The Electric Telegraph, News Coverage, and Political Participation

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This paper uses newly digitized data on the growth of the telegraph network in America during 1840–1852 to study the impacts of the electric telegraph on national elections. Exploiting the expansion of the telegraph network in a difference-in-difference approach, I find that access to telegraphed news from Washington significantly increased voter turnout in national elections. Newspapers facilitated the dissemination of national news to local areas. Text analysis on historical newspapers shows that the improved access to news from Washington led local newspapers to cover more national political news, including coverage of Congress, the presidency, and sectional divisions involving slavery.

Newspapers play an important role in democracy, and timely access to national news is paramount in informing and engaging citizens. The most consequential improvement in timeliness of national news was due to the electric telegraph, which reduced the typical lag of Washington news for American families in the Midwest by seven days during the 1840s. Yet the telegraph has gone largely unstudied in economics, particularly with regard to potential impacts on the political realm. This paper assembles a novel dataset to study the political impact of the telegraph. Specifically, I study the impact of access to telegraphed national news on electoral politics in mid-nineteenth-century America.

The invention of the telegraph was a watershed in the history of newspapers. While newspapers contribute to civic engagement and political participation (Gentzkow, Shapiro, and Sinkinson 2011; Drago, Nannicini, and Sobbrio 2014; Schulhofer-Wohl and Garrido 2013), up until the early 1840s the speed of transportation dictated the speed of news; days and even weeks would pass before newspapers reported on distant events (Schwarzlose 1989). For instance, the death of President William Harrison in 1841 was reported five days later in Cleveland and nine days later in St. Louis. Introduced in 1844, the telegraph allowed news to travel instantly over vast distances for the first time, revolutionizing the news industry and speeding up the dissemination of news throughout the nation. As a result, the public received unprecedented access to timely national news. At a time when close to 90 percent of the American population still lived in rural areas, the improved access to national news could have important political implications.

Why would the timeliness of news matter for electoral outcomes, such as voter turnout? Theoretically, the effect could operate through both demand and supply channels. On the demand side, contemporary historical accounts suggest that readers preferred news with less delay and that the telegraph made newspapers more attractive and increased their sales (Standage 2009a).[1] On the supply side, the greater ease of obtaining national news via the telegraph and the higher value that readers attached to national news with less delay meant that newspaper editors had incentives to cover more national news after the introduction of the telegraph. The greater demand for and supply of national news because of the telegraph would therefore increase the amount of national news consumed in the equilibrium by the public. This would lead to an electorate more informed of national politics, which may potentially increase political participation and affect outcomes in national elections.

To study the electoral impact of the telegraph empirically, one ideally would need data measuring both spatial and temporary variation in access to the telegraph. A challenge, however, is the shortage of data on the telegraph network in general. As a result, previous studies involving the telegraph mostly relied on cross-sectional data (Garcia-Jimeno, Iglesias, and Yildirim 2022) or one-off event such as the establishment of the transatlantic telegraph cable (Steinwender 2018; Hoag 2006) to provide

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[1] For instance, in 1851 Horace Greeley, the editor of the *New York Tribune*, claimed that "the quickest news is the one looked to"; contemporary journalists also observed that "to the press the electric telegraph is an invention of immense value...The press is enabled to lay [the news] fresh before the reader like a steak hot from the gridiron, instead of being cooled and rendered flavourless by a slow journey from a distant kitchen" (Standage 2009a).

variation in access to the telegraph. In this paper, I collect unique data on the growth of the telegraph network in the United States from its inception in 1844 to 1852, when telegraph lines had reached all major and most minor cities. The data set provides precise information on when and where a telegraph line opened for operation. From this data set, I obtain variation in access to the telegraph across the country in each election year between 1840 and 1852. To my knowledge, this paper is the first to empirically study the political impacts of the telegraph using this systematic and detailed information on the expansion of the U.S. telegraph network.

My baseline empirical work relates access to telegraphed national news to voter turnout. In particular, I focus on telegraphed news from Washington, because Washington was the primary source of national political news in the mid-nineteenth century (Kernell and Jacobson 1987). The high cost of using the telegraph, however, means that only daily newspapers during the period could afford to gather news with the telegraph (Thompson 1947; Kielbowicz 1989). My empirical strategy therefore exploits proximity to daily newspapers with telegraphic connections to Washington to generate plausibly exogenous variation in access to telegraphed news from Washington. Specifically, in each election year, I measure a county's distance to the nearest daily newspaper with a telegraphic connection to Washington, which I call the "effective distance to Washington" and use as my explanatory variable. Much of the variation in a county's effective distance is driven by telegraphic connections in faraway places, which are plausibly exogenous to local circumstances or demand for the telegraph. My baseline empirical analysis then follows a generalized difference-in-difference approach, in which I regress county-level voter turnout from the period 1840–1852 on effective distance to Washington, while controlling for county fixed effects and state-by-year fixed effects.

I find that access to telegraphed news from Washington increased voter turnout in presidential elections. Specifically, my estimate suggests that a reduction in effective distance to Washington by one standard deviation (about 260 miles) would increase presidential election turnout by approximately 3.2 percentage points (or 4.5 percent relative to the mean). The estimated effect increases monotonically as effective distance to Washington decreases. I find similar evidence for House election turnout once taking into account the differences in ballot options between presidential and House elections that were common during this period. The results also hold under a series of robustness checks, including controlling for railroad access or constructing alternative measures of access to

telegraphed Washington news that consider the historical overland, rail, and water transportation networks.

I find little evidence that access to telegraphed news from Washington affected party vote shares, suggesting that the increase in turnout was shared between and similar for both parties. I also find no evidence that access to telegraphed Washington news affected congressmen's behaviors, including roll call votes or the number of bills introduced.

I then turn to examine the mechanisms underlying the effects on voter turnout. I find that the effect on turnout was larger in counties with a newspaper in 1840, whereas whether a county had a non-news periodical did not matter for turnout. This finding suggests that newspapers played a key role in facilitating the diffusion of more timely national news to local areas, potentially contributing to participation in national elections.

Moreover, text analysis of 102 small-town weekly newspapers from the 1840s suggests that access to telegraphed Washington news led newspapers to cover more national news, including coverage of Congress, the presidency, and sectional divisions involving slavery. Taken together, the results suggest that the telegraph made newspapers less parochial and facilitated a national conversation on major issues, which possibly led to greater electoral participation. A participatory public is important for democracy, especially for a young and developing democracy like America in the 1840s. The results therefore suggest that the telegraph contributed to the burgeoning democracy of America in the mid-nineteenth century.

The paper is closely related to the literature on the political impacts of newspapers (Gentzkow, Shapiro, and Sinkinson 2011; Perlman and Sprick Schuster 2016; Drago, Nannicini, and Sobbrio 2014; Schulhofer-Wohl and Garrido 2013; Snyder and Strömberg 2010; Bruns and Himmler 2011; Gerber, Karlan, and Bergan 2009; George and Waldfogel 2006; Boix, Adsera, and Payne 2003). While previous studies focused on the political impacts of newspapers, this paper examines the impact of a revolutionary technology on newspapers themselves. By disseminating news throughout the nation with unprecedented speed, the telegraph greatly improved the ability of newspapers to inform and engage the public in the mid-nineteenth century.

The paper also contributes to the literature on the impacts of information technologies on electoral politics and participation. Previous studies examined the impacts of the internet (Campante, Durante, and Sobbrio 2018; Falck, Gold, and Heblich 2014), television (Gentzkow 2006), and radio (Strömberg 2004) on electoral politics. The telegraph was a watershed in the history of communication, signaling the beginning of

electronic communication. In addition, unlike modern forms of information technology that frequently mix information and entertainment, the telegraph transmitted only information and provided an opportunity to study the impacts of information technology in its "purest" form. Despite its revolutionary nature and far-reaching influence, the telegraph remains one of the least studied information technologies in the literature. The paper provides new insight into the political impacts of the telegraph.

Finally, the paper contributes to the literature on the impact of the telegraph, widely considered as one of the most important inventions in history. Previous work has examined the telegraph's impacts on financial and commodity markets (Hoag 2006; Field 1998; Garbade and Silber 1977; Langdale 1979), international trade (Steinwender 2018; Steinwender and Juhász 2019; Lew and Cater 2006), collective action in protests (Garcia-Jimeno, Iglesias, and Yildirim 2022), and firm management (Field 1992; Yates 1986; DuBoff 1980, 1983). The findings of this paper underscore the importance of timely access to information for voters.

HISTORICAL BACKGROUND

The electric telegraph was a hallmark of the Industrial Revolution. Before the introduction of the telegraph in 1844, how fast information flew largely depended on transportation technologies, be it foot, horse, or rail. Invented by Samuel F. B. Morse, the telegraph transmitted electrical signals encoded as lines and dots over a wire laid between stations, where different combinations of the lines and dots represented different English alphabets and punctuations. The telegraph enabled instant transmission of information over vast distances, at last freeing communication from transportation (Carey 1992).[2]

At the beginning of the 1840s, almost 90 percent of Americans were still living in rural areas (U.S. Census 1840), where access to external information was limited. States had extended suffrage to almost all adult white males by 1840, and citizens demonstrated a strong interest in politics (Silbey 2014; Altschuler and Blumin 1997). The primary source of political information during this era was newspapers, and newspaper content was predominantly political in nature. For the most part, newspapers

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[2] A precursor of the electric telegraph was the semaphore telegraph, which conveyed information through visual signals, using towers with pivoting shutters that could form into different positions to encode messages. Because the semaphore system operated through line-of-sight, the system was constrained by geography, daylight, and weather conditions for clear visibility. The semaphore telegraph, briefly used in the United States to transmit shipping news at several locations since the early 1800s, was never widely adopted in the United States.

discussed political issues and printed summaries or transcripts of legislative proceedings as well as presidential and gubernatorial messages (Altschuler and Blumin 1997). Washington was the primary source of national political news, which mainly consisted of coverage of Congress and the presidency (Kernell and Jacobson 1987).

The federal government had long recognized the importance of newspapers to an informed electorate. To encourage the circulation of news, the federal government passed the Postal Service Act of 1792, which allowed newspaper editors to exchange newspapers with one another by the postal system for free. Yet, news was slow-moving. Up until the early 1840s, a typical newspaper in the Midwest or the South reported Washington news with a lag of one to two weeks. Some newspapers occasionally even ran out of news to report and had to use non-news items, such as poems and anecdotal stories, to fill the space (Blondheim 1994). The slowness and meagerness of news were much to the dissatisfaction of newspaper editors and readers (Standage 2009b).

Samuel F. B. Morse and his associates obtained funding from Congress in 1843 and built the first telegraph line in America—an experimental line of about 40 miles between Washington and Baltimore. The line opened on 24 May 1844, demonstrating the practicality of the telegraph with the famous message "What hath God wrought!" Morse believed that only the government should own and operate a technology as strategic as the telegraph and hoped to sell his system at a fair price to the American government. Congress, however, failed to see the full potential of the telegraph and refused to fund further extension of the Washington-Baltimore line, which was sold to private investors in 1846 (Thompson 1947).

Realizing the commercial potential of the telegraph, a number of private companies were soon formed to build telegraph lines across the country after 1844. The telegraph companies primarily built lines to connect major cities and commercial centers (Reid 1886). To finance the construction of a line, the telegraph company building the line would issue shares of stocks to raise capital from prominent residents (usually local businessmen) along the route of the line; cities or towns from which sufficient stock subscriptions could be obtained were included as stops on the line (Thompson 1947).

To build the lines, telegraph companies typically followed and obtained their right of way from existing roads, such as public highways, stage routes, turnpikes, and railroads (Nonnenmacher 2001).[3] The relatively

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[3] It was, however, not until the mid-1850s that railroad companies embraced the potential of the telegraph for directing trains and started to collaborate with telegraph companies widely (Thompson 1947).

low cost of building telegraph lines facilitated their rapid spread across the nation.[4] By 1848, there were 2,311 miles of telegraph lines in operation, which further increased to 12,000 miles by 1850, when the telegraph had grown into a national network connecting most major cities and many smaller towns across the United States (Highton 1852).[5] Newspapers, along with banks and corporations, were the biggest customers of the telegraph during this period (Thompson 1947).

The telegraph revolutionized news gathering by greatly accelerating the flow of news. The high expenses of using the telegraph to gather news, however, made the telegraph out of reach for almost all but daily newspapers, which were predominantly located in big cities (Thompson 1947; Kielbowicz 1989).[6] With larger readerships to spread the costs, big-city dailies were able to adopt the telegraph almost immediately after the city received the telegraph (Thompson 1947). For instance, the telegraph connected Pittsburgh to Washington on 26 December 1846, and three days later daily newspapers in Pittsburgh started to report telegraphed news from Washington. Operating with smaller budgets, other newspapers, most of which were weeklies and located in smaller cities or towns, hardly used the telegraph (Kielbowicz 1989). Instead, small newspapers frequently copied national news from big-city dailies that they received by the postal system for free and therefore obtained, albeit with a lag, news that had originally been telegraphed to the dailies. For example, a small-town weekly 120 miles outside of St. Louis, *The Boon's Lick Times*, frequently copied its news from St. Louis's dailies and saw the delay of its latest Washington news going down by ten days between 1847 and 1848 as the telegraph expanded westward and reached St. Louis. Thus, the telegraph reduced the delay of news across the nation, directly for daily newspapers and indirectly for other smaller newspapers.

Newspapers generally expected that the telegraph would engage the public. For example, the newspaper *Philadelphia North American*

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[4] The cost of building telegraph lines, including wire, posts, and labor, was about 150 dollars per mile (U.S. Census Office 1852), which was much lower than the cost of building a railroad and even lower than the cost of building a good road (Calvert 2008).

[5] Based on my data on the telegraph network, 48 out of the 50 most populous urban places in 1850 had received the telegraph by that year.

[6] The usual charge for telegraphic transmission in its early days was 25 cents for ten words or less per one hundred miles, with additional charges for each additional word beyond the first ten words (Thompson 1947). Based on a telegraph rate schedule published in 1853, sending a ten-word message from Pittsburgh, PA, to Washington, D.C., cost 50 cents (Barr 1853). In comparison, in 1845 the postal rate for a *onesheet* letter mailed anywhere within 300 miles (which is greater than the distance between Pittsburgh and Washington) was 5 cents (USPS 2008). In fact, even big-city daily newspapers had to find ways to cut telegraph expenses—sometimes by gaming the telegraph system. For instance, to cut telegraph expenses, several big-city dailies used code words to convert long messages into shorter ones (Thompson 1947).

predicted in late 1845 that the telegraph would increase "the appetite for news" by "feeding public curiosity." Likewise, James Gordon Bennett, founder and editor of the *New York Herald*, asserted that the faster flow of news brought by the telegraph would increase people's interest in public affairs (Blondheim 1994).

DATA

Growth of the Telegraph Network

In this section, I describe the data on the telegraph network. Data on the telegraph are surprisingly scarce in the literature. Previous studies on the telegraph have mostly relied on cross-sectional data (Garcia-Jimeno, Iglesias, and Yildirim 2022) or one-off event such as the establishment of the transatlantic telegraph cable (Steinwender 2018; Hoag 2006).[7] For this study, I collect new data from several sources to measure the continuous growth of the U.S. telegraph network during 1844–1852.

Data on the telegraph network are compiled from several sources. For the pre-1850 period, I obtain data primarily from the books *Wiring a Continent: The History of the Telegraph Industry in the United States, 1832–1866* (Thompson 1947) and *The Telegraph in America and Morse Memorial* (Reid 1886). Thompson's (1947) seminal work on the telegraph industry traces the history of the development of the telegraph network in the United States. Thompson carefully searched through a wealth of source material, both printed and manuscript, and provides, to my knowledge, the most detailed studies of the early history of the telegraph industry.[8] In particular, the book provides detailed information on when and where a telegraph line opened for operation, including each line's opening date as well as the terminal and the intermediary stations on

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[7] An exception is Steinwender and Juhász (2019), who use the timing of connection to the global telegraph network by countries to study the effect of a reduction in communication time on international trade in nineteenth-century cotton textiles.

[8] The primary source material of Thompson's study consists of the collections of key figures in the early history of the telegraph industry, including but not limited to the O'Rielly collection at the New York Historical Society Library; the F. O. J. Smith collection at the Maine Historical Society Library in Portland; the Cornell papers in the custody of the Cornell University Library; the Alfred Vail papers in the Smithsonian Institution; and the Samuel F. B. Morse and the John D. Caton collections in the Library of Congress. In his review of Thompson (1947) in 1948, American economic historian Chester W. Wright wrote that "The known manuscript collections – notably those including the papers of Caton, Morse, O'Rielly, Smith, and Vail – have been exhaustively searched [...] and a mass of printed material has been used. Scrupulous care has been taken to provide both elaborate footnote references to all sources and pertinent comments." Wright (1948) further notes that Thompson's contribution "consists in filling in the voluminous details and verifying the whole record."

the line.[9] Reid (1886), a detailed history of the early days of the telegraph industry, supplements Thompson (1947) with more detailed information on some lines and adds several smaller stations and feeder lines omitted by Thompson (1947). While it is possible that some small stations might have been omitted by both sources, it should be noted that my empirical work exploits connection to the telegraph by major cities, which are well documented in both sources.[10] Using Thompson (1947) and Reid (1886), I digitize the continuous growth of the telegraph network from its infancy in 1844 to the beginning of 1850.

Partly because the telegraph network sprouted more rapidly after 1850, information on the telegraph network since 1850 is not systematically accounted for by either Thompson (1947) or Reid (1886). To overcome this challenge, I find data from several additional sources published in the early 1850s, which allow me to digitize the telegraph network in 1852. The primary source for the 1852 lines is *Report of the Superintendent of the Census* (U.S. Census Office 1852), which lists all the telegraph lines in operation in the United States in 1852. I supplement this source with the book *Historical Sketch of the Electric Telegraph: Including Its Rise and Progress in the United States* (Jones 1852) and the 1 January issue of *Appleton's Mechanics' Magazine and Engineers' Journal* (Adams 1853), which contain more details for some lines. These primary sources provide me with a cross section of the telegraph network in 1852, including the location of the lines and the cities and towns connected. Combining the 1852 data with the pre-1850 data from Thompson (1947) and Reid (1886), I am able to measure the growth of the U.S. telegraph network during 1844–1852. Based on these data, Figure 1 shows the telegraph lines in operation in the United States every other year for the period 1844–1852.

Data on the telegraph network after 1852 are more sporadic. I therefore focus my study on the period up to 1852. Although a seemingly short span of time, the period 1844–1852 saw rapid growth of the telegraph network from a single line to a national network. To my knowledge, this is the first paper to empirically study the electoral impacts of the telegraph using systematic and detailed information on the expansion of the U.S. telegraph network.

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[9] In most cases, the book provides an exact date or at least the month for when a line opened. In the few cases where only a vague date is offered, such as the season, I look up historical newspapers from cities or towns on the line to identify a more precise date whenever possible.

[10] I also check and confirm that Thompson (1947) and Reid (1886) account for all the chief telegraph lines before 1850 as listed in the book *Historical Sketch of the Electric Telegraph: Including Its Rise and Progress in the United States* (Jones 1852), which I use to digitize the 1852 lines.

1844   **1846**

1848   **1850**
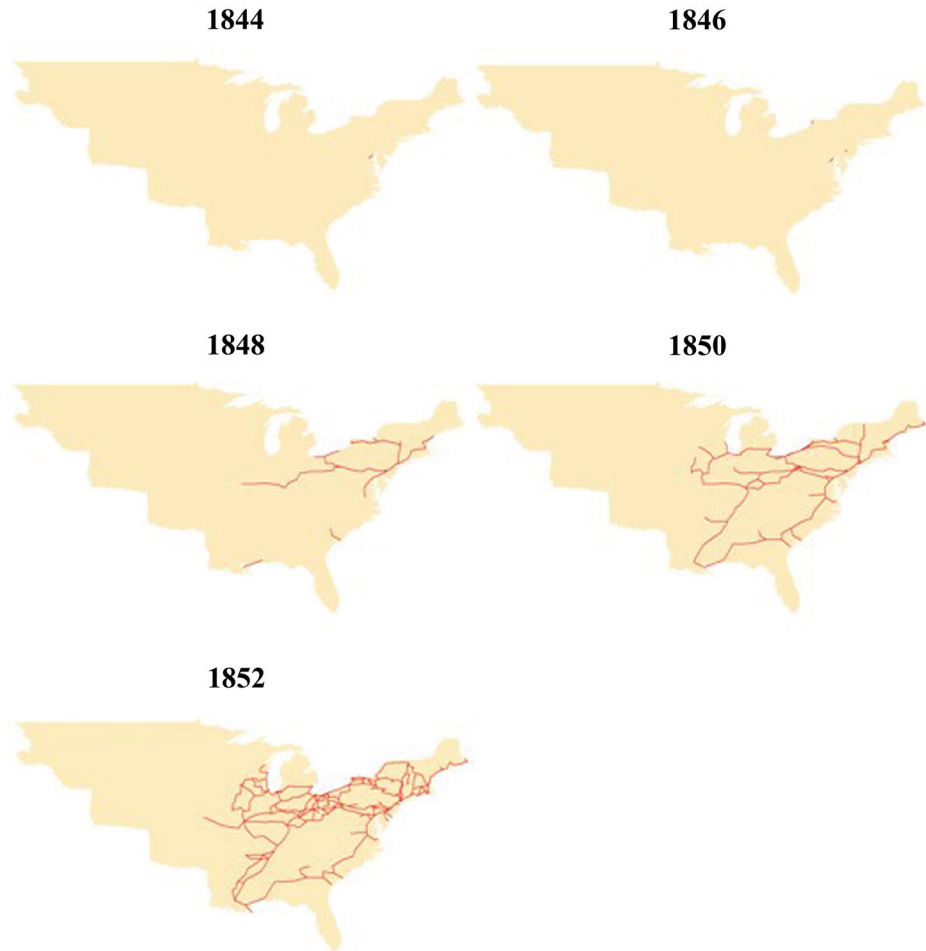
1852

FIGURE 1
GROWTH OF TELEGRAPH LINES, 1844–1852

Notes: This figure shows the telegraph lines in operation in the United States at the beginning (1 January) of each year during 1844–1852.
Sources: Data on the telegraph network were compiled primarily from Thompson (1947), Reid (1886), and the *Report of the Superintendent of the Census* (U.S. Census Office 1852).

Elections, Newspapers, and Other Data

   The baseline sample includes counties from all the states and territories in the United States as of 1840.[11] To measure political participation, I obtain county-level data on voter turnout and party vote shares in

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   [11] My sample does not include areas that were not part of the U.S. states or territories as of 1840. Since California and Texas did not exist as a state or territory in 1840, they are not part of the sample.

presidential and congressional elections for the period 1840–1852 from ICPSR Study 8611 (Clubb, Flanigan, and Zingale 2006). A county's voter turnout in an election is calculated as the total number of votes cast in the election divided by the number of white males 20 years and older in the election year linearly interpolated between census years (Clubb, Flanigan, and Zingale 2006). In robustness checks, I also explore alternative ways to interpolate the intercensal voting population. I focus on data from presidential election years to make the results of presidential and congressional elections more directly comparable. To improve precision, I exclude outlier observations with turnout per eligible voter greater than one. These observations constitute about 1 percent of the data, but the main results are not affected when I relax this sample restriction.

I obtain demographic characteristics of counties between 1840–1860 from Haines (2010), including county population and the shares of urban population, white population, white males above 20 years old, and slave population. To deal with changes in county boundaries over time, I harmonize county boundaries to the 1840 boundary following Hornbeck (2010) and linearly interpolate missing data on demographic characteristics for intercensal years.[12]

I obtain the geographic distribution of newspapers across counties from the 1840 *Census of Manufactures*. The data provides the number of newspapers published in each county as of 1840, including the number of daily, weekly, and semi-/tri-weekly newspapers.[13] Using this data set, I can identify the location (county) of all daily newspapers published in 1840. Online Appendix Figure A.1 shows the location of daily newspapers in 1840. Not surprisingly, daily newspapers appear to center around big cities. The 1840 *Census of Manufactures* also provides the number of periodicals published in each county as of 1840. In addition, I collect and digitize new data on the spatial distribution of U.S. newspapers in 1850 from the *Catalogue of the Newspapers and Periodicals Published in the United States* (Kennedy 1852), which allows me to calculate the change in the number of newspapers across counties during 1840–1850.

Furthermore, I obtain the historical GIS transportation network data from Atack (2016) to measure each county's access to the railroads, canals, and steamboat-navigated rivers for the period 1840-1852. Moreover, I use the DW-NOMINATE score data from Voteview.com to measure congressmen's ideology (Poole and Rosenthal 2001) and use

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[12] In robustness checks, I also try interpolating intercensal population log-linearly.

[13] Based on the data, there were 1,404 newspapers in the United States in 1840, out of which about 81 percent were published weekly, 9 percent semi- or tri-weekly, and 10 percent daily. The 138 daily newspapers in 1840 were published in 67 different counties.

the ICPSR 3371 dataset (Swift et al. 2009) to measure the number of bills sponsored by each congressman. Online Appendix Table A.1 provides summary statistics for the variables used in the main analysis.

EMPIRICAL STRATEGY

My baseline empirical work aims to measure the impact of access to telegraphed national news on voter turnout. In particular, I focus on access to the telegraphed Washington news, because Washington was the primary source of national political news during the mid-nineteenth century (Kernell and Jacobson 1987). My empirical strategy exploits proximity to daily newspapers with telegraphic connections to Washington to generate plausibly exogenous variation in access to telegraphed news from Washington.[14]

To illustrate the idea, Figure 2 maps the locations of daily newspapers (shown as triangles) that had the latest Washington news between 1840 and 1852. Up until the beginning of 1844, the telegraph was yet to be introduced, and therefore only daily newspapers in Washington had the latest Washington news. Between 1844 and 1852, however, telegraph lines spread across the nation, making the latest Washington news accessible to more daily newspapers throughout the nation. As a result, access to the latest Washington news increased across space over time with the expansion of the telegraph network.

I therefore construct my explanatory variable, which I call "the effective distance to Washington," in the following way to measure access to the latest Washington news: For election years before the introduction of the telegraph (i.e., up to 1844), I measure a county's effective distance to Washington using its actual distance to Washington; for election years after the introduction of the telegraph (i.e., 1848 and 1852), I measure a county's effective distance to Washington using its distance to the nearest daily newspaper that had a telegraphic connection to Washington.[15] In

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[14] As detailed in Section 2, the high cost of using the telegraph during this period meant that only daily newspapers could afford to gather news with the telegraph (Thompson 1947; Reid 1886); other newspapers, most of which were small-town weeklies, frequently copied their news (including telegraphed Washington news) from major-city dailies (Kielbowicz 1989; Schwarzlose 1989).

[15] I consider the effective distance to Washington at the beginning of each year based on the extent of the telegraph network on 1 January of each year, but the results are similar and not sensitive if I instead use the effective distance in the middle (1 July) of each year. In practice, I measure the straight-line distance between county centroids. A county's effective distance is therefore measured between the centroid of the county and the centroid of the nearest county with a daily newspaper and telegraphic connection to Washington. Online Appendix Figure A.2 plots the average effective distance to Washington across counties in each presidential election year during the period 1840–1852, showing a reduction from an average of about 473 miles in 1840 to an average of about 90 miles in 1852, a drop of 81 percent.
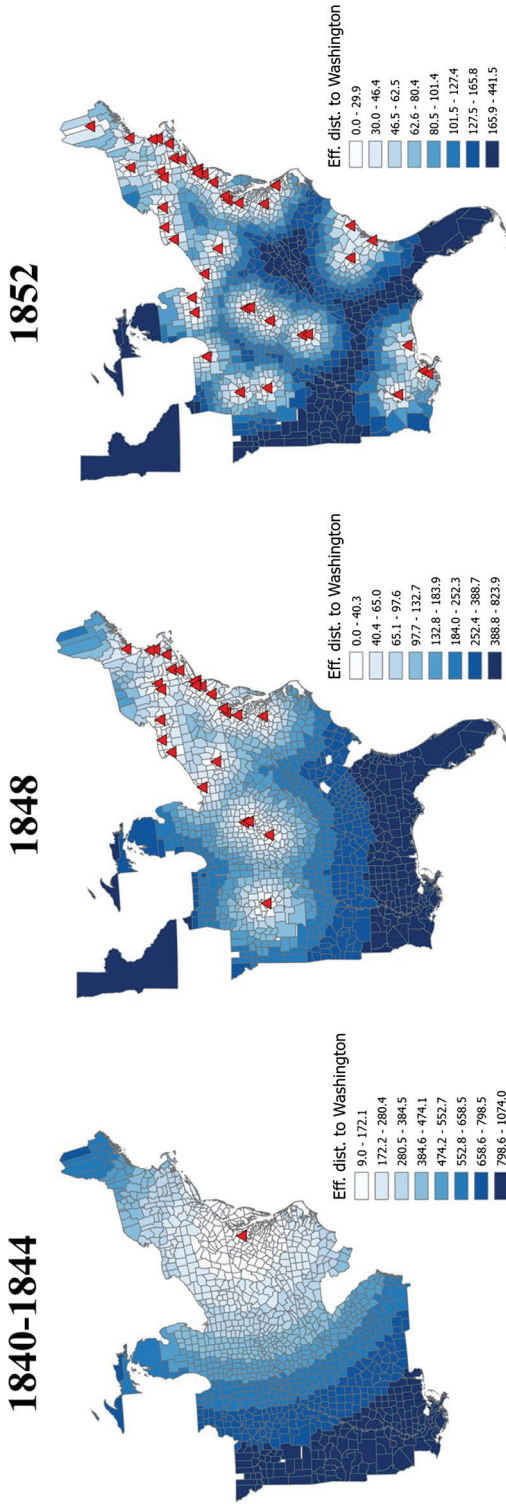
FIGURE 2

DAILY NEWSPAPERS WITH THE LATEST WASHINGTON NEWS AND COUNTIES' EFFECTIVE DISTANCE TO WASHINGTON, 1840–1852

Notes: The triangles show the locations (county centroids) of daily newspapers with the latest Washington news during 1840–1852. Up to the beginning of 1844, only daily newspapers in Washington had the latest Washington news; after 1844, daily newspapers on the telegraph network connected to Washington had the latest Washington news. The graduated color shows the effective distance (in miles) to Washington across counties during 1840–1852. It is measured as the actual distance to Washington during 1840–1844 and the distance to the nearest daily newspaper with a telegraphic connection to Washington after 1844. *Sources*: The locations of daily newspapers come from the 1840 *Census of Manufactures*. Data on the telegraph network are compiled primarily from Thompson (1947), Reid (1886), and the *Report of the Superintendent of the Census* (U.S. Census Office 1852).

robustness checks, I also construct alternative measures of access to telegraphed Washington news that consider the historical overland, rail, and water transportation networks.

To illustrate the validity of the effective distance measure, Figure 3 plots the effective distance to Washington and the lag of the Washington news in *The Boon's Lick Times*, a small-town newspaper in Fayette, Missouri. It is evident that the lag of Washington news in *The Boon's Lick Times* closely followed its effective distance to Washington. It is also worth mentioning that Fayette never received a telegraph line during the entire period. Thus, the drops in the effective distance to Washington and the lag of Washington news resulted entirely from telegraphic connection to Washington by faraway major cities, which was arguably exogenous to Fayette's circumstances and demand for the telegraph.[16]

My baseline empirical specification follows a generalized difference-in-difference approach:

$$y_{ct} = \alpha + \beta EffectiveDist_{ct} + X_{ct}\delta + \eta_c + \sigma_{st} + \epsilon_{ct} \tag{1}$$

where y_{ct} is the voter turnout (in percentage points) during the presidential or the congressional election in county c and year t. I focus my analysis on presidential election years to make the results from presidential and congressional elections more directly comparable. X_{ct} is a vector of socio-economic controls of county c, including the natural log of population and the shares of urban population, white population, white males above 20 years old, and slave population. η_c are county fixed effects, which control for any time-invariant county characteristics such as geographic location. σ_{st} are state-by-year fixed effects, which control for statewide shocks common to all counties in the same state, such as changes in state electoral laws and procedures and other statewide policy or economic shocks, as well as for the possibility that a state might be pivotal in the Electoral College.[17] The variable of interest is the effective distance to Washington, *EffectiveDist_{ct}*, which is measured in hundred miles. The *negative* of β captures the effect of a 100-mile *reduction* in the effective distance to Washington on voter turnout. I weight the regression by the

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[16] It is evident from the figure that the lag of Washington news dropped from 14 to 11 days during 1846–1847, during which telegraph lines reached cities closer to Fayette but were still over 600 miles away.

[17] Up until 1844, each state decided when to hold its elections, and presidential elections were held on different dates across states, ranging from late October to early December. In 1845, Congress mandated presidential elections in all states to be held thenceforth on the Tuesday after the first Monday in November, but each state still chose when to hold its congressional elections, whose timing varied significantly over time within states (Dubin 1998).
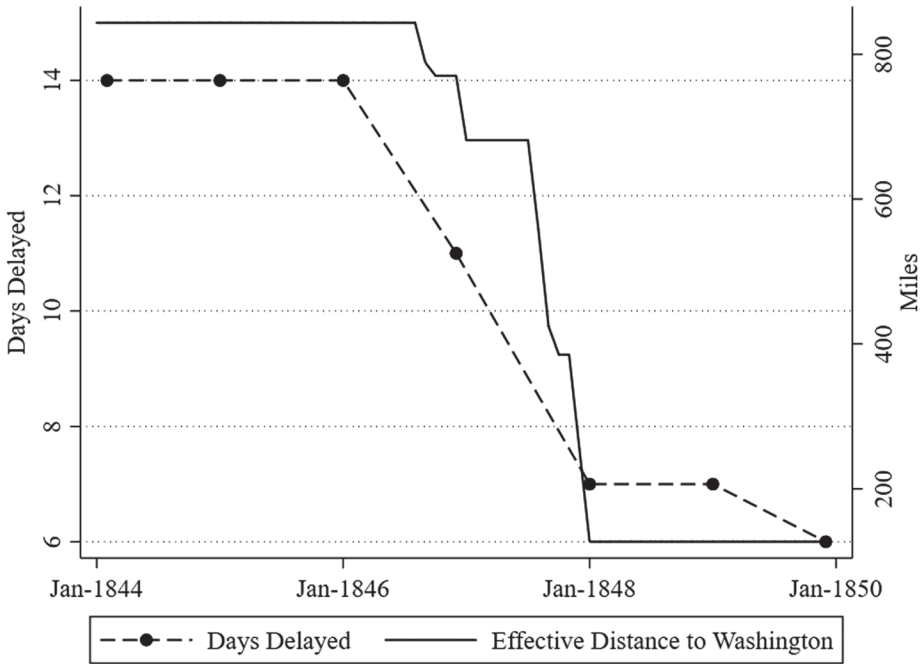
FIGURE 3
DELAY OF WASHINGTON NEWS AND EFFECTIVE DISTANCE TO WASHINGTON—
EVIDENCE FROM THE NEWSPAPER *THE BOON'S LICK TIMES*

Notes: The figure shows the delay of Washington news and the effective distance to Washington during 1844–1850 for the newspaper *The Boon's Lick Times*, which was published in Fayette, Missouri, a small town 120 miles outside of St. Louis. The dashed line plots the minimum number of days delayed of Washington news in the first two months of each year, as appeared in *The Boon's Lick Times*. The solid line plots Fayette's effective distance (in miles) to Washington during the same period.
Sources: Text data on *The Boon's Lick Times* come from the Library of Congress, *Chronicling America*: Historic American Newspapers site: https://chroniclingamerica.loc.gov/. Effective distance to Washington was calculated based on the telegraph network data compiled primarily from Thompson (1947) and Reid (1886) as well as the locations of daily newspapers from the 1840 *Census of Manufactures*.

population of white males above 20 years old in 1840, which proxies for the size of the voting-eligible population.[18] Standard errors are corrected for clustering at the county level (Bertrand, Duflo, and Mullainathan 2004).

The identifying assumption of my baseline empirical strategy is that, conditional on the county and state-by-year fixed effects as well as the county socioeconomic controls, effective distance to Washington is not

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[18] Weighting is suitable in the presence of unmodeled heterogeneity of effects by population size (Solon, Haider, and Wooldridge 2015). Following the advice of Solon, Haider, and Wooldridge (2015), I also show the results when using no weight in robustness checks.

correlated with other unobserved variables that may also affect voter turnout. Because the telegraph companies primarily targeted places of commercial importance (Thompson 1947), a natural concern is that access to the telegraph might be correlated with local population or income growth, which might also affect voter turnout. What goes against this concern, however, is the fact that a county's effective distance to Washington is primarily driven by telegraphic connections in *distant* locations, which is unlikely related to the county's own demand for the telegraph. In addition, Gentzkow, Shapiro, and Sinkinson (2011) show (albeit for the period 1869–1928) that local population and income growth tend to be associated with *decreases* in voter turnout, suggesting that any bias from potentially omitted variables is likely to work against finding a positive effect of access to the telegraph. I also conduct a series of robustness checks, which strengthen identification further.

<div align="center">RESULTS</div>

Baseline Results

This section presents the impacts of access to telegraphed news from Washington on voter turnout based on Equation (1). Columns (1)–(2) of Table 1 show that a reduction in the effective distance to Washington by 100 miles is associated with an increase in presidential election turnout by about 1.2 percentage points, with or without county demographic controls.

In contrast, Columns (3) and (4) of Table 1 show that the estimated turnout effects for House elections are small and statistically insignificant.[19] It is natural to wonder why the effects on House elections might be different from those on presidential elections. One possibility is that there might be substantial disparity in ballot options between presidential and congressional elections in many places during this period. In particular, in the mid-nineteenth century, it was not uncommon for a party (whether a major or third party) to appear on the presidential election ballot in a specific place without also appearing on the congressional election ballot.

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[19] I do not examine Senate elections, because congressional elections in the nineteenth century were only to elect members of the House of Representatives. U.S. Senators were not popularly elected until the Seventeenth Amendment to the United States Constitution in 1913; before 1913, senators were chosen by state legislatures. House elections in the mid-nineteenth century were frequently held on different days than presidential elections (Dubin 1998; Engstrom and Kernell 2014). Based on Dubin (1998), in 1852 only 6 (CA, IL, MI, NJ, NY, and WI) out of 31 states held their House elections on the same day as the presidential election; similarly, 4 (MI, NJ, NY, WI) out of 30 states held same-day elections in 1848.

	Outcome: Voter Turnout					
	Presidential Election		House Election			
	(1)	(2)	(3)	(4)	(5)	(6)
Eff. dist. to Washington	−1.159***	−1.224***	0.0176	−0.104	−1.380***	−1.309*
(100 miles)	(0.421)	(0.345)	(0.614)	(0.548)	(0.491)	(0.694)
Observations	4,659	4,659	3,892	3,892	3,290	3,192
R-squared	0.918	0.925	0.826	0.834	0.881	0.843
County FE	Yes	Yes	Yes	Yes	Yes	Yes
State-by-year FE	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls		Yes		Yes	Yes	Yes
No missing major party					Yes	
No missing third party						Yes
Mean of dep. var.	69.78	69.78	68.09	68.09	70.02	68.64
Std. dev. of dep. var.	15.71	15.71	16.55	16.55	15.33	17.25

Notes: The table shows the estimated effects of access to telegraphed news from Washington on voter turnout (in percentage points) for the period 1840–1852. Each column represents the results from a separate OLS regression following Equation (1), where each observation is a county-year. The outcome variables are presidential election turnout in Columns (1)–(2) and House election turnout in Columns (3)–(6). The explanatory variable is effective distance to Washington measured in hundred miles. Each regression controls for county fixed effects and state-by-year fixed effects. Columns (2) and (4)–(6) further control for county demographics, including the natural log of population, the population share of whites, share of urban population, share of white males above 20 years old, and share of slaves. Column (5) drops the county-years in which a major party appeared solely on the presidential ballot but not on the House ballot. Similarly, Column (6) drops the county-years in which a leading third party appeared solely on the presidential ballot but not on the House ballot. Each regression is weighted by the voting-eligible population as proxied by the population of white males above 20 years old in 1840. Standard errors are corrected for clustering at the county level. *** p<0.01, ** p<0.05, * p<0.1
Sources: Data on the telegraph network are compiled primarily from Thompson (1947), Reid (1886), and the *Report of the Superintendent of the Census* (U.S. Census Office 1852). The locations of daily newspapers come from the 1840 *Census of Manufactures*. Election data come from Clubb, Flanigan, and Zingale (2006). County demographic data come from Haines (2010).

Consequently, supporters of a particular party that was solely on the presidential ballot might have cast their vote for the president without voting for any congressional candidate.

To test this potential explanation, I inferred whether a party was missing from a county's House election ballot by comparing the county-level party vote shares between presidential and House elections. Specifically, I define a county as missing a major party (Democrat or Whig) in the House election if the major party received non-zero votes in the county's presidential election but zero votes in the House election. Likewise, I define a county as missing the leading third party (i.e., the Liberty Party or the Free Soil Party, depending on the year) in the House election if the

third party received non-zero votes in the county's presidential election but zero votes in the House election.[20]

Column (5) of Table 1 presents the estimated effects on House election turnout when I exclude the county-years in which a major party appeared solely on the presidential ballot but not on the House ballot, and I conduct an analogous exercise in Column (6) of the Table for leading third parties. As seen in Columns (5)–(6) of Table 1, the estimated effects on House election turnout become much more similar to those for the presidential elections, suggesting that the initial difference in the results between presidential and House election turnout can be largely attributed to the variation in ballot options between the two types of elections.

As an alternative specification, I measure effective distance to Washington with a set of mutually exclusive dummy variables to allow the estimates to vary by distance more flexibly. Figure 4 plots the estimated effects based on this alternative specification, with "more than 500 miles away" as the omitted category. The figure shows that overall the estimated effects on voter turnout increase monotonically as effective distance to Washington decreases.[21]

Robustness Checks

I conduct a series of robustness checks, which I summarize here and provide more details on in Online Appendix B. First, I use long-difference specifications and show that counties that gained greater access to telegraphed news from Washington during 1844–52 were not on any differential trend in turnout during 1840–44 before the rise of the telegraph (Online Appendix Table A.2).

In addition, Online Appendix Table A.3 shows that the baseline results are robust to controlling for access to the railroad (Column (1)), using unweighted regressions (Column (2)), dropping counties with daily

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[20] The findings from this exercise remain similar when I use alternative thresholds to define the variables, such as defining a county as missing a major party in the House election if the major party received at least 20 percent of the votes cast in the county's presidential election but 0 percent of the votes in the House election, and defining a county as missing the leading third party in the House election if the third party received at least 3 percent of the votes cast in the county's presidential election (which was approximately the mean of third party vote shares during the study period) but 0 percent of the votes in the House election.

[21] Results are similar and not sensitive to using alternative sets of distance dummies to measure the effective distance to Washington. For Panel B of the figure, which shows the House election estimates, I again focus on counties that did not have a major party or a leading third party missing from the ballot between presidential and House elections. Online Appendix Figure A.3 shows that the estimates for House election turnout are noisier and do not exhibit a clear pattern when including all counties in the sample, consistent with the evidence from Columns (3)–(4) of Table 1. All the tables and figures in the paper and the Online Appendix can be reproduced using the replication files from Wang (2025).
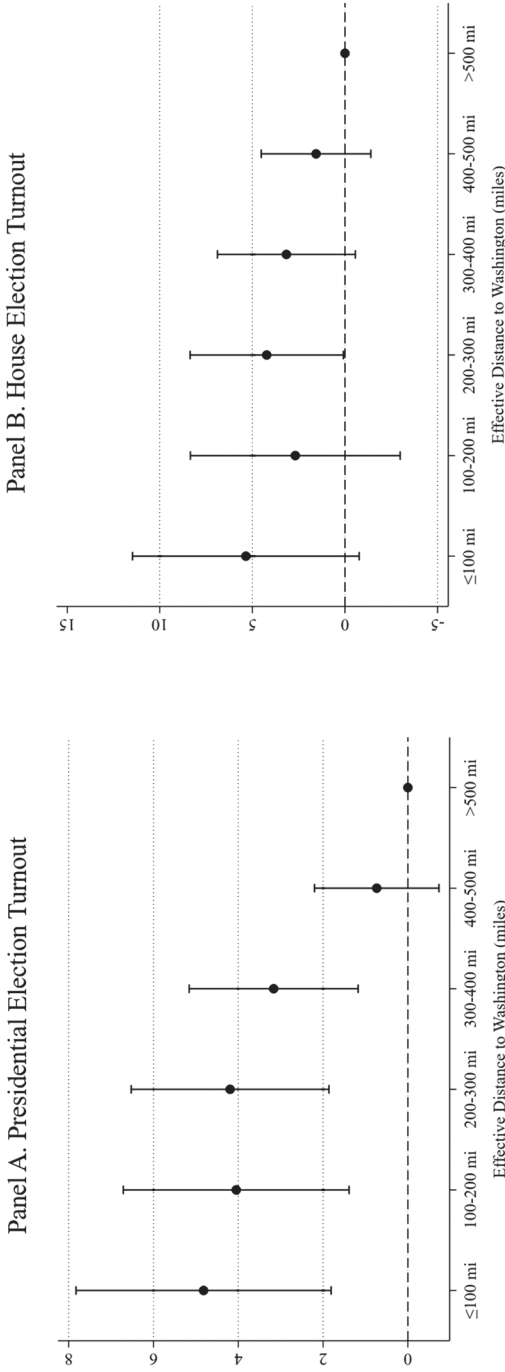
Panel B. House Election Turnout

Panel A. Presidential Election Turnout

FIGURE 4

ACCESS TO TELEGRAPHED NEWS FROM WASHINGTON AND VOTER TURNOUT

Notes: The figure shows the estimated effects of access to telegraphed news from Washington on voter turnout during 1840–1852. The dots are the estimated coefficients, and the vertical lines represent the 95 percent confidence intervals. The estimates in each panel come from a single OLS regression, where each observation is a county-year. The outcomes are presidential and House election turnout in Panel A and House election turnout in Panel B, both measured in percentage points on a scale from 0 to 100. The sample of Panel A includes all counties, while Panel B focuses on counties that did not miss a major party or a leading third party from the ballot between presidential and House elections. The explanatory variables are five dummy variables measuring a county's effective distance to Washington: within 100 miles, 100–200 miles, 200–300 miles, 300–400 miles, and 400–500 miles; the omitted category is being more than 500 miles. Each regression controls for county fixed effects, state-by-year fixed effects, and county demographic characteristics, including the natural log of population, the population share of whites, share of urban population, share of white males above 20 years old, and share of slaves. Each regression is weighted by the voting-eligible population as proxied by the population of white males above 20 years old in 1840. Standard errors are corrected for clustering at the county level.
Sources: Data on the telegraph network are compiled primarily from Thompson (1947), Reid (1886), and the *Report of the Superintendent of the Census* (U.S. Census Office 1852). The locations of daily newspapers come from the 1840 *Census of Manufactures*. Election data come from Clubb, Flanigan, and Zingale (2006). County demographic data come from Haines (2010).

newspapers (Column (3)), restricting the sample to only rural counties (Column (4)), restricting the sample to counties that were more than 50 miles away from any telegraph lines by 1852 (Column (5)), using the sub-sample of counties with consistent boundaries between 1840 and 1850 (Column (6)), and dropping counties with extremely low voter turnout (Column (7)). More details on each of these checks are provided in Online Appendix B.

Furthermore, in Online Appendix B, I use newly digitized historical newspaper data to show that access to telegraphed Washington news did not affect the number of newspapers during 1840–50 (Online Appendix Table A.4). The results are also robust to clustering standard errors at the state level or using Conley (1999) standard errors with different distance cutoffs (Online Appendix Table A.5), controlling for a rich set of preexisting 1840 county socioeconomic characteristics interacted with year dummies (Online Appendix Table A.6), exploiting only the variation from telegraphic connections more than 100 miles away (Online Appendix Table A.7), controlling for the winners' margins of victory (Online Appendix Table A.8), dropping state-years with special House election rules such as at-large or multi-seat House elections (Online Appendix Table A.9), using the common subset of counties that reported both presidential and congressional election turnout (Online Appendix Table A.10), using a balanced panel of counties (Online Appendix Table A.11), and using log-linear interpolation to obtain intercensal voting population (Online Appendix Table A.12).

Moreover, the results are similar when I construct alternative measures of access to telegraphed news from Washington based on GIS network analysis that consider the overland, rail, and water transportation networks during the study period (Online Appendix Tables A.13–A.14).[22] Taken together, the series of robustness checks further strengthen the causal interpretation of the results.

Additional Results

In Online Appendix B, I provide additional evidence that the effects on voter turnout did not depend on the county's preexisting partisanship. In addition, I find no evidence that access to telegraphed Washington news affected party vote shares or congressmen's behaviors, including their

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[22] Specifically, using the historical GIS transportation network data, I run the origin-destination (OD) cost matrix analysis tool in ArcGIS Pro, minimizing the travel time from each county centroid to the nearest daily newspaper with telegraphed Washington news. I then use the predicted travel time and distance as alternative measures of access to telegraphed news from Washington. Online Appendix B provides the detailed steps of this exercise.

positions on roll call votes and the number of bills they introduced. More details on these analyses and results are provided in Online Appendix B.

MECHANISMS

The evidence so far shows that access to telegraphed news from Washington increased voter turnout in national elections. In this section, I explore the mechanisms underlying this result. I first provide evidence that a potential mechanism is the provision of information through newspapers. I then conduct text analysis on a sample of historical newspapers from the 1840s to show how access to telegraphed news from Washington altered news content.

Provision of Information by Local Newspapers

A natural mechanism linking the telegraph and voter turnout is information. By providing newspapers with more timely information on national politics, the telegraph increased the ability of newspapers to inform and engage the electorate. Both theoretical models and empirical evidence from the more recent period show that more informed voters are more likely to vote (Feddersen 2004; Matsusaka 1995; Lassen 2005).

To further explore the provision of information through newspapers as a mechanism, I compare the estimated effects on turnout between counties with and without a newspaper as of 1840 based on the 1840 *Census of Manufactures*.[23] To do this, I augment the baseline regression from Equation (1) with an interaction term, interacting the effective distance to Washington with an indicator variable that equals 1 if the county had a newspaper in 1840 and 0 otherwise. The coefficient on the interaction term therefore represents the additional turnout effect in counties with a newspaper in 1840 over counties without one.

Column (1) of Table 2 reports the results and shows that a 100-mile reduction in effective distance to Washington increased presidential election turnout by an *additional* 0.32 percentage points in counties with a newspaper than in counties without one, suggesting that local newspapers likely facilitated the dissemination of national news to local areas.[24]

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[23] Annual publications of newspaper directories did not start until 1869 (Gentzkow, Shapiro, and Sinkinson 2011).

[24] The coefficient on effective distance to Washington itself is about −1 and statistically significant, suggesting that a 100-mile reduction in effective distance to Washington increased presidential election turnout by about 1 percentage point in counties without a newspaper as of 1840. The relatively large and statistically significant estimate in counties without a newspaper as of 1840 could be because a newspaper entered subsequently in many of these counties between 1840 and 1852, or because information from daily newspapers diffused through alternative channels to the local areas, such as word-of-mouth and direct subscriptions to daily newspapers by the local population.

In comparison, Column (2) of the table uses the number of newspapers in 1840 for the interaction term. The small and insignificant coefficient on the interaction term suggests that having a newspaper, and not necessarily the number of newspapers, mattered for the effect of access to telegraphed national news on voter turnout.

To verify that the larger effects in newspaper towns were not driven by some unobserved county characteristics associated with having a printed publication, Column (3) of Table 2 reports the regression with an interaction term between effective distance to Washington and an indicator that equals 1 if the county had a (non-news) periodical in 1840 and 0 otherwise.[25] It is evident that the estimated coefficient on the interaction term is now much closer to zero, statistically insignificant, and of the opposite sign as compared to that in Column (1) of the same table. The comparison between Columns (1) and (3) of the table suggests that local newspapers played a unique role in facilitating the diffusion of more timely national news to the local area, which might have contributed to voter turnout.

Impact of the Telegraph on News Content

By accelerating the dissemination of news throughout the nation and providing timely access to national news, the telegraph could have increased the coverage of national news in newspapers, which could then contribute to informing and turning out voters. To explore this channel, I use the *Chronicling America* database to perform text analysis on historical newspapers published during the 1840s.

Specifically, I scraped *Chronicling America*'s website to obtain the text data of all digitized newspapers published between 1 January 1840 and 31 December 1849.[26] My analysis focuses on small-town newspapers, both because there are few big-city newspapers in the *Chronicling America* database for the period and because access to the telegraph by small-town newspapers was more likely to be exogenous.[27] After removing the few

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[25] Periodicals in the mid-nineteenth century were typically published at a lower frequency than newspapers and focused on non-news topics such as trade, literature, and science, with some periodicals catering to the interests of specific audiences such as women and children.

[26] Online Appendix C provides more details on the *Chronicling America* database. I focus on the period 1840–1849 for my newspaper text analysis because for this period I have relatively precise information on the continuous *within-year* growth of telegraph lines, which is essential for analyzing high-frequency newspaper text data with substantial within-year variation; after 1849, I have a snapshot of telegraph lines in 1852, which is used for the voting analysis but is less ideal for the newspaper text analysis because of the high-frequency nature of the text data.

[27] To restrict my newspaper sample to small-town newspapers, I removed from my sample the few newspapers published in any of the "100 largest urban places in 1840" based on the 1840 Census (https://www2.census.gov/library/working-papers/1998/demographics/pop-twps0027/tab07. txt). Since the 100th largest urban place in 1840 (New Albany, IN) had 4,226 people, the resulting sample consists of newspapers from places with a population of about 4,000 or below, which I consider as small towns in the paper.

TABLE 2
EFFECTS OF THE PRESENCE OF LOCAL NEWS AND NON-NEWS PUBLICATIONS

	Outcome: Presidential Election Turnout		
	(1)	(2)	(3)
Eff. dist. to Washington (100 miles)	–0.995***	–1.219***	–1.250***
	(0.369)	(0.360)	(0.347)
Eff. dist. to Washington × Had newspapers in 1840	–0.321**		
	(0.155)		
Eff. dist. to Washington × Number newspapers in 1840		–0.0169	
		(0.0155)	
Eff. dist. to Washington × Had periodicals in 1840			0.0743
			(0.192)
Observations	4,659	4,595	4,659
R-squared	0.926	0.926	0.925
County FE	Yes	Yes	Yes
State-by-year FE	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes
Mean of dep. var.	69.78	69.78	69.78
Std. dev. of dep. var.	15.71	15.71	15.71

Notes: The table shows the estimated interactive effects between access to telegraphed news from Washington and county publishing characteristics on presidential election turnout for the period 1840–1852. Each column represents the results from a separate OLS regression, where each observation is a county-year. The outcome variable is presidential election turnout measured in percentage points. The explanatory variables are effective distance to Washington (in hundred miles) and its interaction with a county publishing characteristic in 1840. In Column (1), I interact effective distance to Washington with an indicator for whether the county had a newspaper in 1840. In Column (2), the interaction is with the county's number of newspapers in 1840. In Column (3), the interaction is with an indicator for whether the county had a (non-news) periodical in 1840. Each regression controls for county fixed effects, state-by-year fixed effects, and county demographics, including the natural log of population, the population share of whites, share of urban population, share of white males above 20 years old, and share of slaves. Each regression is weighted by the voting-eligible population as proxied by the population of white males above 20 years old in 1840. Standard errors are corrected for clustering at the county level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$
Sources: Data on the telegraph network are compiled primarily from Thompson (1947), Reid (1886), and the *Report of the Superintendent of the Census* (U.S. Census Office 1852). The locations of newspapers and periodicals come from the 1840 *Census of Manufactures*. Election data come from Clubb, Flanigan, and Zingale (2006). County demographic data come from Haines (2010).

big-city newspapers, I obtain a sample of 102 small-town newspapers from 17 states. All the newspapers in my sample are four pages in size and published weekly. Online Appendix Table A.20 lists the newspapers in my sample, and Online Appendix Figure A.4 maps the locations of the newspapers.

National news in the mid-nineteenth century primarily consists of news on Congress and the presidency (Kernell and Jacobson 1987). I therefore focus my analysis on the coverage of these topics. I use the frequency

of words that are typically associated with each news topic to measure coverage. For example, I use the frequency of the word "Congress" to measure the coverage of news on Congress.[28] Similarly, I use the frequency of the last names of the U.S. presidents in the 1840s to measure presidential news coverage.[29] Online Appendix C provides evidence supporting word frequencies as a reasonable measure of news coverage.

Besides news related to Congress and the presidency, I have also measured coverage of local, state, and European news using the mentioning of the newspaper town's name, the county's name, state-specific names (such as state capital and governor names), and European country names. Moreover, I have measured coverage of major national issues during the 1840s. The arguably most prominent national issues of the 1840s include the sectional divisions involving slavery, the annexation of Texas, tariff issues, and the war with Mexico (1846–1848). I therefore focus on the frequency of the following keywords: "slavery," "texas," "annex," "tariff," and "mexic."[30] Online Appendix Table A.21 provides summary statistics of all the words used in the paper to measure news topics.

Evidence from Text Analysis

This section presents results from my newspaper text analysis. To estimate the effect of the telegraph on news coverage, I run the following regression:

$$\ln(WordFreq_{it}) = \alpha + \beta EffectiveDist_{it} + X_{ct}\delta + \eta_i + \sigma_t + \epsilon_{it}, \qquad (2)$$

where *WordFreq*$_{it}$ is the frequency of a word, such as "Congress," in newspaper *i* and year-month *t*. For ease of interpretation, I use the natural log of the frequency as my outcome variable. *EffectiveDist*$_{it}$ is my measure of

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[28] It is worth noting that when counting the frequency of words associated with a news topic, I count the frequency of the root word wherever applicable. Therefore, the frequency of "Congress" represents the sum of the frequencies of all words with the root "Congress," such as "Congress," "congressional," "congressman," etc. Similarly, the frequency of the word "telegraph" also includes words such as "telegraphed" and "telegraphic." All the words in the text data have also been converted to lowercase before being analyzed, so letter case does not matter. By considering the root word, I avoid omitting related variants of the words and measure news coverage more accurately.

[29] The presidents' last names consist of "Van Buren," "Harrison," "Tyler," "Polk," and "Taylor."

[30] I use the word "slavery" instead of the root word "slave" to avoid confusing the issue of slavery with advertisements involving slaves. In subsequent analysis, I also consider other words and phrases related to slavery, such as "abolition" and "free soil." The frequency of the root "annex" captures variants of the word, such as "annex" and "annexation." Similarly, "mexic" captures variants such as "mexico" and "mexican."

access to telegraphed news from Washington and is defined similarly as in Equation (1). X_{ct} is the same set of county controls as in Equation (1). η_i are newspaper fixed effects, which control for any time-invariant newspaper characteristics such as geographic location, local culture, and editor preferences for news topics. σ_t are month-by-year fixed effects, which control for common shocks to all newspapers, such as national elections and breakout of other national events.[31] Standard errors are corrected for clustering at the level of newspaper locations (towns) (Bertrand, Duflo, and Mullainathan 2004).

Table 3 shows the impacts of access to telegraphed news from Washington on coverage of various news topics.[32] Panel A presents the estimated effects on coverage of Congress and the presidency. Column (1) of Panel A shows that a 100-mile reduction in effective distance to Washington increased the mentioning of "Congress" by about 5 percent. Column (2) shows that the estimated effect is similar (at about 5.6 percent) for the mentioning of the presidents' last names, with the effect stronger during election years (Column (3)) than during off years (Column (4)).[33] Results are also similar when I examine the mentioning of presidential and vice-presidential candidates' names from both major parties and the leading third party (Columns (5)–(6)).

Panel B of 3 provides the estimates for local, state, and European news coverage. In Column (1) of Panel B, I find a 100-mile reduction in effective distance to Washington *decreased* the mentioning of the newspaper town's name by about 4 percent. During this era, coverage of a newspaper's locality (the town itself) primarily consisted of items such as local commercial advertisements, obituaries, marriage announcements, and legal notices (Blondheim 1994). The decrease in the mentioning of the newspaper town's name therefore most likely reflects a decrease in the coverage of these items. In contrast, I find little effect on the mentioning of the county's name or the state, state capital, and governor names (Columns (2)–(5)), suggesting that telegraphed Washington news did not crowd out regional news. Similarly, I find no effect on European news coverage (Column (6)), likely because during this era European news was scarce and always coveted despite the delay (Schwarzlose 1989).

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[31] I aggregate weekly newspaper data to the monthly level to reduce noise in the weekly data. The results based on the weekly data are similar.

[32] As a first stage, Online Appendix Table A.22 shows that access to telegraphed Washington news led to a significant increase in the mentioning of the word "telegraph," which was commonly mentioned for telegraphed news.

[33] Kernell and Jacobson (1987) also find that in the mid-nineteenth century, presidential news dominated national news coverage during presidential election years but was much less so during other years (off years).

TABLE 3
ACCESS TO TELEGRAPHED NEWS FROM WASHINGTON AND NEWS COVERAGE

Panel A. Mentioning of "Congress" and Presidents' and Presidential Candidates' Last Names

	ln("Congress")	ln(President Name)	ln(Pres. Name)			ln(Pres. Cand. Name)	
			Pres. Year	Off Year	P. Cand Only	P. Cand Only	P. & V.P. Cand
	(1)	(2)	(3)	(4)	(5)	(5)	(6)
Eff. dist. to Washington	−0.0501*	−0.0562**	−0.125***	−0.0576	−0.123***	−0.123***	−0.0989**
(100 miles)	(0.0277)	(0.0276)	(0.0469)	(0.0355)	(0.0439)	(0.0439)	(0.0389)
Observations	4,882	4,882	1,427	3,451	1,427	1,427	1,427
R-squared	0.466	0.507	0.563	0.519	0.621	0.621	0.633

Panel B. Mentioning of Local, State-Specific, and European Nation Names

	ln(Town Name)	ln(County Name)	ln(State Capital Name)	ln(State Name)	ln(Governor Name)	ln(European Nation Name)
Eff. dist. to Washington	0.0441*	−0.00650	0.0217	−0.0208	−0.0115	0.00509
(100 miles)	(0.0258)	(0.0266)	(0.0262)	(0.0234)	(0.0209)	(0.0312)
Observations	4,882	4,882	4,882	4,882	4,882	4,882
R-squared	0.787	0.713	0.665	0.615	0.574	0.489

TABLE 3 (CONTINUED)

ACCESS TO TELEGRAPHED NEWS FROM WASHINGTON AND NEWS COVERAGE

Panel C. Mentioning of Issues of National Importance

	ln("Slavery")	ln("Texas")	ln("Annex")	ln("Tariff")	ln("Mexic")	ln("Vote")
Eff. dist. to Washington	−0.102***	−0.0598*	−0.0396	−0.0377	−0.0110	−0.0405*
(100 miles)	(0.0361)	(0.0304)	(0.0279)	(0.0280)	(0.0275)	(0.0225)
Observations	4,882	4,882	4,882	4,882	4,882	4,882
R-squared	0.632	0.592	0.607	0.516	0.739	0.492
Newspaper FE	Yes	Yes	Yes	Yes	Yes	Yes
Month-by-year FE	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The table shows the estimated effects of access to telegraphed news from Washington on the mentioning of words related to different news topics in my sample of newspapers from the 1840s. Each column of each panel represents the results from a separate OLS regression following Equation (2), where each observation is a newspaper-year-month. The explanatory variable is effective distance to Washington measured in hundred miles. The outcome variables are the frequencies of words on news topics, all measured in natural logs. Panel A examines the mentioning of the word "Congress," the presidents' last names, as well as the last names of presidential candidates from the two major parties and the leading third party. Columns (3) and (4) of Panel A examine the mentioning of the presidents' last names separately in presidential election years and off-years. Columns (5) and (6) of Panel A focus on presidential election years only and examine the mentioning of presidential candidates' last names (Column (5)) as well as that plus the mentioning of vice-presidential candidates' last names (Column (6)). Panel B examines the mentioning of the newspaper's town, county, and state-specific names (including state capital, state, and governor names), as well as European nation names. Panel C examines the mentioning of the words related to the key national issues of the day. Each regression controls for newspaper fixed effects, month-by-year fixed effects, and the same county demographics in the baseline. Standard errors are corrected for clustering at the newspaper location (town) level. *** p<0.01, ** p<0.05, * p<0.1.

Sources: Newspaper text data come from the Library of Congress, *Chronicling America*: Historic American Newspapers site: https://chroniclingamerica.loc. gov/. Data on the telegraph network are compiled primarily from Thompson (1947), Reid (1886), and the *Report of the Superintendent of the Census* (U.S. Census Office 1852). The locations of daily newspapers come from the 1840 *Census of Manufactures*. County demographic data come from Haines (2010).

Moreover, Panel C of Table 3 examines keywords related to major national issues during the 1840s. Column (1) shows that a 100-mile reduction in the effective distance to Washington increased the mentioning of "slavery" by approximately 10 percent.[34] Similarly, I find a significant increase in the mentioning of "Texas" (6 percent). The coefficients for other national keywords (Columns (2)–(5)) are of the same signs and meaningful magnitudes, although not statistically significant at conventional levels. Lastly, Column (4) of the panel shows a positive effect on the word "vote," which suggests an increase in coverage of voting-related information.[35]

In Online Appendix C, I also show that the results are robust to controlling for region-by-year-month fixed effects, dropping Mississippi (the state with the largest number of newspapers in my sample) from the analysis, or including newspaper-specific linear trends.

Overall, this section shows that access to telegraphed news from Washington led newspapers to cover more national politics, including coverage of Congress, the presidency, and sectional divisions involving slavery. The greater access to national political news could have informed and engaged the public, contributing to turnout in national elections.

CONCLUSION

A revolutionary technology, the electric telegraph enabled instant communications over vast distances for the first time and greatly accelerated the dissemination of news throughout the nation. Yet the impacts of the telegraph are understudied in economics, particularly with regard to its impacts on the political realm. Using unique data on the growth of the telegraph network in the United States during 1840–1852, this paper studies the electoral impact of the telegraph. I find that access to telegraphed news from Washington increased voter turnout in national elections. There is, however, little evidence of an effect on party vote shares or politician ideology and behavior. Exploring the mechanisms, I find evidence that newspapers played a key role in facilitating the diffusion of more timely national news to local areas. Moreover, text analysis from over 100 small-town weekly newspapers suggests that access to

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[34] Online Appendix Table A.23 examines other words and phrases related to slavery, including "free soil," "abolition," "wilmot proviso," "liberty party," and "plantation," and also splits the sample into Northern and Southern newspapers. Overall, I find consistent evidence that access to telegraphed Washington news increased coverage of slavery and that the effect was driven by newspapers in the North.

[35] In Online Appendix C, I show that local grassroots campaigning was unlikely a channel for the increase in voter turnout by examining words related to local political rallies and campaigns.

telegraphed news from Washington led local newspapers to cover more national news, including coverage of Congress, the presidency, and sectional divisions involving slavery.

At a time when almost 90 percent of Americans were still living in rural areas and had limited access to national news, the telegraph connected the nation to an unprecedented degree and greatly improved access to timely national news. The results suggest that the telegraph made newspapers less parochial, facilitated a national conversation on important issues, and increased political participation in antebellum America.

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