

# *Measuring the Partisan Behavior of U.S. Newspapers, 1880 to 1980*

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In this paper, we study newspaper partisan behavior and content, which we measure using coverage of and commentary on partisan activities, institutions, and actors. We use this measure to describe the levels of relative partisan behavior during the period 1880 to 1900, and to describe changes over the period 1880 to 1980. We find that, on average, newspapers were initially highly partisan, but gradually became less partisan over time. Importantly, we find as much change after the 1910s as before, which contributes to the existing literature that focuses on changes in the nineteenth and early twentieth centuries. We also investigate words and phrases that had negative or positive partisan connotations in particular periods. Finally, we examine whether some of the common hypotheses offered in the literature can account for the changes. The initial findings suggest that these explanations can only account for part of the decline.

The press in the United States changed dramatically over the course of the nineteenth and twentieth centuries. One dimension in which it changed was partisanship. Initially, most newspapers were tied to a political party, and their content on political matters heavily favored that party. According to McGerr (1986, p. 14), “In 1850, 95 percent of the daily and weekly papers in America claimed loyalty to some party.” Data from Gentzkow, Shapiro, and Sinkinson (2011) show that by 1980, only 9 percent of daily newspapers in the United States identified themselves as Democratic or Republican. Conventional wisdom holds that non-partisan newspapers emerged in the United States in the nineteenth

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century. There is less agreement about why this happened or about how newspaper partisan behavior continued to evolve during the twentieth century.

Scholars have offered several explanations for the decline of partisan newspapers, which can be grouped into three broad classes. The first focuses on commercial forces, particularly the increasingly attractive market for advertising revenue, as well as technological changes that increased the profitability of higher circulation.<sup>1</sup> The second emphasizes the role of political forces, such as the amount of resources available to party organizations or the strength of partisan ties in the electorate.<sup>2</sup> The third argues that journalism became increasingly professionalized, leading publishers, editors, and reporters to increasingly value objectivity over time (Schudson 1978, 2001; Mindich 1998).

In terms of the empirical literature, most studies of the partisan press and its decline focus on the mid- to late-nineteenth century to the early twentieth century.<sup>3</sup> For example, Hamilton (2004, p. 45) writes, “The most remarked upon change in daily newspapers in the period 1870–1900 was the emergence of the independent press.” Similarly, Baldasty (1992, p. 139) writes that in 1900, “Newspaper owners and editors were no longer primarily political activists obsessed with winning elections and filling their newspapers with political argument.” Gentzkow, Glaeser, and Goldin (2006, p. 190) write, “Sometime between 1870 and the early 1900s newspapers became demonstrably less connected to political parties” and focus their attention on the period 1870 to 1920. McGerr (1986, p. 118) argues that by the mid-1880s, “independent journalism was well established.” In contrast, Kaplan (2002, p. 16) argues that it was not until 1896 that “newspapers broke from parties and established their independence.”

In this paper, we focus on two main questions: What happened to newspaper partisanship during the twentieth century? Were the same economic and political forces continuing to affect newspaper partisanship throughout this period? To address these questions, we develop

<sup>1</sup> See Baldasty (1992), Hamilton (2004), Gentzkow, Glaeser, and Goldin (2006), and Petrova (2011).

<sup>2</sup> Kaplan (2002, p. 16) writes that prior to 1896, political parties enjoyed “overwhelming power” and a truly independent press could not arise until “the Democrats and Republicans suffered a long-term decline in their legitimacy and control of political resources.” McGerr (1986) describes the connections between voter partisan attachments and newspaper partisanship.

<sup>3</sup> Schudson (1978) and Baldasty (1992) trace the origins of a politically independent press back to the “penny papers” in the 1830s. Schudson (1978, p. 21) writes, “Most of the penny papers... claimed political independence, something that earlier papers rarely pretended to.” Baldasty (1992, p. 37) writes, “The rise of the penny press... provided the basis for the press as a servant of business rather than of politics.”

new measures of newspaper partisanship that cover the century between 1880 and 1980. Previous empirical studies have employed a variety of measures of partisan and ideological bias. However, these seem adequate only for studying short and/or specific time periods.<sup>4</sup>

Our key measures of newspaper partisanship are based on the coverage and commentary of partisan activities, institutions, and actors. We expect that partisan newspapers will devote especially large amounts of coverage to events involving their party and its members. We construct these measures via automated searches of online newspaper text. We use these measures to describe the levels of relative partisan behavior during the period 1880 to 1900, and to describe changes in partisan coverage over the period 1880 to 1980. In addition to our main measures, we also investigate measures that attempt to capture the “tone” rather than the intensity of coverage. These are based on “loaded” language, or news that is “good” or “bad” for a party. Furthermore, since there are well-documented differences in political and economic conditions across states and regions, we compare partisan coverage across newspapers within states and even within cities when possible (McGerr 1986; Kleppner 1987; Bense 2000).

Our main finding is that newspaper coverage became less partisan between 1880 and 1980, and this decline was gradual and largely continuous. Consistent with much of the previous literature, we find noticeable changes through the 1910s. We also find that the decline in the partisanship of coverage continued after the 1910s, through 1980. Based on our measure, the decline between 1920 and 1980 was nearly as large as the decline between 1880 and 1920. To our knowledge, this pattern has not been previously documented in the existing literature. We also find no evidence that partisanship in newspaper coverage increased after 1980, at least through 2018.

Another finding is that our main measure is strongly correlated with explicit partisan positions taken on the editorial pages in the early years of the sample, 1880–1900. This suggests that the measures are capturing a similar dimension of newspaper partisanship. We also find high correlations between our measure, partisan positions on editorial pages, and newspapers’ self-reported partisan identifications, which have been used in previous studies. This demonstrates that self-identifications reflect significant variation in partisan content. Since self-identifications are

<sup>4</sup> See Groseclose and Milyo (2005), Gentzkow and Shapiro (2010), Puglisi and Snyder (2011), Larcinese, Puglisi, and Snyder (2011), and Baum and Groeling (2008). For surveys of the literature, see Puglisi and Snyder (2015), Groeling (2013), and Hamburg, Donnay, and Gipp (2019).

easier to collect than content—and available for a larger set of newspapers—our findings support using this measure, at least for papers that identify with a party.<sup>5</sup>

In terms of heterogeneity, we find evidence suggesting that partisan differences in tone became less pronounced earlier than differences based on amounts of coverage. This is based on a limited set of terms and requires further investigation. We also find no clear differences in the partisan trends of southern vs. non-southern newspapers.<sup>6</sup>

While our paper is largely descriptive, the patterns we identify help assess some arguments and claims made in previous scholarship. For example, the fact that the decline was gradual and mostly continuous suggests that no single shock, such as the invention of the linotype, the appearance of radio, or the election of 1896, can account for the entire change unless its effect diffused quite gradually. Instead, if the decline in newspaper partisan coverage is driven by only one or two variables, then these variables probably also exhibit gradual trends. Taking an initial step, we examine several economic and political hypotheses regarding the transition from partisan to non-partisan newspapers.

First, many scholars argue that an increase in potential advertising revenue increases the pressure for newspapers to be more independent (Hamilton 2004; Besley and Prat 2006; Gentzkow, Glaeser, and Goldin 2006; Petrova 2011). We regress our newspaper coverage measure on population and wealth (for a short period), both of which are related to potential advertising revenues. Second, since radio and TV were relatively independent sources of news, newspapers might have responded to their entry by becoming less partisan (Besley and Prat 2006; Song 2020). We examine the share of households that owned radios and (later) televisions. We find that none of these variables account for the entire decline in partisan newspaper coverage—or even a substantively large part of it—on their own. Population and wealth only account for a small proportion of the observed change. We find no significant relationships between partisan coverage and the expansion of radio or television.

<sup>5</sup> It is less clear what to think about the papers that self-identify as “independent.” Groeling and Baum (2013, p. 4) cite Lawrence (1928, p. 894), who writes, “Every time you send a questionnaire to newspapers listed in the newspaper directory, and ask them for their political affiliations, they invariably reply ‘independent’; and there is no way to get away from that classification.” Groeling and Baum (2013) conclude, “This logic would tend to lead one to distrust news outlets proclaiming ideological independence in their coverage, but presumably outlets that did identify as partisan would be more credible in their claims.” By the 1930s, more than half of newspapers self-identified as some type of “independent,” so this measure was of questionable use for most of the twentieth century. Lee (1937, p. 182) writes, “The trend toward ‘independence’ does not necessarily mean greater freedom from political or politico-economic affiliation or even control.”

<sup>6</sup> Our main within-state analyses of long-lived newspapers are restricted to the non-South, except for Tennessee.

Regarding political explanations, we focus on two electoral measures. The first is vote share—compared to areas where voters lean heavily toward one party, there is pressure for newspapers to become less partisan in areas where voter partisanship is divided more equally (Hamilton 2004; Gentzkow and Shapiro 2010). The second is a measure of vote volatility—the standard deviation of the vote—which is related to the strength of voters' partisan attachments and possibly also the strength of party organizations (McGerr 1986; Kaplan 2002). In areas where voters are more independent, newspapers have less incentive to be highly partisan. Again, we find that these variables account for only a small amount of the observed decline in partisan newspaper coverage.

Although the economic and political variables mentioned previously do not account for much of the decline in partisan newspaper coverage when analyzed one at a time, taken together they account for a noticeable share of the changes in within-newspaper behavior. The regression analyses may underestimate the impact of these variables for several reasons. First, following the literature (and due to data availability), our analyses are at the county level. This might approximate the market areas for some newspapers, but for many others, the relevant market area is probably smaller, for example, the municipality. A second concern is measurement error in the independent variables—for example, population and wealth are only proxies for newspapers' potential advertising revenue. The dependent variable is also measured with error, which limits our ability to explain its variation. Finally, although we exploit the panel nature of the data—estimating models with newspaper-specific fixed effects—more work is needed to rule out potential biases due to omitted variables or endogeneity.

The ability to measure media biases is important because such biases may be consequential for democratic selection and accountability. In many formal models, biased reporting reduces voter information. Partisan media might affect election outcomes—for example, voters might choose lower-quality politicians if they are not given enough accurate information—or lead to increased polarization among citizens. Partisan news might also reduce electoral accountability, leading to more partisan behavior by politicians, more shirking, or increased catering to narrow, organized interest groups. Many theoretical papers have explored these arguments, and recent empirical studies have found evidence that biased news has persuasive and polarizing effects.<sup>7</sup>

The paper proceeds as follows. The next section describes our measures of partisan newspaper coverage and editorial stances. The subsequent

<sup>7</sup> See Gentzkow, Shapiro, and Stone (2015) for a review of the theoretical work. See DellaVigna and Gentzkow (2010) for a review of the empirical literature prior to 2010.

two sections present our main descriptive findings for the 1880–1900 period and then the entire 1880–1980 period. Next, we focus on measures that capture differences in the tone of coverage. The penultimate section presents our preliminary analyses regarding possible explanations for variation in partisan coverage. The final section concludes.

## DATA AND MEASURES

Our main measure of newspaper behavior is based on the amount of coverage of actors, institutions, or events associated with each party. Using this measure based on differential amounts of coverage, we focus on two time periods and two corresponding samples. The first covers 1880–1900, which, as we show, was a period of highly partisan behavior. The second covers 1880–1980. We also extend one analysis to 2018.

Our primary unit of observation is the newspaper-year. In both samples, we include a newspaper-year only if we can code both the partisanship of the newspaper's editorial stance and the partisan slant of its content in that year. For the 1880–1900 sample, we use all available newspaper-years. For the 1880–1980 sample, we restrict attention to “long-lived” newspapers for which we can measure the relative partisan slant of their coverage for a sufficient number of years. We refer to this as the multi-decade sample.

We use information from the online archive *Newspapers.com* to code content; therefore, all of the newspapers in the sample appear in that archive.<sup>8</sup> For the summary measure of partisan coverage, the 1880–1900 and 1880–1980 samples contain 1985 and 414 newspapers, respectively.

The number of newspapers in the United States increased dramatically between the Civil War and the 1910s. Similarly, the number of newspapers available in the *Newspapers.com* archive increases sharply over the same period. We began in 1880 as a compromise, trading off between the desire to cover a period as long as possible and to have a roughly comparable sample over time.<sup>9</sup>

We end our main analyses in 1980, primarily due to data limitations. The sample of available newspapers shrinks noticeably around 1980 and continues to decline almost every year afterward. The sample is further reduced because we need to define “Democratic” and “Republican” newspapers based on their historical editorial behavior or self-identification, as described next.

<sup>8</sup> Almost all of the newspaper coverage data was gathered between April and October 2020.

<sup>9</sup> For example, fewer than 25 percent of the newspapers in the multi-decade sample had enough pages in the *Newspapers.com* archive in 1870 to be useful.

*Classifying Newspaper Partisanship*

We first classify newspaper partisanship based on its explicit editorial behavior. We call this *Newspaper Party ID*, or *PID* for short. We code each newspaper's initial *PID* as Democratic or Republican, using only information from 1880 to 1920. This information comes from two sources.

The first source is the newspapers themselves. In the late nineteenth and early twentieth centuries, it was common for partisan newspapers to print the ticket of the party they supported directly under their banner/masthead.<sup>10</sup> They did this for almost every issue in the weeks leading up to the election and stopped immediately after the election. We coded these for 2,386 newspapers found in the *Newspapers.com* archive.<sup>11</sup>

The second source is newspapers' partisan self-identification, as published in *N.W. Ayer & Son's American Newspaper Annual*. For most daily papers, we found this in *ICPSR 30261 United States Newspaper Panel, 1869–2004*, and for non-dailies, we coded them ourselves.<sup>12</sup> This measure has been used previously by various scholars (Rutenbeck 1995; Hamilton 2004; Gentzkow, Glaeser, and Goldin 2006; Gentzkow, Shapiro, and Sinkinson 2011, 2014). Newspapers are coded as Democratic, Independent Democratic, Independent, Independent Republican, and Republican.<sup>13</sup> For 3,057 newspaper-years between 1880 and 1920, we have both explicit editorial behavior and self-identification, and both are coded as either Democratic or Republican. In these cases, the two virtually always coincide. There are 1,127 cases where both are Democratic, 1,920 cases where both are Republican, and only 10 cases where the partisanship does not match.<sup>14,15</sup>

Since the two measures are so highly correlated for the period 1880 to 1920, we code *PID* using newspapers' partisan self-identifications for the cases where we are unable to classify a newspaper based on its explicit

<sup>10</sup> This was both a statement about their editorial stance and information to help readers identify valid party ballots before the introduction of the Australian ballot. In discussing this period, McGerr (1986, p. 17) writes, "During elections, papers demonstrated their loyalty to their party by running the names of its candidates each day on the masthead. A paper failing to do so risked immediate censure from party members."

<sup>11</sup> In some cases, the ticket did not appear on the editorial page. We included these when it was obvious that it was not an advertisement.

<sup>12</sup> For non-dailies, we mainly use *Ayer's* directories of 1880, 1885, 1890, 1897, 1911, 1917, and 1921.

<sup>13</sup> Here, we ignore newspapers affiliated with third parties, "local," and specialty papers.

<sup>14</sup> In cases where the variables disagree, it is because a newspaper evidently changed its partisan affiliation. Self-identifications reported in newspaper directories appear to refer to the previous year and not to the year of publication.

<sup>15</sup> In our sample, there are 287 newspaper-years in which a newspaper self-identified as Independent Republican and 235 newspaper-years in which the newspaper self-identified as Independent Democratic. We do not count these cases as partisan when constructing *PID*.

editorial behavior. We do this only when the directory lists a newspaper as Democrat or Republican, not as Independent Democrat, Independent Republican, or something else. We code the partisanship of 730 newspapers based on this second source.

On rare occasions, newspapers changed their partisan affiliations from Democratic to Republican or Republican to Democratic. In these cases, we treat the newspaper as if it were two different newspapers—one before the switch and one after. Since we are only using information from 1880 to 1920 to code *PID*, if a newspaper changed partisanship from Democratic to Republican or vice versa after 1920, then we drop all observations for that newspaper after the change.

Sometimes newspapers consolidated, or one newspaper bought another. In the latter case, the purchased paper disappears from our sample in subsequent years, and the paper that made the purchase continues. In some consolidations, one paper was the “senior” partner and the other the “junior” partner.<sup>16</sup> We treat these as if the senior partner bought the junior partner. When the differences were small or unclear, we treated the newly consolidated paper as a new newspaper, and both of the constituent papers disappeared from the sample years after the consolidation. Again, since we are using information from 1880 to 1920 to code *PID*, a new newspaper formed from a consolidation that occurred after 1920 never appears in our analyses.

Overall, we have 767 Democratic papers and 1,013 Republican papers. Note that many papers classified as Democratic or Republican in the early period switched their self-identification to Independent, Independent-Republican, or Independent-Democrat in later years. In these cases, we leave *PID* unchanged. We focus on the “initial” partisanship because we are investigating whether and when partisan newspapers changed the slant of their coverage, irrespective of when they started to self-identify as “Independent.”<sup>17</sup>

### *Measuring Partisanship in Newspaper Coverage*

We measure newspaper behavior by looking at the amount of coverage of actors, institutions, or events associated with each party. In their survey on the measurement of media bias, Puglisi and Snyder (2015) distinguish between the “issue intensity” approach and approaches that attempt to capture “tone.”<sup>18</sup> We use the term “topic intensity” rather than issue

<sup>16</sup> A paper is the “senior” partner when all of the management and editorial staff listed on the masthead come from that paper after the merger.

<sup>17</sup> As noted earlier, scholars question what it meant for newspapers to self-identify as Independent.

<sup>18</sup> D’Alessio and Allen (2000) distinguish between three types of bias, which they call coverage bias, gatekeeping bias, and statement bias. Coverage bias and gatekeeping bias concern the amount of coverage, whereas statement bias reflects tone in terms of favorable or unfavorable coverage.

intensity, since it better captures the type of coverage that we measure. Many theoretical models of media bias assume that the primary choice newspapers make is over the amount of coverage to devote to specific events (Strömberg 2004; Besley and Prat 2006; Bernhardt, Krasa, and Polborn 2008; Chan and Suen 2009; Anderson and McLaren 2012). Gentzkow, Shapiro, and Stone (2015, p. 626) use the term “filtering” to describe topic intensity, and in their review of the literature, they write: “We are not aware of any systematic empirical evidence on the relative prevalence of these forms of bias. But it seems clear that filtering, in the form of both selection and summary, plays a large role in the way media bias occurs in practice.” Many scholars argue that this type of behavior is especially important because of its potential “agenda-setting” effects. As Cohen (1963, p. 13) famously wrote, the press “may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what to think about.”

One group of measures we use reflects the topic-intensity approach. More specifically, for each of the search terms shown next, we count the number of pages in each newspaper in each year in which the search term appeared one or more times—we refer to these as “hits.”<sup>19</sup> For Republican terms, the search strings are: [Republican convention], [Republican primary], [Republican committee], and [Republican meeting OR Republican rally OR meeting of Republican].<sup>20</sup> For Democratic terms, we use the natural analogs. The phrases chosen were based on reading a large number of articles in many newspapers over many years. The phrases are common enough that we can detect meaningful differences across newspapers and years, rather than just small random fluctuations in the use of the terms. These terms also appear regularly throughout our period of study.<sup>21,22</sup>

<sup>19</sup> For a subset of papers, we can search at the level of the article rather than the page. The measures of partisanship using page hits and article hits are highly correlated. See Online Appendix D for more details.

<sup>20</sup> We also searched the plurals of all of these terms. We considered other terms but found that many of the hits were for advertisements rather than newspaper coverage. “Primary” and “meeting/rally” also have this issue, but not to the same extent as candidate names or phrases involving “candidate” or “nominee.”

<sup>21</sup> If we want a string to appear at least 20 times per two-year election cycle for at least 50 years and for at least 200 newspapers, then we would need to observe the string at least  $20 \times 25 \times 200 = 100,000$  times in total. In practice, due to variations in newspaper size and coverage of politics, the total number of hits generally has to be larger.

<sup>22</sup> We examined the two words before and the two words after more than 15 million instances of the words “Democrat” and “Republican” (and variations), for the period 1880–1910. Three of our search strings appear in the top nine words: convention, committee, and primary (counts include both the singular and plural versions). Three of the others—state, national, and county—just reference geography, and the most common word—party—is too generic. Finally, we were concerned that the remaining two—ticket and candidate—occur too often in advertisements.

The main idea is that Democratic newspapers should devote more space to Democratic actors, institutions, or events because their readers are more interested in these topics. Republican newspapers should do the opposite. In some cases, the coverage has clear informational value. Republican readers will normally vote in Republican primaries, so it is natural for Republican papers to devote more space to Republican primaries and to provide information about the competing candidates' names, issue positions, and background characteristics. In other cases, the coverage may be more for entertainment. Republican readers might simply want to read about the Republican Party's activities and details about the lives of its candidates and leaders. Variation in coverage might also reflect the views of different publishers or editors. This idea is not new, of course—it is discussed in Kaplan (2002) and is applied in Gentzkow, Shapiro, and Sinkinson (2011).<sup>23</sup> Our contribution is to employ the idea in a more intensive and extensive manner.

We also examined coverage of pre-election forecasts and post-election wrap-ups. Partisan papers may emphasize their party's success and the other party's difficulties, just as candidates and parties do. The search string used for positive Republican coverage is [Republicans ahead OR Republicans lead OR Democrats behind OR Republican victory OR Republican landslide OR Republican triumph OR Republicans win OR Republicans won OR Republicans gain OR Democrat lost OR Democrats lose OR Democratic loss].<sup>24</sup> This search string captures both coverage amounts and tone, since success, even electoral success, is better than failure.

Finally, we examine a measure that even more clearly reflects (negative) tone in addition to relative amounts of partisan coverage. The string used for positive Republican coverage is [Democratic boss OR Democratic machine OR machine Democrat]. Throughout the period of study, both "boss" and "machine" had clearly negative connotations. For both the *Forecasts/Wrap-ups* coverage and the *Boss/Machine* measure, the Democratic strings are the natural analogs of the Republican strings.

For many analyses, we aggregate the six individual items—*Committees*, *Meetings/Rallies*, *Conventions*, *Primaries*, *Forecasts/Wrap-ups*, and

<sup>23</sup> Kaplan (2002, p. 78) notes that even in newspapers claiming to present "their selections as neutral, technical choices," their partisan behavior would be evident in the relative coverage of the party activities. He writes, "At a certain point the ruses of covert partisanship – the immensely unequal distribution of news space between parties and the vastly disproportionate number of quoted remarks in favor of one's party – become obvious." He lists various ways the coverage favored one party, including: "notices of party meetings and calls for rallies, effectively turning the paper into a party bulletin board," "grossly unequal amounts of news coverage devoted to the activities and speeches of the two parties' notables," "woodcuts celebrating the performance of the party in the latest election," and "diverse articles predicting the imminent electoral success."

<sup>24</sup> We did not use "defeated" because it appears frequently with both positive and negative meanings.

*Boss/Machine*—into an overall measure of newspaper partisan behavior, which we call the *Combined Index*. This is simply an average of the partisan scores for the six underlying items.

Let  $R_{ijt}$  be the number of pages in newspaper  $i$  of state  $j$  in year  $t$  on which there was at least one hit on a Republican item.<sup>25</sup> Analogously, let  $D_{ijt}$  be the number of pages on which there was at least one hit on a Democratic item. Then define *Republican Coverage Share*, or *RCS*, as  $RCS_{ijt} = R_{ijt} / (R_{ijt} + D_{ijt})$ . We study various statistics based on *RCS*. Let  $RCS_{Rt}$  be the average of *RCS* taken over papers with Republican *PID* in year  $t$ . Analogously, let  $RCS_{Dt}$  be the average over papers with Democratic *PID* in year  $t$ . We calculate *RCS* for each of our six items. The *Combined Index* is the average *RCS* of the items.<sup>26</sup>

The simplest measure we study is the difference between the average *RCS* for the two types of papers. We call this *Partisan Gap*:

$$PG_t = RCS_{Rt} - RCS_{Dt} \quad (1)$$

The second measure focuses on the gaps within states. Let  $RCS_{Rjt}$  be the average *RCS* among Republican newspapers in state  $j$  in year  $t$ , let  $RCS_{Djt}$  be the average among Democratic newspapers, and let  $PG_{jt} = RCS_{Rjt} - RCS_{Djt}$  be the difference between the two within-state averages. The *Within-State Partisan Gap* is the average of  $PG_{jt}$  across all states in the sample:

$$WSPG_t = \sum_j PG_{jt} / J \quad (2)$$

where  $J$  is the number of states with at least one Republican newspaper and at least one Democratic newspaper, so we can compute  $PG_{jt}$ . We prefer this second measure because it helps separate partisan slant from coverage that may appear partisan but is actually based on relevance. Consider states in which Republicans have a large electoral advantage because of underlying partisan preferences among voters. In these states, Republican party activities are more deserving of attention and monitoring than Democratic activities because Republican candidates are more likely to win elections and hold office. Using *WSPG* subtracts out “bias” that is due to differences in state-specific party relevance, while the overall measure does not.<sup>27</sup>

<sup>25</sup> Note, we use subscripts  $R$ ,  $D$ , and  $I$  to refer to *PID*.

<sup>26</sup> We compute this average for a given newspaper-year as long as *RCS* is non-missing for at least four of the six items.

<sup>27</sup> Ideally, we would construct an analogous within-city measure. We do show within-city results for the 1880–1900 sample. However, very few cities have both Democratic and Republican newspapers in the multi-decade sample.

Misclassifying *PID* could make it appear that the newspapers are becoming less partisan, even when they are not. To take an extreme example, suppose that in year  $T$  half of all Republican papers became Democratic and half of all Democratic papers became Republican. Suppose also that, in all years,  $RCS = 1$  for Republican papers and  $RCS = 0$  for Democratic papers. Then  $PG$  before the switch would be 1 and  $PG$  after the switch would be 0 (since  $RCS_R = RCS_D = 0.5$ ).

We address this issue in two ways. First, we attempt to find all cases where a newspaper clearly changed its partisan self-identification. We also checked whether newspapers changed their general election endorsement patterns, switching from one party to the other.<sup>28</sup> When we find cases after 1920 in which a newspaper with a Republican *PID* switched to Democratic/Independent Democratic or a newspaper with a Democratic *PID* switched to Republican/Independent Republican, we drop all observations for that newspaper after the switch.

Second, we examine the standard deviation of  $RCS$  by year. Let  $SD_{jt}$  be the standard deviation of  $RCS_{ijt}$  across all newspapers in state  $j$  in year  $t$ . We average  $SD_{jt}$  across all states in year  $t$  to create the average standard deviation, *Within-State Standard Deviation*, or  $WSSD_t$ . A decline in the standard deviation over time indicates that newspapers are becoming more similar to one another. Since  $WSSD$  does not use *PID*, any miscoding of *PID* classifications does not affect it.<sup>29</sup>

Several details regarding the data and variables deserve mention. First, we combine odd-numbered years with the previous even-numbered year. Second, we only keep a newspaper-year for a search term if it has 20 or more hits. Online Appendix Figure A1 shows the average number of hits per newspaper by decade for each of the items. For the *Combined Index* we only require 10 or more hits for each item since the index is already an average of several items. Third, we only compute  $WSPG$  for years in which we can compute the gap between Democratic and Republican papers in at least 10 states.

We use a threshold of four hits for the *Boss/Machine* terms. These terms are highly discriminating, but they appear less often than the other items (see Online Appendix Figure A1). Interestingly, the usage of the *Boss/Machine* terms has remained relatively constant over our period of study. There are several possible reasons. First, according to some scholars, traditional, patronage-based party “machines” persisted at least into the 1960s

<sup>28</sup> *Editor & Publisher* has compiled presidential endorsements for all daily newspapers since 1932, which are included in *ICPSR 30261*. We have checked the non-dailies ourselves, but we may have missed some endorsements.

<sup>29</sup> For reliability reasons, we impose an additional requirement that a state have at least four newspapers in order to be included in this measure.

(Stave 1970; Wolfinger 1972; Dorsett 1977; Trounstein 2008). Second, the terms “boss” and “machine” are used more broadly to describe powerful politicians in various circumstances, not only patronage-based organizations and leaders. Finally, journalists and others who want to criticize a party can reference prominent bosses or machines from other parts of the country or from earlier time periods, that are associated with that party.

Another potential concern is that optical character recognition (OCR) errors could affect our measures. As we discuss in Online Appendix E, however, these errors must be of a particular form in order to bias our measures in serious ways, and therefore it is unlikely that they account for much of the large changes we observe.

Finally, not all newspapers exist for the entire time period under study, and for some of those that do, *Newspapers.com* does not have complete coverage. We define the multi-decade sample as newspapers that, roughly speaking, have existed for at least 50 years.<sup>30</sup> More precisely, for each separate item and the *Combined Index*, let  $Y_{ij}^{min}$  be the first year for which we can compute  $RCS_{ijt}$  for newspaper  $i$  in state  $j$ , and let  $Y_{ij}^{max}$  be the last year for which we can compute  $RCS_{ijt}$  for that newspaper. Newspaper  $i$  is in the multi-decade sample if and only if  $Y_{ij}^{max} - Y_{ij}^{min}$  is at least 50, and  $RCS_{ijt}$  is non-missing for at least half of the years between  $Y_{ij}^{min}$  and  $Y_{ij}^{max}$ . We allow newspapers to have gaps in their coverages because there are gaps or unreadable pages in the *Newspapers.com* archive.<sup>31</sup>

#### ERA OF PARTISAN PRESS, 1880–1900

As noted previously, historians and scholars of journalism describe U.S. newspapers as being highly partisan during the nineteenth century. We investigate this using our measures for the first two decades of our sample, 1880–1900. This also provides a benchmark from which we measure changes over the course of the twentieth century in the next section.

Table 1 presents the average *RCS* for Republican and Democratic newspapers, as well as the *Partisan Gap* (*PG*) between them. The table shows this for each of the six items as well as the *Combined Index*, for all available newspapers. Online Appendix Table B1 shows the analogous figures for papers in the multi-decade sample. For the replication files reproducing all tables and figures, see Hirano and Snyder (2024).

<sup>30</sup> We examined other thresholds for including newspapers in the multi-decade sample, including 30, 40, 60, and 70 years. The substantive findings are not sensitive to the threshold (see Online Appendix C.2).

<sup>31</sup> Also, some events—for example, WWI and WWII—crowded out much of the usual coverage of domestic politics. In these cases, *RCS* might be missing because the number of hits falls below the minimum threshold.

TABLE 1  
NEWSPAPER PARTISAN CONTENT, 1880 TO 1900, ALL AVAILABLE NEWSPAPERS

Item	RCS in R Papers	RCS in D Papers	Partisan Gap	Number of Obs.	Number of Papers
Committees	0.60	0.40	0.20	8,548	1,901
Meetings/Rallies	0.76	0.35	0.42	4,929	1,267
Conventions	0.63	0.40	0.23	10,835	2,136
Primaries	0.74	0.25	0.49	2,456	725
Forecasts/Wrap-ups	0.60	0.40	0.19	4,940	1,216
Boss/Machine	0.64	0.20	0.44	4,287	1,216
Combined Index	0.66	0.35	0.30	7,696	1,780

Notes: Number of Observations is the number of newspaper-years used in calculating the RCS for either Democratic or Republican newspapers. Number of Papers is the number of newspapers that are used at least once.

Sources: Newspapers.com, ICPSR 30261, and *N.W. Ayer & Son's American Newspaper Annual* (various years).

For all items in both samples, Republican newspapers appear to favor the Republican Party, at least when compared to Democratic newspapers. The overall *PG* is always positive, meaning that Republican newspapers have higher *Republican Coverage Shares* for these items compared to Democratic newspapers.<sup>32,33</sup>

Table 2 shows analogous statistics for *WSPG*. For almost all items, these gaps are smaller than those in Table 1. This is consistent with the argument noted previously that the overall gap might overstate partisan bias because it includes differences in the relative relevance of the two parties across states and localities. Nonetheless, for each item, *WSPG* exhibits the same general pattern as the corresponding *PG*. Online Appendix Table B2 again shows the analogous figures for papers in the multi-decade sample.

Finally, Table 3 shows *Within-City Partisan Gaps*. These are analogous to *WSPG*, but at the city level rather than the state level.<sup>34</sup> We can calculate this gap for at least one city in 33 states. The patterns are similar to those in Table 2. Thus, evidently, we can account for most of

<sup>32</sup> We code the *Boss/Machine* item so that a higher *RCS* value means that a newspaper is more likely to use the terms “boss” or “machine” when describing Democrats than when describing Republicans.

<sup>33</sup> We do not report *t*-statistics or *p*-values here, but in all cases, the partisan gaps are statistically significant at the .05 level, even after clustering the standard errors in various ways. The sample size is smaller for *Primaries*, probably because the direct primary was not widely used until after the turn of the twentieth century, and not all states used indirect primaries for choosing delegates (Hirano and Snyder 2019). By contrast, the sample size for *Conventions* is larger, probably because conventions were so important for nominations during this period.

<sup>34</sup> More precisely, let  $RCS_{Rkt}$  be the average *RCS* among Republican newspapers in city *k* in year *t*, let  $RCS_{Dkt}$  be the average among Democratic newspapers, and let  $PG_{kt} = RCS_{Rkt} - RCS_{Dkt}$  be the difference between the two averages. Then let  $WCG_t = \sum_k PG_{kt} / K$  be the average within-city gap, where *K* is the number of cities for which we are able to construct  $PG_{kt}$ .

TABLE 2  
NEWSPAPER WITHIN-STATE PARTISAN GAP, 1880 TO 1900,  
ALL AVAILABLE NEWSPAPERS

Item	Within-State Partisan Gap	Number of Obs.	Number of Papers	Number of States
Committees	0.14	347	1,788	40
Meetings/Rallies	0.34	286	1,175	39
Conventions	0.16	368	2,022	40
Primaries	0.28	160	554	24
Forecasts/Wrap-ups	0.18	286	1,136	38
Boss/Machine	0.50	290	1,120	37
Combined Index	0.26	341	1,663	40

*Notes:* Number of Observations is the number of state-years used in calculating the average Within-State Partisan Gap. Number of Papers is the number of newspapers that are used at least once. Number of States is the number of states that are used at least once.

*Sources:* Newspapers.com, ICPSR 30261, and *N.W. Ayer & Son's American Newspaper Annual* (various years).

TABLE 3  
NEWSPAPER WITHIN-CITY PARTISAN GAP, 1880 TO 1900

Item	Within-City Partisan Gap	Number of Obs.	Number of Papers	Number of Cities
Committees	0.15	1,144	719	238
Meetings/Rallies	0.37	640	465	164
Conventions	0.17	1,416	813	262
Primaries	0.17	234	170	63
Forecasts/Wrap-ups	0.17	707	465	168
Boss/Machine	0.48	567	418	156
Combined Index	0.26	1,084	677	223

*Notes:* Number of Observations is the number of city-years used in calculating the average Within-City Partisan Gap. Number of Papers is the number of newspapers that are used at least once. Number of Cities is the number of cities that are used at least once.

*Sources:* Newspapers.com, ICPSR 30261, and *N.W. Ayer & Son's American Newspaper Annual* (various years).

the difference in newspaper coverage relating to differences in the relative relevance of the two parties using *WSPG*.

In all three tables, the partisan differences are substantively large. Consider, for example, the *Combined Index* and the sample of all available newspapers. The average *RCS* across Democratic papers is about 0.35 in Table 1. The *WSPG* from Table 2 is 0.26, implying that the average *RCS* in Republican papers would be 73 percent higher than the corresponding *RCS* in Democratic papers.

The patterns in Tables 1–3 are consistent with the conventional wisdom that newspapers were quite partisan during the late-nineteenth century. This increases our confidence in the measures. Also, since our measures are novel and based on more comprehensive data than previous studies, the findings provide new evidence for conventional wisdom. One

implication is that many newspaper readers during this period consumed information filtered through highly partisan lenses.

## TRENDS

We now study the long-term trends in newspaper partisan behavior between 1880 and 1980. In order to keep the set of newspapers roughly consistent over time, we restrict attention to the multi-decade sample—that is, newspapers for which we can measure *RCS* for at least 50 years and, except when using *WSSD*, assign a *PID*.<sup>35</sup>

Figure 1 presents the results for the *Combined Index*. The upper-left panel shows *PG*, the upper-right panel shows *WSPG*, the lower-left panel shows *WSSD*, and the lower-right panel shows *RCS* for Democratic and Republican newspapers separately.

Both upper panels display the same basic pattern of a steady and gradual decline. The *WSSD* panel also shows a long and slow decline. The panel in the lower-right shows that Republican and Democratic papers converged over time by roughly the same amount to a *RCS* of about 0.50.

The *WSPG* fell from an average of 0.26 in 1884–1890 to an average of 0.15 in 1914–1920, a decline of 0.11. The average continued to fall after 1920, reaching zero in 1974–1980, a decline of 0.15. Thus, based on our measure of newspaper content, partisan newspaper behavior had not disappeared by 1920. Instead, there was an even larger decline in *WSPG* between the late 1910s and late 1970s.

The patterns are consistent with the conventional wisdom that newspapers became increasingly independent of political parties around the turn of the twentieth century. However, many studies of the emergence and development of press independence ended their analyses in the early 1900s. For example, Hamilton (2004) focuses on the period up to 1900, and Kaplan (2002) focuses on the period until 1920. The figures show that substantial changes in partisan coverage occurred after 1900 and even after 1920.

The patterns are less clear regarding the claim in Kaplan (2002) that 1896 was a critical turning point in newspaper independence. The overall *PG* did not clearly begin to decline until the late 1890s, which is consistent with the argument. Also, *WSPG* appears to show a small

<sup>35</sup> The within-state analyses in this section essentially cover only states outside the South because the measures using the multi-decade sample only include one southern state, Tennessee. There are no long-lived southern Republican daily newspapers in the South (except in Tennessee); see ICPSR 30261.

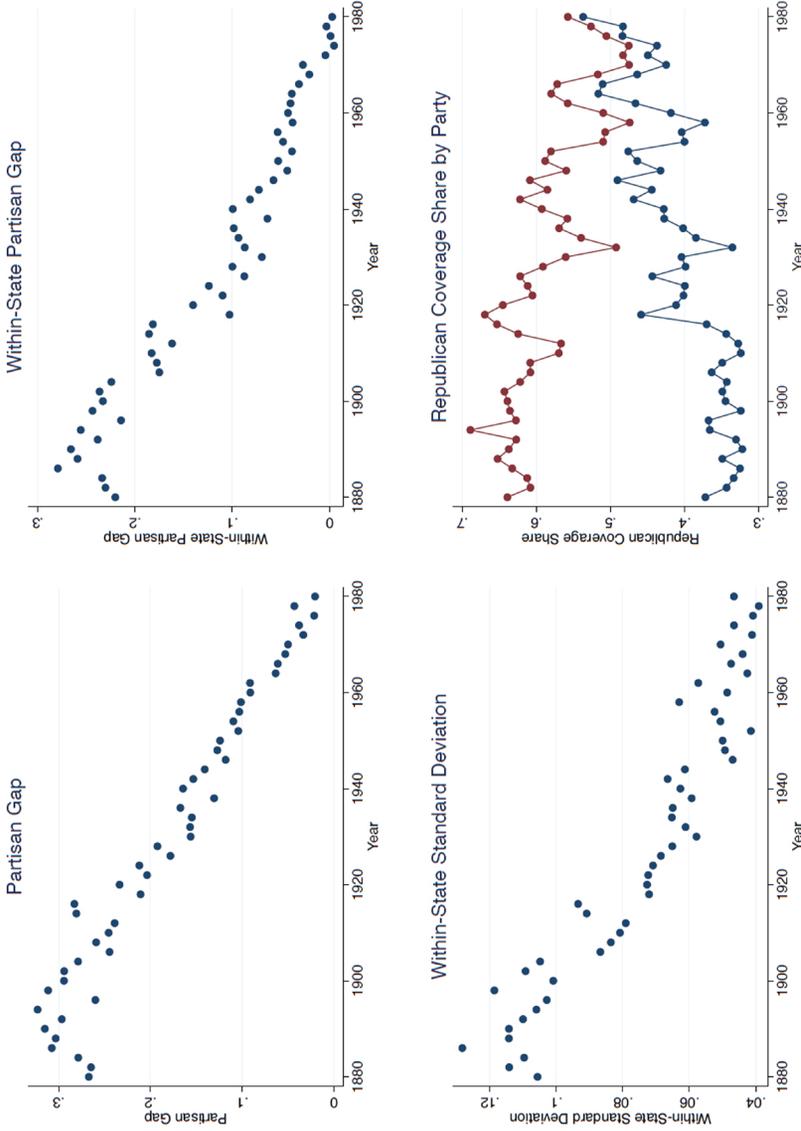


FIGURE 1  
COMBINED INDEX, MULTI-DECADE SAMPLE  
Sources: Newspapers.com, ICPSR 30261, and *N. W. Ayer & Son's American Newspaper Annual* (various years).

but noticeable drop just after 1900 (between 1904 and 1906). Similarly, *WSSD* began its more apparent decline after 1900. When viewed in the context of the entire period 1880–1980, however, the changes around 1896 are not particularly large.<sup>36</sup>

In the Online Appendix, we show *PG*, *WSPG*, and *WSSD*, as well as *RCS* by party, for each of the six items separately (Figures C8–C11). They exhibit roughly similar patterns—in particular, long, gradual declines in partisan behavior after 1900 or, in some cases, earlier.

We also present *WSSD* using all available newspapers, not only those in the multi-decade sample (Online Appendix Figure C7), and find the trend is similar to that in Figure 1. This mitigates concerns that the multi-decade sample might systematically differ from the full set of newspapers available on *Newspapers.com*. Finally, we examined other thresholds for including newspapers in the multi-decade sample—30, 40, 60, and 70 years. As shown in Online Appendix C.2, the patterns do not differ substantially depending on the threshold used.

In the analysis noted earlier, we restricted the sample to long-lived newspapers that existed for at least 50 years of our 100-year period of investigation. However, even in these figures, there is some entry and exit into the sample. In Online Appendix Figure C1, we examine the trends in *PG*, *WSPG*, and *WSSD* for overlapping 50-year windows, holding the sample of newspapers fixed within each window, and find patterns similar to those noted earlier. Thus, the decline shown in Figure 1 reflects changes in partisan behavior within newspapers, not merely changes over time in the newspapers included.

### *What about Post-1980?*

The analyses mentioned previously stopped in 1980, primarily because of limited data availability and our decision to define *PID* using only information through 1920. As noted earlier, the sample of newspapers available in our data source shrunk noticeably just before 1980 and continued to decline almost every year afterward. The sample of newspaper years for which *PID* is non-missing is even smaller. Many of the newspapers that exist in the database post-1980 first appear after 1920; also, we “restart” newspapers as new objects after consolidations (except where one newspaper acquired the other or was the “senior” partner). This means that our preferred measure, *WSPG*, is based on relatively small samples for many states.

<sup>36</sup> The *PG* measure appears to change slope in the late 1800s. However, more data and better measures are needed to increase our confidence in this conclusion.

With that caveat in mind, it is nonetheless interesting to extend our figures to the present. In addition, *WSSD* does not rely on *PID*, so we have a reasonably large number of newspapers in the multi-decade sample to compute this measure through 2018. The *RCS* measure was non-missing for nearly 200 newspapers in the 2010s, as compared to more than 350 newspapers in the 1970s.<sup>37</sup>

We again focus on the *Combined Index*. The left panel of Figure 2 shows *WSPG* and the right panel shows *WSSD*. Both panels show a similar pattern—that is, no significant change in either *WSPG* or *WSSD* between 1980 and 2018.<sup>38</sup>

The lack of change in newspaper behavior is interesting because it contrasts sharply with the increase in partisan polarization among political elites during this recent period. Polarization in roll-call voting increased in Congress and in most state legislatures (Shor and McCarty 2011; McCarty, Poole, and Rosenthal 2016). Other media might have been polarized during this period, with the growth of conservative talk radio, the introduction of cable news networks such as Fox News on the right and MSNBC on the left, and the expansion of the conservative Sinclair Broadcast Group (Ridout 2013). Moreover, two text-based measures find evidence of partisan polarization among political elites. Jensen et al. (2012) and Gentzkow, Shapiro, and Taddy (2019) examine the Congressional Record and find an increasing partisan divide in the speeches made by members of Congress since the 1980s.

### *Regional Variation: South versus Non-South*

Historians have documented large economic, social, and cultural differences between the South and non-South during our period of study. Here we briefly analyze whether the trends in newspaper partisan behavior described earlier differ between the regions.

Focusing on the period 1880 to 1920, we calculate *WSPG* for six southern states and many non-southern states. The *WSPG* for the South and non-South are 0.25 and 0.23, respectively. The difference is not statistically significant. Thus, the partisan behavior appears to be similar in southern and non-southern newspapers for this period.

We cannot conduct a within-state analysis of the partisan gap for the South for our entire time period, because there are no southern Republican

<sup>37</sup> Recall that when computing the *WSSD*, we only include state-years for which *RCS* is non-missing for at least four newspapers. When we limit attention to these state-years, there are about 100 newspapers in our sample for the 2010s.

<sup>38</sup> The pattern is the same even if we use the same sample of newspapers in 50-year intervals, as in Online Appendix Figure C2.

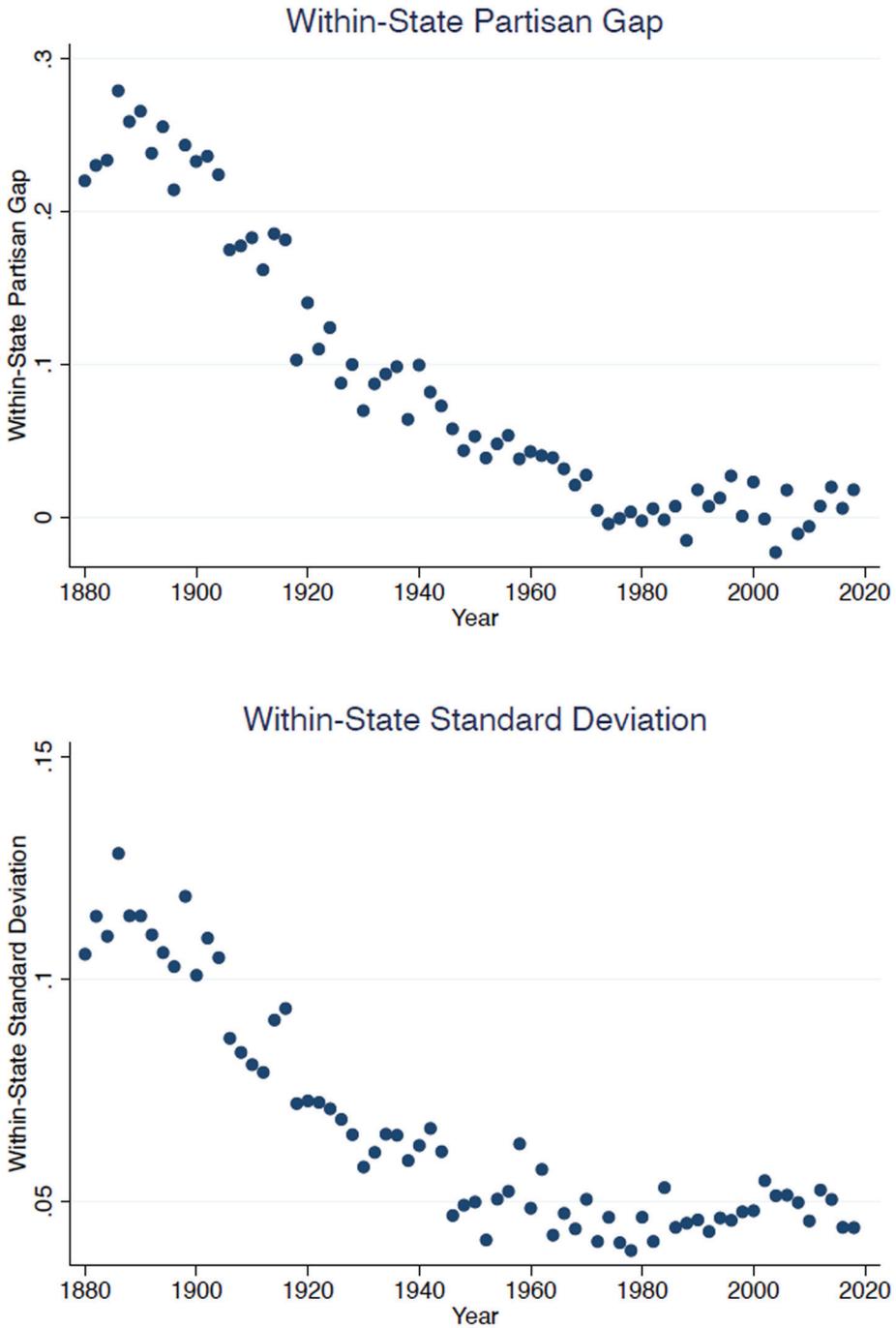


FIGURE 2  
COMBINED INDEX, MULTI-DECADE SAMPLE, TO 2018

Sources: Newspapers.com, ICPSR 30261, and *N.W. Ayer & Son's American Newspaper Annual* (various years).

papers in the multi-decade sample (except one in Tennessee). We can, however, compare Democratic newspapers in the South and non-South. Figure 3 shows *RCS* for the *Combined Index* for southern newspapers (in black) and non-southern newspapers (in gray). For almost all years, Democratic newspapers in the South had lower values of *RCS* than Democratic newspapers elsewhere. However, the trends are similar in the two regions, suggesting that similar forces were at work outside and inside the South.

#### TONE-BASED PARTISAN DIFFERENCES

Does the decline in newspapers' partisan behaviors mainly reflect a change in the amount of coverage given to each party's activities, events, and elites, or was there also a change in the tone of the coverage? One of the items in the *Combined Index*, *Boss/Machine*, reflects a clear difference in the tone of the coverage of the political parties—"Republican machine" is not a favorable description of the Republican party. *Forecasts/ Wrap-ups* also have a partisan tone when they reflect "cheerleading" for one party or the other. The remaining items have a more neutral tone.

Here, we examine two other types of news stories in which we can identify search strings that capture differences in tone. The first involves direct accusations of improper behavior, malfeasance, or incompetence by one of the parties. The second exploits the fact that Democrats and Republicans often use different language to frame issues and policies and, in some cases, used charged phrases that were widely adopted in the press. We do not include these in the *Combined Index* analyzed, either because they appear too infrequently in the newspapers compared to the items included in the *Combined Index*, or because they capture partisan tone only for specific years or decades.

#### *Corruption, Ring, Scandal, and Waste*

References to corruption and wastefulness in connection with one of the parties provide another possible way to measure tone, at least to the degree that the references are not merely reports about clear, specific acts of corruption or waste. In reading through numerous newspaper articles, we found that these accusations were commonly used to impugn the integrity of one of the parties, especially in the late nineteenth and early twentieth centuries. These items are similar in spirit to the *Boss/Machine* item used, but often involved more serious charges.

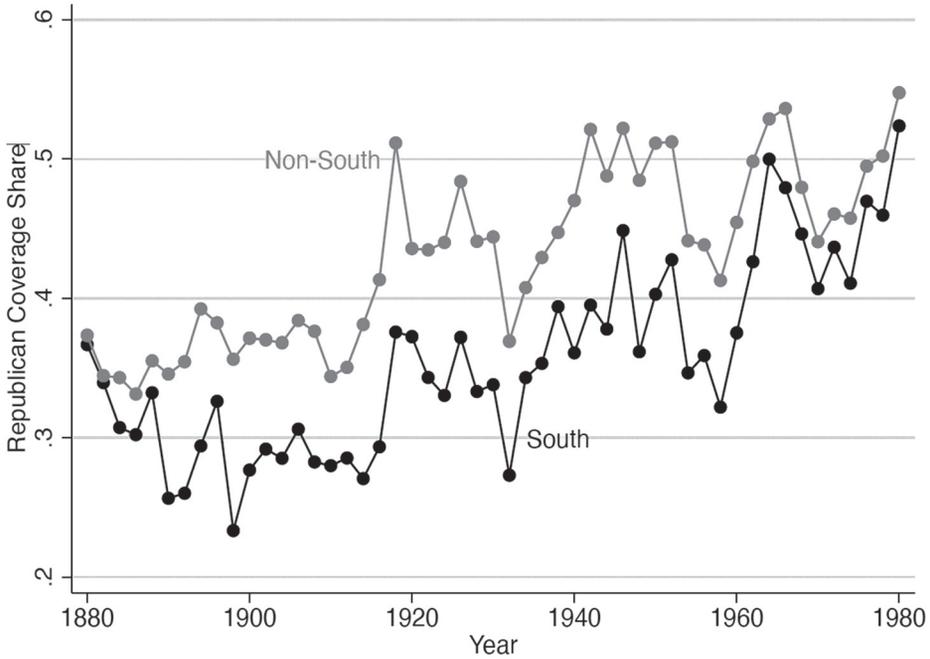


FIGURE 3  
 REPUBLICAN COVERAGE SHARE FOR DEMOCRATIC PAPERS  
 IN THE SOUTH AND NON-SOUTH

Sources: Newspapers.com, ICPSR 30261, and *N.W. Ayer & Son's American Newspaper Annual* (various years).

For references to Republican corruption, we used the following search strings: [Republican corruption OR corrupt Republican] and [Republican ring OR ring Republican]. For Republican waste, we used the following search string: [Republican extravagance OR extravagant Republican OR Republican waste OR wasteful Republican]. For scandals, we searched for the following string, which was more frequently used in the second half of the twentieth century: [Republican scandal OR scandal Republican]. For Democratic terms, we used natural analogs. Since the tone of these terms is negative, *RCS* is the number of pages with the terms referring to the Democratic Party divided by the total number of pages with these references applied to either party. Although these phrases appeared regularly, they were not used commonly enough to compute an accurate *RCS* measure at the newspaper-year level. Therefore, we aggregate across years by decade. We examine the period 1880–1980, and include 1980 in the decade of the 1970s.

Figure 4 shows the results. Again, we observe a steep decline in all three measures, *PG*, *WSPG*, and *WSSD*. Unlike Figure 1, the partisan

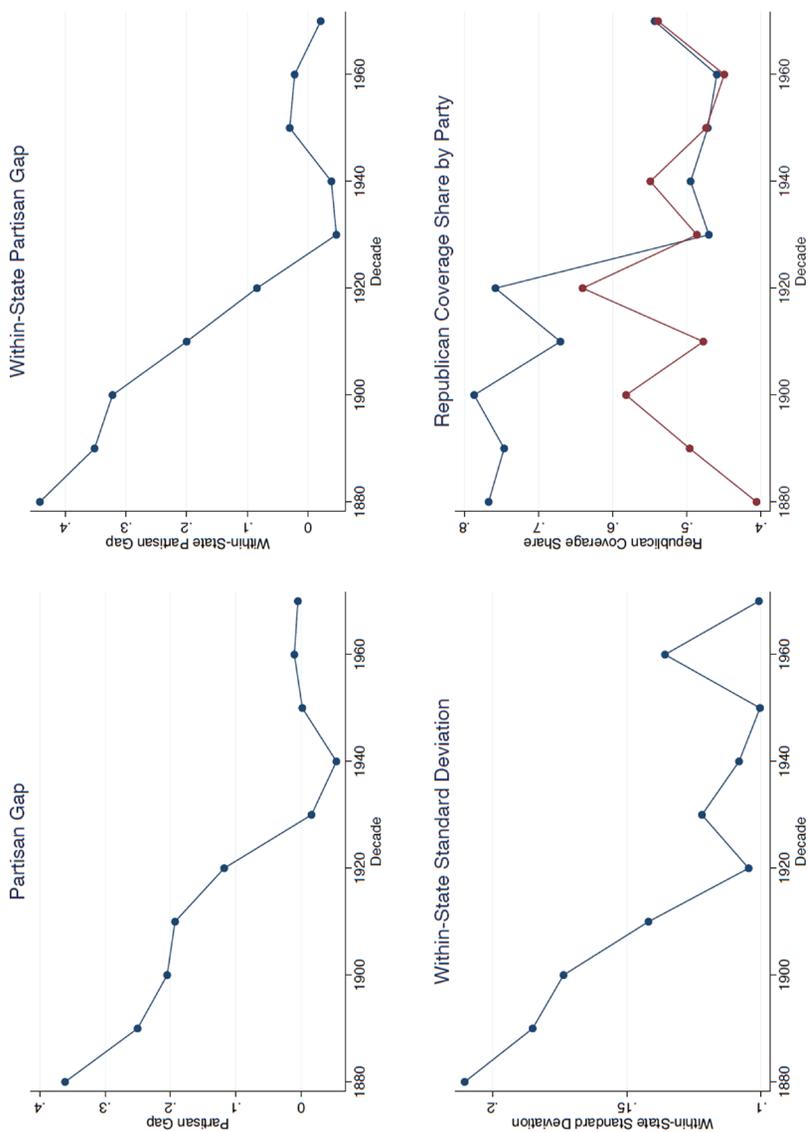


FIGURE 4  
CORRUPTION, RING, SCANDAL, AND WASTE, MULTI-DECADE SAMPLE

Sources: Newspapers.com, ICPSR 30261, and *N.W. Ayer & Son's American Newspaper Annual* (various years).

differences appear to have bottomed out by the 1930s as opposed to 1980.

In addition to the changes in the relative frequencies shown in Figure 4, there were also changes in the overall usage of these highly charged phrases. In fact, it appears that all but one of them went almost completely out of fashion by 1980. The only phrases for which there was an increase in use over time were those involving the word scandal.

### *Tariff Issue*

The tariff divided the Democrats and Republicans after the Civil War through the first decades of the twentieth century, with the Republican Party favoring high tariffs and the Democratic Party favoring low tariffs. We focus on the period 1888–1938, during which the tariff was a particularly partisan and salient issue.<sup>39</sup>

We measure the partisan coverage of the tariff issue using two search strings that have a positive connotation for tariffs—[protective tariff OR tariff protection]—and four search strings that have a negative connotation—[high tariff OR monopoly tariff OR trust tariff OR tariff tax].<sup>40</sup> Because Republicans favored the protective tariff more than Democrats, *RCS* is the number of pages with terms that have a positive connotation divided by the total number of pages with either positive or negative terms. We include newspapers that existed in the archive for at least half of the years during this period.<sup>41</sup>

Figure 5 shows the results. The upper-left panel shows the *PG*, the upper-right panel shows the *WSPG*, the lower-left panel shows the *WSSD*, and the lower-right panel shows *RCS* for Democratic and Republican newspapers separately.

The patterns in Figure 5 are roughly similar to the patterns in Figure 1. Both of the upper panels show a steady and gradual decline in differential use of the positive and negative terms for the tariff by Democratic and Republican papers. The *WSSD* panel also exhibits a decline, although

<sup>39</sup> In describing the tariff, O'Halloran (1994, p. 51) writes, "Grover Cleveland, in his 1887 address, declared the tariff the most important issue of the day. The tariff continued to divide the political parties and define the political debate for the next fifty years." We stop in 1938 because, after the Smoot-Hawley tariff and continued economic depression, the Republican protectionist position began to lose its popularity. After WWII, clear divisions emerged among Republicans (Hiscox 1999).

<sup>40</sup> Critics often argued that high tariffs benefited monopolies and trusts, and that tariffs were a form of taxation.

<sup>41</sup> More precisely, let  $Y_{ij}^{min}$  be the first year for which we can compute  $RCS_{ijt}$  for the tariff measure for newspaper  $i$  in state  $j$ , and let  $Y_{ij}^{max}$  be the last year. We include newspaper  $i$  if and only if  $Y_{ij}^{max} - Y_{ij}^{min} \geq 25$ , and  $RCS_{ijt}$  is non-missing for at least 10 years between  $Y_{ij}^{min}$  and  $Y_{ij}^{max}$ .

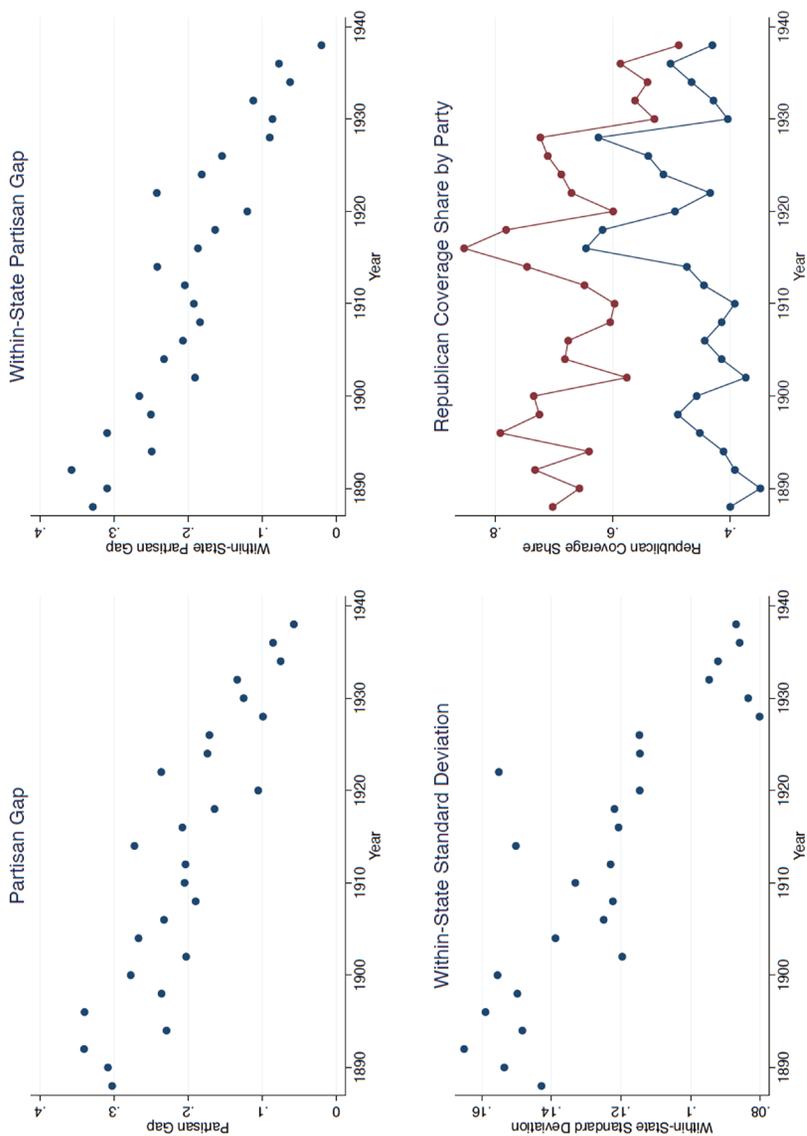


FIGURE 5  
TARIFF, MULTI-DECADE SAMPLE

Sources: Newspapers.com, ICPSR 30261, and *N.W. Ayer & Son's American Newspaper Annual* (various years).

there are two outlier years. The lower-right panel shows that Republican and Democratic papers converged over time to a *RCS* of about 0.50 in 1938.

### *Other Specific Issues*

Here we examine several other issues for which we identified simple phrases with a partisan slant. Unlike the tariff, these involved specific pieces of legislation or government actions that were newsworthy for only a short time. They are: (1) Federal Election Bill introduced in 1890; (2) Judicial Procedures Reform Bill of 1937; (3) President Harry Truman's Healthcare Reform Plan of 1949; and (4) Bay of Pigs Invasion of 1961.

The Federal Election Bill was first introduced in 1890. Republicans supported it, and Democrats opposed it. According to proponents, the bill's purpose was to ensure that voting rights were respected and to improve election administration, and it would have involved expanding the federal government's role in congressional elections. Opponents referred to it as the "(Lodge) Force Bill." We use the following search strings for the supporting and opposing sides, respectively: [election bill] and [force bill]. We search for these strings during the years 1890–1892.

The Judicial Procedures Reform Bill was proposed by Franklin D. Roosevelt and supported by Democrats in 1937. The bill contained several reforms, but the most controversial was the provision allowing the president to appoint new Supreme Court judges. Opponents, primarily Republicans (and some southern Democrats), referred to it as the "court packing plan." We use the following search strings for the supporting and opposing sides, respectively: [court reform] and [court packing]. We search for these strings in 1937.

President Harry Truman strongly supported attempts to pass a national universal healthcare plan, especially in 1949, making it part of his Fair Deal. It was mainly supported by Democrats, while opponents referred to it as "socialized medicine." We use the following search strings for the supporting side: [national health insurance OR national health program OR national health plan OR trumans health program OR trumans health plan OR medical insurance program OR medical insurance plan]. For the opposing side, we use: [socialized medicine]. We search for these strings in 1949 and 1950.

Finally, the Bay of Pigs Invasion was a failed military operation that attempted to stop the Cuban Revolution in 1961. Critics of the operation referred to it as a "fiasco," "debacle," or "disaster." It was viewed as a major failure of John F. Kennedy's administration, and Republicans

TABLE 4  
 NEWSPAPER PARTISAN CONTENT ON SELECTED ISSUES,  
 ALL AVAILABLE NEWSPAPERS

Item	RCS in R Papers	RCS in D Papers	Partisan Gap	Number of Obs.
Election Bill, 1890–1892	0.62	0.30	0.31	1,178
Court Reform Plan, 1937	0.51	0.30	0.20	335
Health Insurance, 1949–1950	0.68	0.67	0.01	377
Bay of Pigs, 1962–1964	0.14	0.13	0.01	296

Notes: Number of Observations is the number of newspaper-years used in calculating the RCS for either Democratic or Republican newspapers.

Sources: Newspapers.com, ICPSR 30261, and *N.W. Ayer & Son's American Newspaper Annual* (various years).

were especially vocal in their criticism. We use the following search strings for the critics of the administration: [bay of pigs fiasco OR bay of pigs debacle OR bay of pigs disaster]. The search strings more favorable toward the Democratic administration are: [bay of pigs operation OR bay of pigs invasion]. We search for these strings during the years 1962–1964.

The results in Table 4 show that the partisan gap for the Election Bill was similar in magnitude to the gap of the *Combined Index* reported in Table 1 and the gap for the tariff issue for the period 1880–1900. The gap for the Court Reform Plan is lower but still fairly large, and in fact somewhat larger than the gap of the *Combined Index* in the 1930s, as shown in Figure 1. The gaps for the Health Insurance and Bay of Pigs items are both tiny.<sup>42</sup>

Taken together, the patterns documented in this section, together with the Online Appendix for *Boss/Machine*, suggest that stark partisan differences in tone fell out of usage even earlier than partisan differences in topic intensity. For each of the measures involving tone—*Corruption/Ring/Scandal/Waste*, the *Tariff*, the four specific issues, and *Boss/Machine*—the differences between Democratic and Republican newspapers were all small by 1950 or earlier. By contrast, recall that partisan differences in the *Combined Index*, which is dominated by measures that capture topic intensity, only became small and stable by about 1980.

#### POSSIBLE EXPLANATIONS

Why did newspaper partisan behavior decline during the twentieth century? While answering this question is beyond the scope of this paper, in this section we present some empirical findings that shed light on a few

<sup>42</sup> Online Appendix Table F4 shows that the results are similar if we restrict attention to the multi-decade sample.

of the common explanations in the literature. While not conclusive, they provide some guidance for future research in this area. All analyses in this section focus on *RCS* of the *Combined Index*.

One argument is that as advertising markets became more lucrative, newspapers had an incentive to reduce their partisan slant to appeal to a broader cross-section of readers. It appears impossible to construct a comprehensive panel of information on newspaper advertising—including rates, line inches, and revenues—for the 100-year period we are studying. However, two of the main determinants of advertising market size are population and income. The number of consumers in a given market area is highly correlated with the population of that area, and advertising prices appear to be related to population as well—for example, Hamilton (2004) finds that in 1880, city population was positively correlated with advertising rates. Households with higher incomes can afford to buy more consumer goods. Since there was no consistently and regularly calculated income measure at the county level before 1950, we use the population in the county where a newspaper circulates as a rough proxy for the size of the paper's potential advertising market.

In our multi-decade sample, there are modest but statistically significant correlations between newspaper *RCS* and the population of the counties where newspapers are based. Measuring population in logs, for Republican newspapers, the correlation is  $-0.30$ , and for Democratic papers, the correlation is  $0.35$ .<sup>43</sup> Thus, in both cases, the correlations indicate that newspapers based in more populous counties are less partisan.

However, accounting for county population does not significantly affect the overall pattern of convergence in *RCS* of Democratic and Republican newspapers. To see this, consider the following analysis. We run two regressions of *RCS* on year-trends and newspaper fixed-effects, one that controls for the log of county population and one that does not. In the regressions, we use third-order polynomials for both the log of population and year-trend variables.<sup>44</sup> We then calculate the expected values of *RCS*, as predicted by the year-trend variables alone, for each of the two regressions. We do this separately for Democratic and Republican newspapers (as mentioned earlier, partisanship is defined using *PID*). The top left panel in Figure 6 shows the predicted point estimates. The two curves toward the top are for Republican newspapers, and the two lower curves are for Democratic newspapers. In both cases, the dashed curves are for the regressions with controls, and the solid curves are for those without

<sup>43</sup> Population data are from the U.S. Census of Population (various years), with population imputed linearly between census years.

<sup>44</sup> Online Appendix Figure G15 shows the analogous figures using fifth-order polynomials.

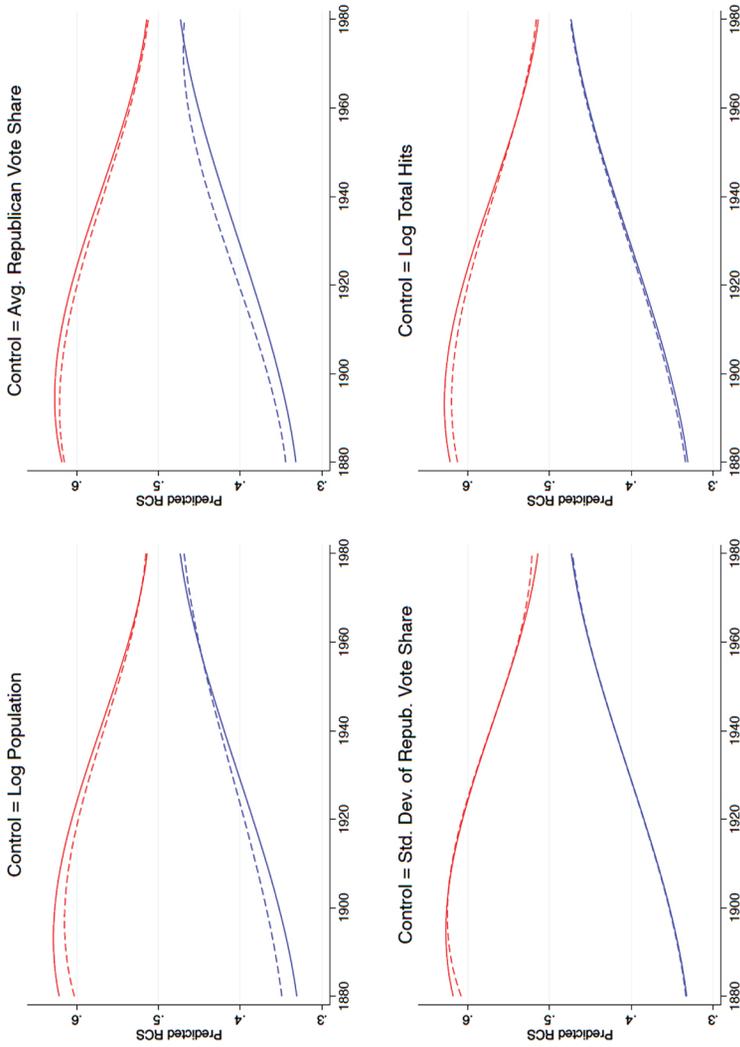


FIGURE 6  
PREDICTED RCS OF COMBINED INDEX, WITH AND WITHOUT CONTROLS FOR LOG OF POPULATION, REPUBLICAN VOTE SHARE,  
STANDARD DEVIATION OF REPUBLICAN VOTE SHARE, OR LOG OF TOTAL HITS

Sources: Newspapers.com, ICPSR 30261, *N.W. Ayer & Son's American Newspaper Annual* (various years), U.S. Census of Population (various years), ICPSR 1, ICPSR 13, and Hirano and Snyder (2019).

controls. If changes in population accounted for a large amount of the changes in *RCS*, then there would be little variation left for the year-trend variables to capture, and the dashed curves in the figures would be flat lines near 0.5. As the top left panel of Figure 6 shows, however, the two curves for Republican newspapers are quite similar to one another, as are the curves for Democratic newspapers.

Measures of wealth at the county level exist for the period 1880 to 1912—the period of high partisan behavior—so we can compare population and wealth as measures of advertising market potential for this period. As shown in Online Appendix Figure G16, using wealth rather than population does not significantly affect the key estimates.

Another potential explanation is that newspapers exhibited less partisan behavior over time in response to the changing political preferences of their readers. Two of the most important characteristics of readers are the distribution and intensity of partisan attachments. In an area where a large fraction of the electorate favors one party, a newspaper has incentives to cater to the tastes of the advantaged party's voters. By contrast, in an area where the electorate is divided evenly between the parties, a newspaper risks losing a large segment of its potential audience if it favors one party in its coverage. Similarly, in areas where voters do not have strong partisan attachments, a newspaper has less incentive to be highly partisan since readers may be interested in the coverage of both parties.

We begin with the distribution of partisan attachments. Let  $RVS_{it}$  be the average Republican party vote share in county  $i$  in year  $t$ .<sup>45</sup> Throughout the period of study, but especially in the early decades, there is a large and positive correlation between both *PID* and the newspaper *RCS*, and the partisanship of the county where the newspaper circulates. For example, focusing on the period 1880 and 1910, the correlation between *RCS* and *RVS* is 0.53, and the correlation between *PID* and *RVS* is 0.51. These correlations are consistent with the hypothesis that newspaper partisan behavior responds to reader demand, which previous researchers have also found (Gentzkow and Shapiro 2010).<sup>46</sup>

<sup>45</sup> For each county  $i$ , we compute  $RVS_{it}$  by taking the average of the Republican vote share in all elections for president, U.S. Senate, U.S. House, and governor held in years  $t - 7$  to  $t$ . We drop the presidential vote in 1872, 1896, and 1912 because of the high vote shares for fusion and third-party candidates. We keep cases where there were Democratic and Republican candidates on the ballot and no third-party candidates received more than 15 percent of the vote. The county level data is from *ICPSR 1, United States Historical Election Returns, 1824–1968*, and *ICPSR 13, General Election Data for the United States, 1950–1990*; we have made some corrections and additions (Hirano and Snyder 2019).

<sup>46</sup> Bergan et al. (2021) also find a significant association between partisan newspaper circulation and party vote shares at the county level for the period 1900–1928.

However, systematic changes in Republican vote share do not account for a large amount of the convergence in *RCS*. We conduct an analysis analogous to that in the previous discussion, but with *RVS* in place of population. The upper right-hand panel of Figure 6 shows the resulting predicted values. The panel shows that the curves with and without the *RVS* control variables are similar.

This is perhaps not surprising, given the patterns we observe in *RVS* over time. In particular, the counties where Republican and Democratic newspapers circulated did not become steadily more similar in their partisan orientations. Consider the difference between the average *RVS* of counties where Republican newspapers circulated and the average *RVS* of counties where Democratic papers circulated. For the newspapers in our multi-decade sample, this difference did not decline monotonically over time. Instead, the difference in *RVS* increases from the 1880s to the 1910s, is flat from the 1910s to the 1950s, and falls from the 1950s through the 1970s.

We now turn to the intensity of partisan attachments. Measuring intensity is difficult, but one type of variable used in the literature is variability in the two-party vote share either across offices and/or over time.<sup>47</sup> Let  $SDVS_{ct}$  be the standard deviation of the Republican Party vote share in county  $c$  and year  $t$ .<sup>48</sup> Similar to the patterns for *RVS*, systematic changes in *SDVS* do not account for a large amount of the convergence in *RCS*. We conduct a regression analysis analogous to the previous two analyses and show the resulting predicted values in the lower left-hand panel of Figure 6. The panel shows that the curves with and without the *SDVS* control variables are almost identical to one another for both Republican and Democratic newspapers.

Overall, these findings suggest that the decline in newspaper partisan coverage was not driven exclusively by the broader changes in partisanship and voting that occurred during the period of our study. For local inter-party competition, this is not too surprising because this variable does not exhibit the same nationwide downward trend that we document for newspaper partisan coverage. Instead, when averaging across counties, this variable oscillates with no clear trend between 1900 and 1950 and only exhibits a steady downward trend from 1950 to 1980 (Hirano and Snyder 2019).<sup>49</sup>

<sup>47</sup> Some studies use this variation as a proxy for split-ticket voting. See, for example, Rusk (1970), Burnham (1971), Harvey and Mukherjee (2006), and Hirano and Snyder (2019).

<sup>48</sup> For each county  $c$ , we compute  $SDVS_{ct}$  by taking the standard deviation of the Republican vote share for president, U.S. Senate, U.S. House, and governor for elections in years  $t - 7$  to  $t$ .

<sup>49</sup> At the elite level, scholars find that polarization in congressional roll-call voting declined between 1900 and 1976 (Poole and Rosenthal 1997), and polarization is correlated with average party loyalty scores in Congress. However, Gentzkow, Shapiro, and Taddy (2019) find that partisanship in congressional speech exhibits a different pattern.

Between 1880 and 1980, the amount of coverage of the items in our *Combined Index* generally increased (see Online Appendix Figure A1). There are several reasons why higher levels of coverage on an issue might be associated with a less partisan slant in the coverage. Some events are so important that all news outlets should consider them newsworthy. Examples might include the parties' national conventions and, within a state, the parties' state conventions, as well as contested primaries for U.S. president, U.S. senator, or governor. To the degree that these events occur equally often for both parties, higher coverage will be correlated with values of *RCS* closer to 0.5. Journalistic norms might also have changed over time, leading newspapers to cover both parties more equally. If papers do this mainly by expanding coverage of "the other side" to avoid reducing coverage of the party they support, then higher amounts of coverage will again be correlated with values of *RCS* closer to 0.5.

To measure the total amount of space newspapers devote to each item, we find the number of pages with at least one Democratic hit and the number of pages with at least one Republican hit for that item, and sum them:  $T_{ijt} = R_{ijt} + D_{ijt}$ . We then calculate  $\bar{T}_{ijt}$  by averaging  $T_{ijt}$  across all six items in the *Combined Index*. Because  $\bar{T}$  is right-skewed, we use  $\log(\bar{T})$  in our analyses. The correlations between  $\log(\bar{T})$  and *RCS* indicate that newspaper-years with higher  $\bar{T}$  are a bit less partisan. For Republican newspapers, the correlation is  $-0.37$ , and for Democratic papers, the correlation is  $0.34$ .

Accounting for this factor does not significantly affect the overall pattern of convergence in *RCS* of Democratic and Republican newspapers. The bottom left-hand panel of Figure 6 shows that the curves with and without  $\log(\bar{T})$  as control variables are similar to one another, both for Republican and Democratic newspapers.

Figure 7 shows the predicted values from regressions that include all four variables together. Collectively, they appear to account for a non-trivial amount of the convergence between Republican and Democratic newspapers. Most of the change, however, remains unexplained.

Finally, we conducted two analyses to assess the potential effects of the introduction and growth of new competing media, one for radio and one for television. Models such as Besley and Prat (2006) suggest that the introduction of less partisan alternative sources of information could reduce the incentives for partisan behavior by newspapers. Song (2020) finds evidence suggesting that television had this effect.<sup>50</sup> Using data on

<sup>50</sup> Early studies of the effect of radio and television on various aspects of the newspaper industry found mixed results (Lazarsfeld 1940; Bogart 1975; Lacy 1987). Gentzkow (2006) argues that the growth of television negatively impacted newspaper consumption.

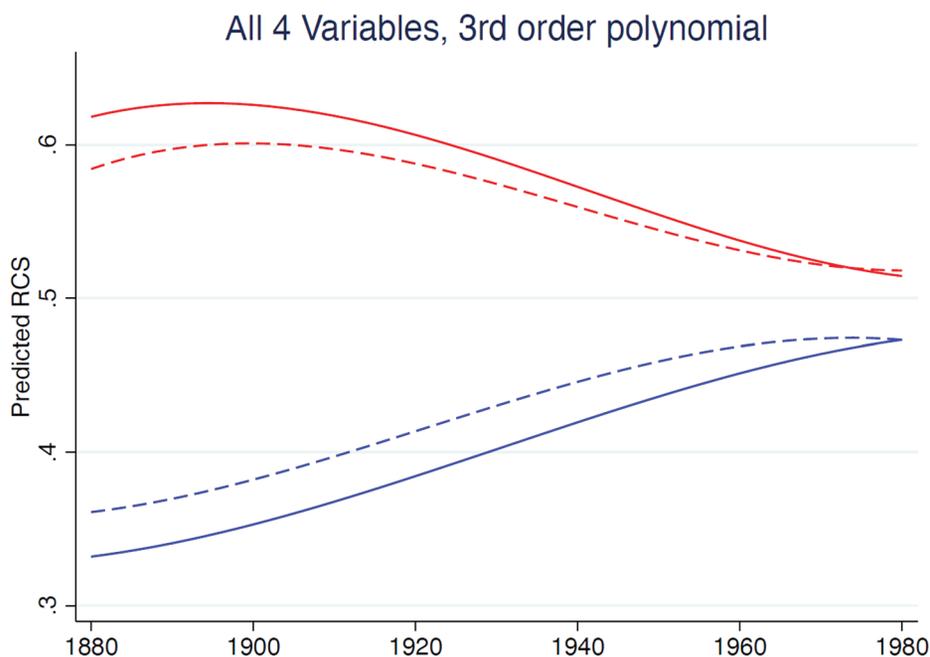


FIGURE 7  
 PREDICTED RCS OF COMBINED INDEX, WITH AND WITHOUT CONTROLS FOR  
 LOG OF POPULATION, REPUBLICAN VOTE SHARE, STANDARD DEVIATION OF  
 REPUBLICAN VOTE SHARE, AND LOG OF TOTAL HITS

Sources: Newspapers.com, ICPSR 30261, *N.W. Ayer & Son's American Newspaper Annual* (various years), U.S. Census of Population (various years), ICPSR 1, ICPSR 13, and Hirano and Snyder (2019).

radio ownership for 1930 and 1940, we calculate the growth in the fraction of households with radios in each county. The median grew sharply from 0.25 to 0.75. There is no significant relationship, however, between changes in radio ownership rates by county and the *RCS* of the Republican newspapers that circulate in the county. The same holds for Democratic newspapers. Similarly, using television ownership for 1950 and 1960, we calculate the growth in the fraction of households with televisions in each county—in this case, the median grew from 0.01 to 0.82. Again, we find no significant relationships between changes in television ownership rates by county and *RCS* of the newspapers that circulate in the county. See Online Appendix Table G5 for information about the data and the estimates.

Summarizing, even after controlling for the variables we have explored, a substantial amount of the decline in newspaper partisan behavior remains unexplained. This does not imply that the theoretical arguments underpinning these variables are invalid. First, some of the variables capture a non-trivial amount of the cross-sectional variation.

Second, the variables we use are rough proxies for the underlying theoretical concepts, and therefore the estimates may understate the actual relationships due to measurement error. Better measures might account for a larger share of the variation over time.

### *Other Potential Explanations*

Of course, we have not examined all of the factors that might be driving changes in newspaper partisanship. One class of explanation is market structure and competition. At least two factors increased the incentives for newspapers to expand in size and for newspaper markets to become more concentrated. One is technological change that increased the minimum efficient scale of newspapers. Another is declining transportation costs, which allowed newspapers to expand their geographic coverage more easily.

Another potentially important factor is the growth of newspaper chains. We considered the 11 largest and most well-known chains, as cataloged by the University of Illinois History, Philosophy, and Newspaper Library.<sup>51</sup> Only a few newspapers in our sample belonged to a chain in some years but not in others, so the growth of chains cannot account for much of the observed change. Moreover, in a regression analysis including newspaper and year fixed effects, the point estimates on a chain membership indicator variable are small and not statistically significant.

Political factors, in addition to those studied earlier, might also have played a role. Two possibilities are intra-party divisions and institutional reforms. Important political movements, including populism, progressivism, and the New Deal, led to open intra-party conflicts. Newspapers might have responded by becoming less partisan to avoid alienating potential readers. Institutional reforms include changes in electoral laws such as direct primary and non-partisan elections, as well as other reforms that affected traditional party organizations, such as the adoption of civil service laws. Weaker party organizations had fewer resources and less ability to subsidize newspapers.

Another potential factor is a change in what constitutes newsworthy events. One example is the increasing role of the national government over the course of the twentieth century—newspapers covering many of the same national events might exhibit smaller partisan differences in their coverage. A related factor is the reliance on wire service content. If newspapers printed an increasing number of stories using content from

<sup>51</sup> [www.library.illinois.edu/hpnl/guides/chains/](http://www.library.illinois.edu/hpnl/guides/chains/)

wire services, they might have become more similar to one another. The amount of wire service content and whether to employ it in a partisan manner were still at the discretion of newspaper editors (see, e.g., Shaw 1967).<sup>52</sup>

Finally, the norms of journalistic professionalism also changed over time, and “objectivity” became increasingly valued (Schudson 1978; Mindich 1998). One way for a newspaper to assert its objectivity is to be less partisan in its coverage. As noted previously, we find some evidence that tone-based partisan differences declined earlier than differences based on topic intensity. One possible explanation is that the development of journalistic professionalism may have discouraged obviously disparaging language.

### CONCLUSION

In this paper, we develop a new measure of newspaper partisan behavior. We document: (1) a high degree of partisanship in the U.S. press between 1880 and 1900, consistent with conventional wisdom; and (2) a long, steady decline in partisan behavior in terms of both topic intensity and tone, beginning in 1900 or perhaps earlier and continuing all the way until 1980. We find no evidence of an increase in partisan polarization in coverage after 1980. There is some evidence that the partisan differences for the tone-based measures may have declined earlier than the topic intensity measures. We also provide some preliminary analyses of potential explanatory variables to account for socio-economic changes, partisan changes, and the introduction of radio and television, but we find that none of these variables individually accounts for a large fraction of the total change.

Clearly, there are many directions for future work. First, we would like to further investigate possible differences between the tone-based and topic intensity measures. In particular, we would like to include additional terms that capture tone over long periods of time, similar to the *Boss/Machine* and *Forecasts/Wrap-ups* items, or terms that capture tone for issues specific to particular years. This would increase our confidence that the patterns we identified earlier hold more generally.

Second, we have mostly focused on long-term trends rather than cross-sectional variation. However, there is a large amount of variation

<sup>52</sup> Accurately measuring the use of wire service content by automated searches is challenging. One difficulty is that the wire service articles are not readily identifiable using the *Newspapers.com* search engine. Another obstacle is that some newspapers print wire-service stories without attribution (Epstein 1992).

in *RCS*, even among papers with a Republican *PID* and among those that are Democratic. For example, during the period 1880–1900, non-daily newspapers were more partisan than dailies in their behavior. This is true even after controlling for population in the county where each newspaper circulates, as well as total coverage.<sup>53</sup> The *RCS* of Republican non-dailies is 0.031 higher than that of Republican dailies, while the *RCS* of Democratic non-dailies is 0.021 lower than that of Democratic dailies. These differences are potentially important because during this period there were many more non-dailies than dailies, and non-dailies accounted for more than 60 percent of total U.S. newspaper circulation.

Third, we have focused on newspapers with Democratic or Republican *PIDs*. Although less common around the turn of the twentieth century, there were also independent, non-partisan, and third-party newspapers. Interestingly, during the period 1880–1900, the average *Combined Index RCS* for these other types of papers is 0.54, which is close to the midpoint between the *RCS* for Democratic and Republican papers. The interquartile range is 0.47 to 0.60, which lies between the average *RCS* for Democratic and Republican newspapers of 0.35 and 0.66, respectively. Competition from these papers may have induced Democratic and Republican papers to moderate their behavior. This clearly deserves further investigation.

Fourth, one potential driver of a newspaper's partisan behavior is the advertising potential of the newspaper's market area. Following Hamilton (2004), we used county population as a rough proxy of the size of each newspaper's advertising market. For a shorter time period, we also incorporated wealth. However, more must be done on this—for example, using income and other variables associated with consumer demand and measuring more accurately the geography of each paper's (potential) market area. Since population and income tend to be trending variables, it is possible that advertising potential could account for a significant portion of the trending in our measures.

Finally, although the measures here appear to capture meaningful variation across newspapers and over time, they are limited. Online newspaper archives continue to grow, and natural language processing continues to improve. These advances should allow researchers to develop even more refined measures of partisan behavior, as well as other types of behavior, in the coming years.

<sup>53</sup> As in the sixth section, we include county population and  $\bar{T}$  in logs as the control variables. We also include state and year fixed effects.

## REFERENCES

- Anderson, Simon P., and John McLaren. "Media Mergers and Media Bias with Rational Consumers." *Journal of the European Economic Association* 10, no. 4 (2012): 831–59.
- Baldasty, Gerald J. *The Commercialization of News in the Nineteenth Century*. Madison: University of Wisconsin Press, 1992.
- Baum, Matthew A., and Tim Groeling. "New Media and the Polarization of American Political Discourse." *Political Communication* 25, no. 4 (2008): 345–65.
- Bensel, Richard Franklin. *The Political Economy of American Industrialization, 1877–1900*. New York: Cambridge University Press, 2000.
- Bergan, Daniel E., Stephen Lacy, Dustin Carnahan, Michael Stamm, and Daniel H. Krier. "Reinforcement in the Aggregate: Partisan Newspaper Circulation and the Presidential Vote, 1900–1928." *Journalism Studies* 22, no. 14 (2021): 1911–29.
- Bernhardt, Dan, Stefan Krassa, and Mattias Polborn. "Political Polarization and the Electoral Effects of Media Bias." *Journal of Public Economics* 92, no. 5–6 (2008): 1092–104.
- Besley, Timothy, and Andrea Prat. "Handcuffs for the Grabbing Hand? Media Capture and Government Accountability." *American Economic Review* 96, no. 3 (2006): 720–36.
- Bogart, Leo. "How the Challenge of Television News Affects the Prosperity of Daily Newspapers." *Journalism Quarterly* 52, no. 3 (1975): 403–10.
- Burnham, Walter D. "Communication." *American Political Science Review* 65, no. 4 (1971): 1149–52.
- Chan, Jimmy, and Wing Suen. "Media as Watchdogs: The Role of News Media in Electoral Competition." *European Economic Review* 53, no. 7 (2009): 799–814.
- Cohen, Bernard C. *The Press and Foreign Policy*. Princeton, NJ: Princeton University Press, 1963.
- D'Alessio, Dave, and Mike Allen. "Media Bias in Presidential Elections: A Meta-Analysis." *Journal of Communication* 50, no. 4 (2000): 133–56.
- DellaVigna, Stefano, and Matthew Gentzkow. "Persuasion: Empirical Evidence." *Annual Review of Economics* 2, no. 1 (2010): 643–69.
- Dorsett, Lyle W. *Franklin D. Roosevelt and the City Bosses*. Port Washington, NY: Kennikat Press, 1977.
- Epstein, Richard A. "International News Service v. Associated Press: Custom and Law as Sources of Property Rights in News." *Virginia Law Review* 78, no. 1 (1992): 85–128.
- Gentzkow, Matthew. "Television and Voter Turnout." *Quarterly Journal of Economics* 121, no. 3 (2006): 931–72.
- Gentzkow, Matthew, 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*, edited by Edward L. Glaeser and Claudia Goldin, 187–230. Chicago, IL: University of Chicago Press, 2006.
- Gentzkow, Matthew, and Jesse M. Shapiro. "What Drives Media Slant? Evidence From U.S. Daily Newspapers." *Econometrica* 78, no. 1 (2010): 35–71.

- Gentzkow, Matthew, Jesse M. Shapiro, and Michael Sinkinson. "The Effect of Newspaper Entry and Exit on Electoral Politics." *American Economic Review* 101, no. 7 (2011): 2980–3018.
- . "Competition and Ideological Diversity: Historical Evidence from US Newspapers." *American Economic Review* 104, no. 10 (2014): 3073–114.
- Gentzkow, Matthew, Jesse M. Shapiro, and Daniel F. Stone. "Media Bias in the Marketplace: Theory." In *Handbook of Media Economics*, volume 1, edited by Simon P. Anderson, Joel Waldfogel, and David Strömberg, 623–45. Amsterdam: Elsevier, 2015.
- Gentzkow, Matthew, Jesse M. Shapiro, and Matt Taddy. "Measuring Group Differences in High-Dimensional Choices: Method and Application to Congressional Speech." *Econometrica* 87, no. 4 (2019): 1307–40.
- Groeling, Tim. "Media Bias by the Numbers: Challenges and Opportunities in the Empirical Study of Partisan News." *Annual Review of Political Science* 16 (2013): 129–51.
- Groeling, Tim, and Matthew Baum. "Partisan News Before Fox: Newspaper Partisanship and Partisan Polarization, 1869–1992." HKS Faculty Research Working Paper Series RWP13-035, Cambridge, MA, September 2013.
- Groseclose, Tim, and Jeffrey Milyo. "A Measure of Media Bias." *Quarterly Journal of Economics* 120, no. 4 (2005): 1191–237.
- Hamborg, Felix, Karsten Donnay, and Bela Gipp. "Automated Identification of Media Bias in News Articles: An Interdisciplinary Literature Review." *International Journal on Digital Libraries* 20 (2019): 391–415.
- Hamilton, James T. *All the News That's Fit to Sell: How the Market Transforms Information Into News*. Princeton, NJ: Princeton University Press, 2004.
- Harvey, Anna, and Bumba Mukherjee. "The Evolution of Partisan Conventions, 1880–1940." *American Politics Research* 34, no. 3 (2006): 368–98.
- Hirano, Shigeo, and James M. Snyder, Jr. *Primary Elections in the United States*. New York: Cambridge University Press, 2019.
- . "Measuring the Partisan Behavior of U.S. Newspapers, 1880 to 1980." Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2024-03-18. <https://doi.org/10.3886/E198425V1>
- Hiscox, Michael J. "The Magic Bullet? The RTAA, Institutional Reform, and Trade Liberalization." *International Organization* 53, no. 4 (1999): 669–98.
- Jensen, Jacob, Suresh Naidu, Ethan Kaplan, and Laurence Wilse-Samson. "Political Polarization and Dynamics of Political Language: Evidence from 130 Years of Partisan Speech." *Brookings Papers on Economic Activity* (2012): 1–81.
- Kaplan, Richard L. *Politics and the American Press: The Rise of Objectivity, 1865–1920*. New York: Cambridge University Press, 2002.
- Kleppner, Paul. *Continuity and Change in Electoral Politics, 1893–1928*. New York: Greenwood Press, 1987.
- Lacy, Stephen. "The Effect of Growth of Radio on Newspaper Competition, 1929–1948." *Journalism Quarterly* 64, no. 4 (1987): 775–81.
- Larcinese, Valentino, Riccardo Puglisi, and James M. Snyder, Jr. "Partisan Bias in Economic News: Evidence on the Agenda-Setting Behavior of US Newspapers." *Journal of Public Economics* 95, no. 9–10 (2011): 1178–89.
- Lawrence, David. "Reporting the Political News at Washington." *American Political Science Review* 22, no. 4 (1928): 893–902.

- Lazarsfeld, Paul Felix. *Radio and the Printed Page; An Introduction to the Study of Radio and Its Role in the Communication of Ideas*. New York: Duell, Sloan and Pearce, 1940.
- Lee, Alfred M. *The Daily Newspaper in America: The Evolution of a Social Instrument*. New York: Macmillan Co, 1937.
- McCarty, Nolan M., Keith T. Poole, and Howard Rosenthal. *Polarized America: The Dance of Ideology and Unequal Riches, Second Edition*. Cambridge, MA: MIT Press, 2016.
- McGerr, Michael E. *The Decline of Popular Politics*. New York: Oxford University Press, 1986.
- Mindich, David T. Z. *Just the Facts: How "Objectivity" Came to Define American Journalism*. New York: New York University Press, 1998.
- O'Halloran, Sharyn. *Politics, Process and American Trade Policy*. Ann Arbor, MI: University of Michigan Press, 1994.
- Petrova, Maria. "Newspapers and Parties: How Advertising Revenues Created an Independent Press." *American Political Science Review* 105, no. 4 (2011): 790–808.
- Poole, Keith T., and Howard Rosenthal. *Congress: A Political-Economic History of Roll Call Voting*. New York: Oxford University Press, 1997.
- Puglisi, Riccardo, and James M. Snyder, Jr. "Newspaper Coverage of Political Scandals." *Journal of Politics* 73, no. 3 (2011): 931–50.
- . "Empirical Studies of Media." In *Handbook of Media Economics*, volume 1, edited by Simon P. Anderson, Joel Waldfogel, and David Strömberg, 647–67. Amsterdam: Elsevier, 2015.
- Ridout, Travis N. "Introduction." In *New Directions in Media and Politics*, edited by Travis N. Ridout, 1–5. New York: Routledge Press, 2013.
- Rusk, Jerrold G. "The Effect of the Australian Ballot on Split Ticket Voting: 1876–1908." *American Political Science Review* 64 (1970): 1220–38.
- Rutenbeck, Jeffrey B. "Newspaper Trends in the 1870s: Proliferation, Popularization, and Political Independence." *Journalism & Mass Communication Quarterly* 72, no. 2 (1995): 361–75.
- Schudson, Michael. *Discovering the News: A Social History of American Newspapers*. New York: Basic Books, 1978.
- . "The Objectivity Norm in American Journalism." *Journalism* 2, no. 2 (2001): 149–70.
- Shaw, Donald L. "News Bias and the Telegraph: A Study of Historical Change." *Journalism Quarterly* 44, no. 1 (1967): 3–31.
- Shor, Boris, and Nolan McCarty. "The Ideological Mapping of American Legislatures." *American Political Science Review* 105, no. 3 (2011): 530–51.
- Song, B. K. "Did Television Reduce the Effect of Partisan Press on Electoral Politics?" *American Politics Research* 48, no. 1 (2020): 78–98.
- Stave, Bruce M. *The New Deal and the Last Hurrah: Pittsburgh Machine Politics*. Pittsburgh, PA: University of Pittsburgh Press, 1970.
- Strömberg, David. "Mass Media Competition, Political Competition, and Public Policy." *Review of Economic Studies* 71, no. 1 (2004): 265–84.
- Trounstein, Jessica. *Political Monopolies in American Cities: The Rise and Fall of Bosses and Reformers*. Chicago: University of Chicago Press, 2008.
- Wolfinger, Raymond E. "Why Political Machines Have Not Withered Away and Other Revisionist Thoughts." *Journal of Politics* 34, no. 2 (1972): 365–98.