentally more democratic than previous media, stabilization is likely to develop in less concrete ways, which is a major emphasis of the final two chapters. Thus, within the context of the PCC, I conceptualize the internet broadly as inclusive of all elements in the evolution of the ICT, from the government-backed efforts in the early 1960s to the multifaceted commercial internet that now exists. It includes all technologies and uses relating to computing and methods of transferring data over the web.<sup>98</sup> The evolution of the internet from a four-node academic system in the late 1960s to the mobile and seemingly limitless communication system that we have today has been nothing short of revolutionary.

The development of the internet obviously would not be possible without the computer, which stretches its scientific roots back well over a century. However, the internet as a medium was born much more recently. A report given to the Rand Corporation in 1962 helped foster a widely supported belief that the US government created the internet primarily as a communications resource that could withstand a Soviet attack during the Cold War.<sup>99</sup> The reality is that the government scientists and university researchers who developed the early forms of the internet were aiming for a more scientific goal.<sup>100</sup> Massachusetts Institute of Technology (MIT) professor J. C. R. Licklider began publicly investigating the benefits of computer networking early in the 1960s and became the first head of the US Department of Defense's Advanced Research Projects Agency (DARPA) in 1962. Fellow MIT researcher Lawrence Roberts, who was studying the effects of packet-switching communication, later joined him at DARPA. Packet-switching allows messages to be broken up into separate bundles of information, which can travel independently to a destination before reassembling. In 1967, Roberts proposed a packet-based computer network that would come to be known as ARPANET, the precursor to today's internet. Although other researchers were working on a decentralized network, safe from Soviet attack, the first four nodes of ARPANET were set up in universities in 1969 with the primary goal of increasing research capabilities.<sup>101</sup>

Over the next fifteen years many technological innovations, growing largely out of universities around the world, led to numerous new applications, including email and a large increase in the number of web hosts and users around the world.<sup>102</sup> To handle this increased traffic, the ARPANET was phased out during the late 1980s and was replaced by the NSFNET (set up by the National Science Foundation), which launched in 1985 and provided a more robust backbone for and served as the direct forerunner to today's internet. Starting in

1984, the number of internet hosts doubled approximately every nine months, first on ARPANET and then NSFNET, topping 1 million in 1992.

In 1989 Tim Berners-Lee created the first vision of the World Wide Web while working at CERN. One year later he introduced HTML, URL, and HTTP, three fundamental technologies still in use today, which allow computers to more easily share information over the internet. On August 6, 1991, the web was released to the public, although the world-changing event felt far less dramatic at the time, as Berners-Lee recalled:

I know that you'd love me to say that, well, I got it all wired up and then there was this big switch and we threw the switch and the lights dimmed for a moment, but then there was this incredible high pitched whine, and that was the web taking off all across the world. People starting to log on and type in hypertext and we could feel the power, all these links spreading across the planet, and we just had to hold on tight. And then the calls came in from the *BBC* and the *New York Times* and the *Economist* about what it was that was happening to the world, and the stock market sort of took this incredible uptick. And then we turned it off. [Laughing]. No. It started off in a very small way.<sup>103</sup>

Two years later, in 1993, commercial browsers like Mosaic were introduced, and the public commercial-driven internet started to grow quickly. This became the entirety of the internet when the NSFNET was phased out in 1996.<sup>104</sup> These browsers were the technological innovation that made the internet accessible and useful to the masses, bringing political viability to the internet.

During the early 1990s a group including former vice president Al Gore proposed a national research and education network that would focus primarily on making networked computing a tool for education, scientific progress, and community empowerment. Instead the federal government chose to privatize the internet, creating the commercially driven net that we have today.<sup>105</sup> This privatization does not mean that the government has opted against regulating information online. Corporate and government regulation exists in many forms today and will, no doubt, become a greater issue as the development of the internet continues.<sup>106</sup>

Even casual observers of the evolution of the internet and related new media would agree that their use and role in society have exploded since the mid-1990s. Web browsers provided the catalyst for a true explosion in the scope of the internet. Web traffic on internet backbones in the United States grew one-hundred-fold in only two years from 1994 to 1996.<sup>107</sup> In December 1995 there



were 16 million internet users worldwide, growing to 361 million by the end of 2000, over 1.5 billion in 2008, and over 3.7 billion in 2017.<sup>108</sup> This unbelievable growth has already revolutionized entertainment, communication, business practices, and research and information gathering, as well as the methods used for political communication. Thus, the third PCR has occurred in a similar way to its predecessors: as the use of the internet grew exponentially, it gained political viability and was then explored and used by political actors.

Not coincidentally, political actors started using the internet for campaigns and direct communication with the American public in the early 1990s, just as web browsers started opening up the internet to the masses. At this time, national institutions and campaigns started looking to use the emerging internet as an alternative way to reach the American public. On July 29, 1994, the Clinton administration launched the first White House website.<sup>109</sup> A handful of midterm candidates created campaign websites in that same year, and by 1996 most major national candidates had followed suit. The year 1996 also saw the emergence of websites for political parties, interest groups, news media, and nonprofit voter education organizations.<sup>110</sup>

Just like earlier eras, the initial innovators generally stumbled out of the gate. Bob Dole was the GOP nominee for president in 1996. He was also seventy-three years old and he was no technology buff. However, he did have a shiny new campaign website that he was excited to tout during a televised presidential debate. Unfortunately he read the website incorrectly, sending many would-be supporters to find only error messages.

The sophistication of web tools and the numbers of political organizations online have continued to mushroom since the late 1990s. These tools continue to revolutionize political communication by making accessible information nearly limitless and increasing tools for interaction. Among the many innovative characteristics of the internet, the increased level of interactivity is arguably the most profound. The interactivity of online communication is simply unavailable from any previous communications medium and evolved quickly from the “brochureware” of the mid-1990s to web 2.0 and beyond. This interactivity offers an opportunity to break from the evolutionary line of top-down organizing, providing more interactive and potentially democratic interchange of ideas and powerful tools for recruiting supporters, raising resources, and mobilizing political action.

Social media helped to bring the political utility of the interactivity web front and center in the early 2000s. Various social media sites and related interactive web-based tools emerged quickly (as shown in Table 2.2) and have become increasingly central to the web experience of so many people. Facebook alone topped 2 billion regular users worldwide by June 2017 and is used regularly by nearly 70 percent of all American adults.<sup>111</sup>

Table 2.2 Launch Dates of Various Social Media Services, 2002–2011

<i>Public Launch Date</i>	<i>Social Media Service</i>
2002	Friendster
2003	Myspace
2003	Skype
2003	Facebook
2005	YouTube
2006	Twitter
2010	Pinterest
2010	Instagram
2011	Snapchat

Early social media pioneers like Friendster and Myspace were used to organize local political events and bring together people based on shared political ideologies or issues.<sup>112</sup> From those early political communication trials on social media, various platforms have worked their way into all aspects of political communication today. And just like earlier innovations, social media has helped cause the rise and fall of political figures. Cory Booker used the power of Twitter and Facebook to build a nationwide following while serving as mayor of Newark, New Jersey, and used that following to help propel him to become the junior senator from his home state. Donald Trump has used Twitter to frame issues, attack opponents, rally supporters, rail against the media, and bolster unsubstantiated conspiracies. His confrontational style is now being used by some other politicians, including Democratic Connecticut senator Chris Murphy, which is already leading some to whisper about his 2020 presidential prospects.<sup>113</sup>

Social media has also led to the downfall of political candidates from the left and right. In 2006 Virginia senator George Allen, the Republican incumbent, unexpectedly lost his bid for reelection to Democrat Jim Webb largely due to being caught on tape at a campaign event calling an Indian American in the crowd, who was there filming the event for Allen’s opponent, a “macaca.” Macaca is a Portuguese word for monkey and has been used as a racial slur for generations. The video went viral on YouTube, and although Allen stated that he didn’t know that it was a derogatory term, the damage was done. The fallout from the event was a major factor in his loss.

Rising Democratic star Anthony Weiner’s political demise was self-created through repeated “sexting” scandals that were spread on social media,

including some with girls under eighteen. His resignation from the US House of Representatives in 2011, a failed run for New York City mayor, and eventually his pleading guilty to transferring obscene images to an underage girl in May 2017 showed that social media had equal power to build and destroy political careers, regardless of party.

For citizens, the internet and social media have impacted political communication in important ways by offering new ways to encounter information, interact about politics, and engage in the political process.<sup>114</sup> Perhaps most important are the ways in which social media has affected the political news we receive.<sup>115</sup> In 2017, for the first time, more than half of American adults received news through social media at least weekly, with Facebook being the dominant source for news among social media platforms.<sup>116</sup> There are potentially positive results of this development, including greater potential diversity of sources and a greater ability for a democratization of voices within the political media environment.<sup>117</sup> However, at the same time, social media has clearly aided in the polarization of modern American politics, as viewers from the right and left self-select their sources of information and algorithms build on what the users like or to support creating filter bubbles.<sup>118</sup> Much of the information disseminated is also not well sourced or flatly inaccurate, and the rise of fake news and its impact on American politics was in full display during and after the 2016 election.<sup>119</sup>

Yet before the specific elements of the internet or other historical ICTs can be evaluated, it is first necessary to address the role of new ICTs in the emergence of PCRs. I do this in two steps. In chapter 3, I evaluate when and how particular technologies become socially diffused to the point of becoming politically viable. Once new technologies become politically viable, then the politically innovative uses of these new tools are determined by the actions and choices of political actors. These political choices are the primary determinants of whether a new PCR emerges or whether the existing order is maintained, and are examined in-depth in chapters 4 through 7.

## 3

## The Technological Imperative

*How and When New Communication  
Technology Becomes Politically Viable*

The first two chapters introduced the makeup and historical current of the political communication cycle (PCC). This chapter unpacks the first of the three phases of the PCC: the technological imperative, exploring what leads certain information and communications technologies (ICTs) to become potentially useful to political actors, gaining what I call *political viability*. Political viability is essential in order for political actors and organizations to recognize the potential benefits of trying these new communication devices and innovating their communication tactics. In other words, political viability is necessary for the political choice phase of the PCC to begin. In this chapter I analyze the characteristics of ICTs that make them more or less likely to become politically viable. Specifically, the political viability of an ICT increases when, relative to other communication technologies, it (1) diffuses through society at a fast rate, (2) is relatively inexpensive to use, (3) is convenient to access, and (4) is easily used to reach broad audiences.

The technological imperative begins when new ICTs diffuse widely across America. As more people across a society adopt a new ICT, it becomes increasingly attractive to political actors who are looking for new and better ways to achieve their political communication goals. If a new ICT is viewed as a potentially powerful method to reach the public, then over time more and more political actors and organizations adopt new political communication strategies utilizing this new technology in increasingly sophisticated ways. The first technological stage and the second behavioral phase are clearly related to one another. While many have written about how new technologies create change, I argue that the behavioral role in determining if, when, and how political actors choose to innovate their political communication tactics is much more



69. *Ibid.*, 5, 12.
70. For more on the characteristics of political actors and organizations as potential adopters that might increase or decrease the likelihood that they adopt new ICT innovations, see chapter 4. Case studies about how this process has occurred for various types of political organizations can be found in chapters 5 through 8.

## Chapter 2

1. Winston, *Media Technology and Society*, 4–5.
2. *Ibid.*, 5–9.
3. The concepts of innovation and invention are important and often closely related and confused. One example can be found in the important recent work by Padgett and Powell, in which they describe *innovations* as improving a way of doing something and *inventions* as changing the ways things are done. These definitions vary slightly and are sometimes interchanged with other definitions of the terms. Scott Berkun, who has studied innovations and how the term has been used correctly and incorrectly for years, offers clarification by suggesting that the best definition of innovation is significant positive change—thus requiring both a real change and a positive one. This perspective extends beyond something that is simply new. See John F. Padgett and Walter W. Powell, *The Emergence of Organizations and Markets* (Princeton, NJ: Princeton University Press, 2012); Scott Berkun, “The Best Definition of Innovation,” <http://scottberkun.com/2013/the-best-definition-of-innovation/>; Berkun, *The Myths of Innovation* (Sebastopol, CA: O’Reilly, 2010).
4. Winston, *Media Technology and Society*, 9–10.
5. *Ibid.*, 11.
6. A recent example is the acquisition of DirecTV by AT&T, first proposed in May 2014. This merger was approved in July 2015, creating the largest pay television company in the country, and offers AT&T, a telecommunications giant, new venues, media formats, and media opportunities.
7. Winston, *Media Technology and Society*, 11–15.
8. Starr, *Creation of the Media*, 85.
9. One important exception was that of Ben Franklin, who was a printing apprentice under his brother before running away to Philadelphia and eventually starting his own successful print shop. Over time Franklin’s papermaking took off, and he was a leading paper producer in the colonies, opening up several mills and eventually licensed to print currency for Pennsylvania. Because paper was milled from rags, Franklin literally turned “rags into riches,” which is the true source of the story embedded into American lore. Jill Lepore, *Book of Ages: The Life and Opinions of Jane Franklin* (New York: Vintage Books, 2014); Brooke Gladstone and Bob Garfield, “Rags to Riches,” WNYC: On the Media, <http://www.wnyc.org/story/rags-riches/>.
10. Pasley, “Tyranny of Printers,” 25.
11. *Ibid.*, 25–26.
12. *Ibid.*, 29.
13. *Ibid.*
14. Sidney Kobre, *The Development of the Colonial Newspaper* (Gloucester, MA: Peter Smith, 1960), 10; Pasley, “Tyranny of Printers,” 29.
15. Kobre, *Development of the Colonial Newspaper*, 13; Pasley, “Tyranny of Printers,” 29.
16. Pasley, “Tyranny of Printers,” 29.
17. *Ibid.*, 29–30.
18. *Ibid.*
19. Kobre, *Development of the Colonial Newspaper*, 29–30.
20. *Ibid.*, 96–97; Pasley, “Tyranny of Printers,” 402–3.
21. Pasley, “Tyranny of Printers,” 33.

22. *Ibid.*, 35.
23. Chapter 1 started with the anecdote describing why Dr. Rush suggested that Mr. Paine should be the one to write the document—a noteworthy story of the power of the press to shape opinion and a cautionary tale about the fear of a negative public response.
24. Paine, Foot, and Kramnick, *Thomas Paine Reader*, 8–10.
25. Arthur M. Schlesinger, *Prelude to Independence: The Newspaper War on Britain, 1764–1776* (New York: Knopf, 1958), vii.
26. *The Origins of the American Constitution: A Documentary History* (New York: Penguin Books, 1986), 125–26.
27. *Ibid.*, 125.
28. It took some work, but eventually the Constitution was ratified by every state in the Union when Rhode Island officially approved of the new government on May 29, 1790.
29. Starr, *Creation of the Media*, 86.
30. Pasley, “Tyranny of Printers,” 46.
31. *Ibid.*, 9, 407–9.
32. *Ibid.*, 405.
33. Isaiah Thomas, *The History of Printing in America*, 2 vols. (Worcester, MA: Isaiah Thomas, 1810), as cited in Stephen Botein, “Printers and the American Revolution,” in *The Press and the American Revolution*, ed. Bernard Bailyn and John B. Hench (Boston: Northeastern University Press, 1981).
34. Pasley, “Tyranny of Printers,” 9.
35. *Ibid.*, 403; Starr, *Creation of the Media*, 68; Kobre, *Development of the Colonial Newspaper*.
36. Michael Schudson, *Discovering the News: A Social History of American Newspapers* (New York: Basic Books, 1978), 31–32.
37. A great deal of printing press innovation occurred during the first four decades of the nineteenth century across the United Kingdom and specifically in London. Many of these innovations later made the leap to the United States. See James Moran, *Printing Presses: History and Development from the Fifteenth Century to Modern Times* (Berkeley: University of California Press, 1973).
38. *Ibid.*, 107–8.
39. *Ibid.*, 124; Schudson, *Discovering the News*, 32.
40. Moran, *Printing Presses*, 131–33; Schudson, *Discovering the News*, 32.
41. Matthew Gentzkow, Edward L. Glaeser, and Claudia Goldin, “The Rise of the Fourth Estate: How Newspapers Became Informative and Why It Mattered,” in *Corruption and Reform: Lessons from America’s Economic History*, ed. Edward L. Glaeser and Claudia Goldin (Chicago: University of Chicago Press, 2006), 187–230.
42. Schudson, *Discovering the News*, 32.
43. Gentzkow, Glaeser, and Goldin, “Rise of the Fourth Estate,” 196.
44. Although this does not mean that half of America subscribed to newspapers (many families subscribed to more than one paper), it does suggest that readership might not have been limited to only the political and economic elite. Starr, *Creation of the Media*, 86.
45. Schudson, *Discovering the News*, 14.
46. Ronald Berkman and Laura W. Kitch, *Politics in the Media Age* (New York: McGraw-Hill, 1986), 20.
47. Schudson, *Discovering the News*.
48. For much more on this see, chapter 6 in Steven Johnson, *How We Got to Now: Six Innovations That Made the Modern World* (New York: Riverhead Books, 2014).
49. Richard R. John, *Spreading the News: The American Postal System from Franklin to Morse* (Cambridge, MA: Harvard University Press, 1995), 2.
50. The incredibly affordable fee amounted to one penny if the newspaper was being transported under one hundred miles or one and a half cents if it was being transported farther.
51. John, *Spreading the News*.



52. *Ibid.*, 4, 30–39. Combining the increasing population, literacy rate, and technological advances with this low cost, subsidized distribution by the US Post Office led directly to the growth of the audience for the mass newspaper industry. After only two months the *Daily Sun's* readership grew to two thousand, up to five thousand after five months, and to eight thousand after six months. This number ballooned to over thirty thousand readers daily by 1837, to say nothing of the quickly expanding penny press in most other major cities across America. See Berkman and Kitch, *Politics in the Media Age*, 20–22.
53. Vermont had never included property ownership as part of its voting requirements.
54. The 1820 popular vote represented 1.12 percent of the US population for that year including slaves, and 1.34 percent not including the slave population. The over 1.7 million votes cast in 1840 represented 14.1 percent of the population, or 16.48 percent not including slaves. The numbers of votes grew over 22 times during that period.
55. This extremely high voter turnout remained the norm, staying over 70 percent in every presidential election until 1900. See Lyn Ragsdale, *Vital Statistics on the Presidency: Washington to Clinton* (Washington, DC: Congressional Quarterly, 1996).
56. A full discussion of these early political communication innovations by social movements including the women's suffrage movement and the fight against racial discrimination leading to the modern civil rights movements can be found in chapter 6.
57. In 1850, the Census classified only 5 percent of newspapers as neutral and independent. By 1940, 48 percent of newspapers were labeled as independent, with another 24 percent identified as Independent, Democratic, or Republican. Only 28 percent of papers continued to explicitly align themselves with one party or another. See Kathleen Hall Jamieson, *Packaging the Presidency* (New York: Oxford University Press, 1996), 22.
58. Berkman and Kitch, *Politics in the Media Age*, 25.
59. *Ibid.*, 26.
60. Marconi was the first to show that radio telegraphy, the wireless transmission of code, was both technically feasible and practically useful. Winston, *Media Technology and Society*, 68, 70; Craig, *Fireside Politics*, 3.
61. Winston, *Media Technology and Society*, 70–71.
62. Fessenden convinced the General Electric Company to create a continuous wave oscillator in 1905 that Fessenden used to transmit the signal, which was transmitted to a receiver that Fessenden had created himself (Craig, *Fireside Politics*, 4).
63. Sarnoff would become president of the RCA and later dominate National Broadcasting Company (NBC) radio and television.
64. Berkman and Kitch, *Politics in the Media Age*, 28–29.
65. *Ibid.*, 29.
66. Winston, *Media Technology and Society*, 76–77.
67. Martin Spinelli, "Radio Lessons for the Internet," *Postmodern Culture* 6, no. 2 (1996).
68. Craig, *Fireside Politics*, 8.
69. Berkman and Kitch, *Politics in the Media Age*, 29–30.
70. The formation of regulatory agencies (like the FRC and FCC) and policies during the early radio era will be described in detail in chapter 9. See also Berkman and Kitch, *Politics in the Media Age*, 30–31.
71. Craig, *Fireside Politics*, 12.
72. "Radio: A Consumer Product and a Producer of Consumption," <http://lcweb2.loc.gov:8081/ammem/amrlhtml/inradio.html>.
73. The major companies involved were AT&T, RCA, Westinghouse, and General Electric (GE). They also limited their political coverage to an hour a day suggesting the large demand for political coverage by the political campaigns. See Craig, *Fireside Politics*, 117.
74. *Ibid.*, 141.
75. *Ibid.*
76. Wilson and Harding used the radio but did not address the public. Coolidge did not make addresses specifically for radio, instead broadcasting speeches to live audiences, with radio acting as a technological extension bringing the event to millions around the country. *Ibid.*, 142.
77. "Special to the New York Times," *New York Times*, December 7, 1923.
78. For more on how and when political actors innovated using the radio, see chapter 3. See also Craig, *Fireside Politics*, 143–66.
79. Franklin Delano Roosevelt, *The Public Papers and Addresses of Franklin D. Roosevelt: The Genesis of the New Deal: 1928–1932* (New York: Russell and Russell, 1969), 659, as quoted in Jamieson, *Packaging the Presidency*.
80. Radio Corporation of America, *Principles and Practices of Network Radio Broadcasting—Testimony of David Sarnoff before the Federal Communications Commission, November 14, 1938 and May 17, 1939* (New York: RCA Institute Technical Press, 1939), 102.
81. Vincent J. Roscigno and William F. Danaher, "Media and Mobilization: The Case of Radio and Southern Textile Worker Insurgency, 1929 to 1934," *American Sociological Review* 66, no. 1 (2001): 21–48.
82. Berkman and Kitch, *Politics in the Media Age*, 34.
83. *Ibid.*
84. NBC and CBS were carryover broadcasters from the radio era while ABC emerged as a major broadcaster as the television era was dawning after the FCC forced NBC to sell one of its networks due to federal antitrust regulation. They sold the Blue Network to ABC in 1941 (Craig, *Fireside Politics*, 279).
85. Markus Prior, *Post-Broadcast Democracy: How Media Choice Increases Inequality in Political Involvement and Polarizes Elections* (New York: Cambridge University Press, 2007).
86. Berkman and Kitch, *Politics in the Media Age*, 39–40.
87. For more on the transformational role of Kennedy in campaigning, see chapter 4.
88. Laurence Bergreen, *Look Now, Pay Later: The Rise of Network Broadcasting* (New York: Doubleday Books, 1980), 221.
89. James N. Druckman, "The Power of Television Images: The First Kennedy-Nixon Debates Revisited," *Journal of Politics* 65, no. 2 (2003): 559–72.
90. "Debate Score: Kennedy Up, Nixon Down," *Broadcasting*, November 7, 1960; David L. Vancil and Sue D. Pendell, "The Myth of Viewer-Listener Disagreement in the First Kennedy-Nixon Debate," *Central States Speech Journal* 38, no. 1 (1987): 16–31.
91. Steven Chaffee, "Book Review: Televised Presidential Debates and Public Policy," *International Journal of Public Opinion Research* 12, no. 3 (2000): 333–35. Review of Sidney Kraus, *Televised Presidential Debates and Public Policy*, 2nd ed. (Mahwah, NJ: Lawrence Erlbaum, 2000).
92. A later study revisited the 1960 debate and divided participants into television viewers and radio listeners and found that television did, in fact, impact participants' view of the debate performance (Druckman, "Power of Television Images"). For more on the differences in appearance and performance during the 1960 debate see Kraus, *Televised Presidential Debates and Public Policy*. For analysis of what the viewer-listener disagreement myth might mean historically, see Vancil and Pendell, "Myth of Viewer-Listener Disagreement in the First Kennedy-Nixon Debate"; Michael Schudson, *The Power of News* (Cambridge, MA: Harvard University Press, 1995), 116.
93. Berkman and Kitch, *Politics in the Media Age*, 40–41.
94. For a remarkable study of political polarization in media coverage in the modern media environment, see Amy Mitchell et al., "Political Polarization & Media Habits" Pew Research Center, Washington, DC, 2014.
95. Prior, *Post-Broadcast Democracy*; Prior, "News vs. Entertainment: How Increasing Media Choice Widens Gaps in Political Knowledge and Turnout," *American Journal of Political Science* 49, no. 3 (2005): 577–92.
96. In fact, Americans under fifty years old have been more likely to consume news online than any other sources since 2013. See Amy Mitchell, Jeffrey Gottfried, and Katerina



- Eva Matsa, "Millennials and Political News," Pew Research Center, (Washington, DC, 2015); Mitchell et al., "Political Polarization & Media Habits"; Andrea Caumont, "12 Trends Shaping Digital News," Pew Research Center, <http://www.pewresearch.org/fact-tank/2013/10/16/12-trends-shaping-digital-news/>; Pew Research Center, "State of the News Media," <http://www.pewresearch.org/topics/state-of-the-news-media/>; Michael Barthel, "5 Key Takeaways about the State of the News Media in 2016," Pew Research Center, <http://www.pewresearch.org/fact-tank/2016/06/15/state-of-the-news-media-2016-key-takeaways/>.
97. Bimber, *Information and American Democracy*.
  98. Kerry G. Coffman and Andrew M. Odlyzko, "Growth of the Internet," *Optical Fiber Telecommunications 4B: Systems and Impairments* (2002): 17–56.
  99. Sandy Baldwin, *The Internet Unconscious: On the Subject of Electronic Literature*, ed. Francisco J. Richardo, International Texts in Critical Media Aesthetics (New York: Bloomsbury Academic, 2015), 35–36; Alexander R. Galloway, *Protocol: How Control Exists after Decentralization* (Cambridge, MA: The MIT Press, 2004).
  100. Andrew L. Shapiro, "The Internet," *Foreign Policy* no. 115 (Summer 1999): 16.
  101. *Ibid.*, 16–17.
  102. A web host stores the pages of a website. These hosts then make these pages available to computers connected to the internet.
  103. Philip Smith, "The Great Leveling?" in *The Virtual Revolution* (film; London: BBC, 2010).
  104. Coffman and Odlyzko, "Growth of the Internet."
  105. Shapiro, "The Internet," 17.
  106. Also for examples see Pariser, *Filter Bubble*; Morozov, *Net Delusion*.
  107. Coffman and Odlyzko, "Growth of the Internet," 19, 42.
  108. Over 2 billion internet users in 2015 were living in developing nations. See Jacob Davidson, "Here's How Many Internet Users There Are," *TIME*, May 26, 2015; Miniwatts Market Research, "Internet Growth and Stats," <http://www.allaboutmarketresearch.com/internet.htm>; "Internet World Stats," <http://www.internetworldstats.com/stats.htm>.
  109. This basic website was the first of four versions just during the Clinton administration. It was launched on July 29, 1994. (National Archives and Records Administration, "Welcome to the White House," <http://clinton1.nara.gov/>.)
  110. Bruce Bimber and Richard Davis, *Campaigning Online: The Internet in U.S. Elections* (New York: Oxford University Press, 2003), 23–25.
  111. Josh Constine, "Facebook Now Has 2 Billion Monthly Users . . . And Responsibility," *TechCrunch*, June 27, 2017; Shannon Greenwood, Andrew Perrin, and Maeve Duggan, "Social Media Update 2016," Pew Research Center, Washington DC, 2016.
  112. Kara Jesella, "The Friendster Effect," *Alternet*, January 29, 2006.
  113. Susan B. Glasser, "Do Democrats Need to Tweet More Like Trump," *Politico Magazine*, May 8, 2017.
  114. Cristian Vaccari, Andrew Chadwick, and Ben O'Loughlin, "Dual Screening the Political: Media Events, Social Media, and Citizen Engagement," *Journal of Communication* 65, no. 6 (2015): 1041–61; Rasmus Kleis Nielsen and Kim Christian Schröder, "The Relative Importance of Social Media for Accessing, Finding, and Engaging with News: An Eight-Country Cross-Media Comparison," *Digital Journalism* 2, no. 4 (2014): 472–89.
  115. The main thrust of this book is not political media or political news. For some excellent scholarship on politics and media in the modern era, see, among others, Barthel, "5 Key Takeaways about the State of the News Media in 2016"; Natalie Jomini Stroud, *Niche News: The Politics of News Choice* (New York: Oxford University Press, 2011); Rasmus Kleis Nielsen, "Digital News as Forms of Knowledge: A New Chapter in the Sociology of Knowledge," in *Remaking the News, Essays on the Future of Journalism Scholarship in the Digital Age*, ed. Pablo J. Boczkowski and C. W. Anderson (Cambridge, MA: MIT

- Press, 2017), 91–110; Nic Newman et al., "Reuters Institute Digital News Report 2017," *Reuters Institute Digital News Report*, 2017; Bennett and Segerberg, *Logic of Connective Action*; Shelley Boulianne, "Social Media Use and Participation: A Meta-Analysis of Current Research," *Information, Communication & Society* 18, no. 5 (2015): 524–38; Robertson, *Media and Politics in a Globalizing World*.
116. Note that, within the hybrid media system, this does not mean that social media is replacing traditional platforms, and in fact, for many it is not used for or only makes up a very small part of their political news. Newman et al., "Reuters Institute Digital News Report 2017"; Nielsen and Schröder, "Relative Importance of Social Media"; Chadwick, *Hybrid Media System*.
  117. Clay Shirky, "The Political Power of Social Media," *Foreign Affairs*, January/February (2011): 28–41.
  118. Eytan Bakshy, Solomon Messing, and Lada A. Adamic, "Exposure to Ideologically Diverse News and Opinion on Facebook," *Science* 348, no. 6239 (2015): 1130–32; Mitchell et al., "Political Polarization & Media Habits"; Amy Mitchell et al., "How Americans Encounter, Recall, and Act upon Digital News," Pew Research Center, Washington DC, 2017. Pariser, *Filter Bubble*.
  119. Hunt Allcott and Matthew Gentzkow, "Social Media and Fake News in the 2016 Election," National Bureau of Economic Research, Washington, DC, 2017. For an interesting study on how correcting misinformation via social media can help, see Emily K. Vraga and Leticia Bode, "I Do Not Believe You: How Providing a Source Corrects Health Misperceptions across Social Media Platforms," *Information, Communication & Society* (April, 2017): 1–17.

## Chapter 3

1. Rogers, *Diffusion of Innovations*, 11.
2. Merrill Morris and Christine Ogan, "The Internet as Mass Audience," *Journal of Communication* 46, no. 1 (1996): 39–50; Rogers, *Diffusion of Innovations*, 11–23.
3. Morris and Ogan, "Internet as Mass Audience."
4. Rogers, *Diffusion of Innovations*, 5, 12.
5. Two major aspects to the diffusion of ICTs are the perception of potential adopters and the social processes that affect how they learn about innovations. I analyze these in detail in the next chapter.
6. Trish, "Diffusion of Campaign Technology." Robert J. Gordon, *The Rise and Fall of American Growth: The U.S. Standard of Living since the Civil War* (Princeton, NJ: Princeton University Press, 2016).
7. Gordon, *Rise and Fall of American Growth*.
8. Bradley S. Greenberg, "Diffusion of News of the Kennedy Assassination," *Public Opinion Quarterly* 28, no. 2 (1964): 225–32; Rogers, *Diffusion of Innovations*.
9. This research is particularly useful in the next chapter, when I analyze in detail the choices and actions of political actors. For the time being, note that diffusion by individuals is not identical to diffusion within and between by organizations. For instance, the decision to start to use strategic radio advertisements, email, or twitter is made differently by individual Americans and organizations like the National Rifle Association (NRA) and congressional campaigns, an important distinction that I elaborate on in the next chapter. See also Paul J. Deutschmann and Orlando Fals-Borda, *Communication and Adoption Patterns in an Andean Village* (San José, Costa Rica: Programa Interamericano de Información Popular, 1962); Lawrence B. Mohr, "Determinants of Innovation in Organizations," *American Political Science Review* 63, no. 1 (1969): 111–26.
10. Hybrid corn became available to Iowa farmers in 1928 or 1929 and accounted for 75 percent of corn acreage in the state by 1939. This rapid diffusion provided a great opportunity to study diffusion based on interviews asking farmers to recollect their shift to