News Bias and the Telegraph: a Study of Historical Change

Increased reliance upon news by telegraph brought a sharp decline in biased stories about presidential campaigns in the 1880s, this study of Wisconsin dailies from 1852-1916 indicates.

The years between the end of the Civil War and beginning of the first World War are particularly important to an understanding of the modern press. During these years America underwent an urban and technological revolution. By the 1880s and 1890s as one historian has put it, the nation was trembling between two worlds, one rural and agricultural, the other urban and industrial. By the end of these years America had changed to a new industrial way, one more akin to Western Europe than to its own former agricultural self.¹

The technological changes evident in the nation also had an impact upon American journalism. In many ways developments of the period shaped the modern American daily newspaper. Inventors produced machines which, it seemed, were able to do everything which had previously been done by hand.²

From inventive minds came ideas which resulted in huge perfecting presses, the linotype, the autotype, color printing, and the half-tone and rotogravure processes. Also of great value to the modern daily were such technological developments as the telephone, typewriter, automobile, and the continued improvement of telegraph pro-


cures. Technology developments also sent the price of newsprint down during the period. More than ever before the newspaper became a machine-made product.

Likewise there were changes in the content of the press, and among the American press trends which historians have noted for the years between the Civil War and the first World War were an increasing emphasis upon impartial gathering and reporting of news and a growing independence from party control. At the same time, historians have pointed out that newspapers during this period used increasing amounts of wire news—news which presumably was relatively unbiased politically because it was sold to newspapers of different political faiths. This study attempted a quantitative examination of these developments for Wisconsin.

Specifically, the study asked: 1) As evidenced by political news coverage of presidential campaigns, did Wisconsin English-language dailies become less biased during the national election years from 1852 through 1916? 2) If bias declined, when did it do so? 3) If bias declined, what relationship did declining bias appear to have with newspaper use of telegraph news?

Method

The study developed an operational definition of news bias and employed content analysis. The study examined a random sample of 147 Wisconsin English-language daily papers for Octobers of 1852-1916 national election years, using a modified “constructed week” type of sampling technique. A total of 441 newspaper issues were read, and 1,097 presidential campaign stories—those stories with a presidential or vice-presidential candidate as a referent—were coded as “biased” or “unbiased.” Stories were limited to those which reported a campaign “event” occurring within a week of the date of publication of the sampled issue. On judgment of bias, coding reliability of the author with two check coders was .96 (Spearman’s rho). The coder, of course, also recorded whether a story came to the paper from a wire or nonwire source.

Because this study set out to examine a large body of material over a long time span, coding the entire news story, or “item,” seemed the best method to follow. In a study which compared four ways of recording bias in editorial material, Grey, Kaplan and Lasswell found that coding the paragraph or the whole article was superior to coding each sentence or unit of three sentences. Coding the whole article proved the fastest method; coding units of three sentences proved slowest. Berelson has made a similar observation.

12 The study found that a sample of only three days a month produced results which were not significantly different from results of a sample of six days each month. Hence, sample issues for three days were read. For information on the “constructed week” sampling technique see Robert I. Jones and Roy E. Carter Jr., “Some Procedures for Estimating ‘News Hole’ in Content Analysis,” Public Opinion Quarterly, 23:399-403 (Fall 1959). Newspapers were sampled from those preserved by the State Historical Society of Wisconsin. For election years 1852-1876, all preserved English-language papers were examined. After that, because of the greater number of these papers preserved for each election year, the study employed random sampling. Even though a single daily might appear in the sample in more than a single election year, it is treated as a separate “election year” newspaper each time because the economic, political and historical factors which the study examines would presumably operate differently upon the same newspaper at different points in time. By titles, a total of 52 different newspapers were examined one or more times during the 1852-1916 period covered by this study.
News Bias and the Telegraph

FIGURE 1
Bias Means for All Sample Papers by Election Years 1852-1916

The study based its operational definition of bias upon value statements inserted into a news story. A biased news story was any which had as a referent a presidential or vice-presidential candidate and which contained value statements in such a way that the over-all impression created upon today's reader was a positive or negative feeling toward that referent. An unbiased news story did not create this positive or negative feeling, regardless of whether or not such value statements including adjectives, adverbs, nouns, verbs, phrases or statements were used.

After coding was completed, the author assigned a bias score to each newspaper. This was done in the following way. If a newspaper issue carried more biased than unbiased stories, it was assigned a score of 3, representing "high bias." If a newspaper issue contained an equal number of biased and unbiased stories, it was assigned a score of 2, "balanced on bias." If a newspaper carried more unbiased than biased presidential campaign news stories, it was assigned a score of 1, "low bias." Scores were averaged for the three sampled issues of each newspaper for any given election year.

Results

The amount of bias in the presidential campaign coverage in the Wisconsin English-language daily press clearly declined during the 1852-1916 period studied. Figure 1, based on the average bias scores of all sampled papers for each election year, shows this drop.

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9 Bernard Berelson, Content Analysis in Communication Research (Glencoe, Ill.: The Free Press, 1952), p. 146.
10 For a more detailed discussion of how bias was operationalized in this study, see Donald L. Shaw, "Bias in the News: A Study of National Presidential Campaign Coverage in the Wisconsin English Daily Press 1852-1916," unpublished Ph.D. dissertation, University of Wisconsin, 1966, pp. 57-60. Also see Bruce Westley and Malcolm MacLean, "Obform Coding Instructions," School of Journalism, University of Wisconsin (undated mimeo).
11 For a detailed discussion of problems related to sampling, attribution of opinion statements, and validity, see Shaw, op. cit., pp. 46-77.
But, as Figure 1 shows, this decline in bias was not an even, steady drop. Instead it dropped by fits and spurts, the largest drop being between 1880 and 1884. Of course because bias was measured only for Octobers during national election years, one should not interpret the trend line of the figure as anything more than an estimate of political news bias during the off-election years. How can one account for the sudden drop in news bias (as we have operationalized it) between 1880 and 1884?

Increase in the Use of Wire News. At the same time that bias was declining, there was in Wisconsin an increasing emphasis put on impartial gathering of the news, at least as far as use of telegraph news is an indication of this development. This was also true for the nation as a whole.12 By the late 1860s, business and commerce—as well as newspapers—were increasingly dependent on the fast message transmission of the telegraph. One Congressional report of the period concluded that “The business of the country is dependent on the use of the telegraph, and its suspension for a single day would bring loss and disaster greater than the entire value of the telegraph lines.”13

Certainly the Wisconsin English-language daily press greatly increased its use of wire news copy during the period studied. In the issues sampled, there were no campaign wire stories in 1852 and 1856. By 1880, 47.4% of the presidential campaign stories coded came from this source.

After 1880, the Wisconsin English-language daily press made much greater use of wire copy. During the 1884-1916 years, the percentage of wire campaign stories used varied from a low of 65.5% of the total number of stories coded in 1892 to 93.5% in 1904. In addition, the great jump in use of wire material between 1880 (47.4%) and 1884 (88.5%) occurred at the same time that the number of stories judged biased of the total number of all campaign stories dropped from 42.1% to 3.3%, the same dramatic decline we observed in Figure 1. The data which we have been discussing are shown graphically in Figure 2; these data suggest a strong relationship between use of wire material and decline in presidential campaign news bias.

Factors Related to Wire News Increase. Because it appears obvious that the sudden increase in use of wire news was inversely related to the precipitous decline in news bias, we must turn aside a moment to see why use of wire news increased so abruptly in the early 1880s.

Although data for Wisconsin alone are skimpy, some material can be assembled to account partially for the increase in use of wire news in the 1880s by the press generally. The technological development of the telegraph, anyway, was a national rather than a state-limited phenomenon.

This increase in wire usage appears to be related to at least five factors: the expansion of telegraph facilities; the decreasing relative cost of telegraph news to newspapers; declining costs of newsprint; and expansion of press association services. Finally, if Wisconsin is any example, readers learned to demand more timely news as the years covered by this study progressed.

1) From 1868 to 1900 the miles covered by Western Union Telegraph Company poles increased from 50,183 to 192,705. The miles of wire strung over these poles increased during the same period from 97,594 to 933,153. The average toll per message in 1868 was about $1.05; in 1900, it was 31¢.14

12 Emery, op. cit., p. 317.
For press reports the average message was considered to be about 30 words.15

One Congressional committee claimed that by the late 1860s Western Union transmitted 90% of all telegrams and controlled 93% of the total number of miles of telegraph wire.16 Furthermore, Western Union, through agreements with press associations (particularly the New York Associated Press), transmitted nearly all the nation's news.17 Western Union had working agreements with many other telegraph companies, including Northwestern, whose lines extended into Wisconsin and Minnesota.18

News was distributed to newspapers in three main ways. First, news might be sent by a press service over a regular telegraph wire. Second, a press service might use leased telegraph lines. Finally, some newspapers could afford to have correspondents send to them alone press messages—"specials"—over regular telegraph lines.

Because press associations had exclusive control over the amount of news sent over leased lines, Western Union records do not give any estimate of the amount of news sent in this way. However, sketchy estimates of the amount of press association news and "specials" sent to newspapers over regular nonleased telegraph lines do exist for several years. In 1869 these
two types of news amounted to a total of approximately 2,267,000 messages. By 1887, however, the total number of press messages of these two types had jumped to 24,667,000!

There appear to be at least two reasons to account for the increase in the number of press messages carried by Western Union in the 1880s. First, the increase in miles of wire from 1880 (233,534) to 1884 (430,571) was relatively larger than any other increase during a four-year interval from 1868 through 1900. For Western Union, this represented not only an increase in newly-constructed facilities, but the purchase in 1881 of all the lines of the American Union and the Atlantic and Pacific Telegraph companies. William Orton, president of Western Union, pointed out in the 1870s that the development of the telegraph depended more upon increased facilities than upon any reduction in rates.

Second, Western Union was also able to control an important technological development of the 1870s. In 1873 Western Union put into use a device known as a Duplex which permitted two messages to be transmitted “in opposite directions upon one wire at the same time.” Soon after came the Quadruplex which allowed four messages to be sent simultaneously, two messages in each direction, upon a single wire. The effect of all these developments was to make more wire news available to newspapers about the time of the 1880s.

2) There is also some reason to believe that the relative cost of telegraph news to newspapers declined during the late 1870s and early 1880s, perhaps because increased facilities enabled Western Union to do a greater volume of business. The average tolls for all telegraph messages declined steadily from 1868 to 1900. In 1876 the average cost of a telegraphic message was about 51¢; in 1884, it was 37¢. Furthermore, these were average costs; the telegraph company could, and probably did, charge press associations and newspapers sending “specials” a lower rate.

As one example, the amount of money spent for telegraph news by the Boston Evening Transcript in 1879 ($8,300) represented slightly more than 5% of the newspaper’s total costs for that year ($163,800). Wire news claimed about the same percentage of the total costs in the following year, 1880. In 1881, however, the amount of money spent by the Transcript for wire news dropped to under 4% of total costs, and in 1883 to under 3%. This relationship then did not vary much for the Transcript throughout the remaining years of the 19th century. If, as seems likely, the price for telegraph news declined similarly for the press in general, this lower price presumably worked as an inducement for newspapers to carry more wire news.

Ibid., p. 47. Also see Postal Telegraph System; p. 15. Annual Report of the President of the Western Union Telegraph Company. . . . (New York: Russell Brothers, Printers, 1880), pp. 9-10. This estimate is based upon the fiscal year ending June 30, 1880. Apparently the only known records of Western Union’s annual reports for this year and other years cited below are located in the Corporate Records Division, Baker Library, Harvard Graduate School of Business Administration. Hereafter cited as Annual Report.

Annual Report (1887), pp. 10-11. This estimate is based upon the fiscal year ending June 30, 1887.


Peter R. Knights, "Financial History of the Boston Evening Transcript 1866-1900," unpublished study, University of Wisconsin, 1963. The author thanks Mr. Knights for making these figures available.
3) At the same time that costs for telegraphic dispatches appear to have declined, the price for newsprint also dropped. This presumably meant that money saved from lower newsprint costs could be devoted to buying greater wire news coverage.

As one example, the New York Tribune paid about 8¢ per pound for newsprint in 1860. During the Civil War, the price climbed to around 13¢ per pound; in 1875 it was 9¢; in 1885, 5¢; and in 1895, 1905 and 1915, 2¢ per pound.28 Although the Tribune, because of its large size, was probably able to negotiate a better price for newsprint than were smaller newspapers, the price of paper was generally downward. In late 1865 the average cost of newsprint for all newspapers was about 30¢ per pound, but by the decade of the 1880s the price had dropped to around 5¢ per pound and by 1900 to 2¢.29

This drop in the price of newsprint resulted primarily from development of a commercially successful method of making pulp newsprint in the 1860s. This was a much cheaper method than making newsprint from rags. By the early 1870s newspapers began to shift to the pulp newsprint and by 1882 nearly all large circulation newspapers were using it.30

Cheaper newsprint meant a tremendous savings to newspapers. In the middle 1860s large metropolitan newspapers spent an estimated 45% to 50% of their budgets for newsprint.31 However, by 1880, the new method of making newsprint had pushed the cost of newsprint down to an average of 17% of total costs, a considerable drop.32 This probably helped contribute to the great increase in wire news noticeable in the 1880s; newspapers simply could afford to pay more for wire news if they wanted it.

4) In addition to the developments already discussed, there was an expansion in the press associations during the period studied here. This likely resulted in more wire news being potentially available to newspapers.

Although the Associated Press — formed in 1848 as the New York Associated Press — dominated the field for most of the 1852-1916 years,33 it had competitors and internal difficulties. A splinter group, the Western Associated Press, was formed in 1862 and challenged the dominant New York group. Dramatic fights between the two groups in 1866 and again in 1882 resulted in the Western Associated Press winning greater rights to cover enlarged districts in the Midwest (then, of course, still largely called the “West”).34 By 1892 the westerners took control of the AP.

Another major news agency, the United Press (not related to the UP of United Press International), was started in 1882; it lasted until 1897. The Laffan News Bureau ran from the mid-nineties until 1916. The modern United Press was started in 1907 and International News Service in 1909 (now combined in United Press International).35

In 1879 Western Union leased its first wire to the Associated Press. The wire linked up New York, Philadelphia, Baltimore and Washington. The AP leased another wire in 1884. By 1885 the United Press sent some 17,500 words per day over three leased wires to 70 cities.36 The Western Union in
1888 reported that it had leased out some 12,500 miles of wire exclusively for press reports.87

By 1900, the AP had some 700 members, spent almost two million dollars annually, and sent some 50,000 words a day buzzing over thousands of miles of leased wire.88

5) Finally, there is certainly abundant evidence that readers themselves by the 1870s had begun to demand timely wire news in great variety.

In 1872 Charles Seymour, a prominent La Crosse, Wisconsin, newspaperman, said that subscribers threatened to stop their papers unless they were filled with accounts of

... earthquakes, tornadoes, conflagrations, long-tailed comets, falling meteors, explosions, shipwrecks, collisions, disasters, calamities, pestilence, murders, robberies, commotions, revolutions, wars, falling of dynasties, consolidations of empires and corporations, conflicts, strife and rivalries, discoveries and explorations, corners, panics, creeds, platforms, philosophies and conventions, funerals, elopements, weddings, and an unceasing round of exciting, thrilling and astounding events. . . .89

In the 1870s another editor observed that sensationalism in the news had become an established fact; the public demanded it.40 According to one editor in 1877 journalistic enterprise had come to mean the "acquisition of the greatest amount of information and the utmost celerity in laying it before the public."41

In the 1870s, also, Wisconsin editors noted that readers eagerly demanded telegraph news. One editor pointed out, in 1873, that telegraph dispatches must be published with little regard to their news value. People read such dispatches, continued the editor, without regard to their importance because readers associated telegraph messages with messages sent only in vital emergencies. This reader appetite "grows on what it feeds on, like novel-reading in the young, or a whisky or an opium appetite in the old."42

These trends which were visible by the 1870s — increased reader demand for news, particularly wire news, and the demand for greater variety in content — continued into the 1880s and after.43 To one Wisconsin editor, in 1885, the newspaper had become "an encyclopedia, a poem, a biography, a history, a prophecy, a directory, a timetable, a romance, a cook-book, a guide, a horoscope, an art critic, a political resume, a ground plan of the civilized world, a low-priced multum in parvo."44

These five factors generally suggest why there was a sudden increase in use of wire news by the Wisconsin English-language daily press between the 1880 and 1884 presidential elections. One should also note, perhaps, that the increased attractiveness and availability of wire copy occurred at a time when newspapers were growing in size. Such factors as decreased newsprint costs, development of the linotype and improved presses, larger audiences and more advertising support resulting from urbanization, and better distribution facilities by means of railroads resulted in more and more pages being added to newspaper issues. Hard-pressed news editors undoubtedly welcomed the steadily-incoming wire news as they tried to fill up issues which gradually increased from four to six to eight and, finally, to ten or more pages.

Wire News and Bias. By and large, wire news was much less biased than was nonwire news. Table 1 shows that 23.2% of the wire stories were judged biased in the 1852-1880 campaigns while for the same period, 53% of the nonwire stories were judged biased. For the 1884-1916 period, these figures
were, respectively, 1.4% and 34.7%.

One should point out that strictly speaking this study did not attempt to measure whether wire news per se was biased but rather whether the sample papers made this news biased by altering wire news content which came into the office. In this regard coders were instructed in the following way:

The judgment of whether or not a newspaper has altered material is normally not a hard one to make. When a newspaper does so, it usually does one of these three things: 1) Uses a different type face for its own comments; 2) Breaks into a story which is entirely within quotation marks with its own material not within quotation marks; or 3) Adds its own “pre-disposing” opening and/or closing paragraphs to a story which is otherwise apparently carried verbatim. To determine this, of course, calls for coder judgment.

Although this study did not measure whether wire copy per se was biased or not, the author observed that by and large almost all the wire stories carried verbatim by the sample papers would have themselves been judged unbiased according to the rules established by this study. What Table 1 makes clear is that newspapers were more and more content as time progressed to let the news run in unaltered form, just as it came into the office from the telegraph.

Table 2 shows the impact of wire news on declining bias in another way. Here the election year means, based upon all types of presidential campaign news stories of all sample papers, are compared with the bias mean of all sample papers for the entire 1852-1916 period. In the table, an election year was assigned to the “low” or “high” bias group depending upon whether the mean for all newspapers for an election year fell below or above the bias mean for the entire 1852-1916 period. The unweighted mean for the entire period was 1.53.45 The table shows that the average bias scores for all election years before 1884 fell above the bias average for the entire period under study. In every election year after 1880, the average bias scores for all sample papers each election year fell below the bias average for the entire 1852-1916 period. This is perfect correlation — something of a rarity — and gives further evidence that increased use of wire copy in the early 1880s was related to decreased bias.

![Image with table]

**Table 1**

<table>
<thead>
<tr>
<th>Election Years</th>
<th>Percentage Judged Biased</th>
<th>Total No. Stories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire News Stories</td>
<td>Nonwire News Stories</td>
<td>Per Cent Judged Biased of Total No. Stories</td>
</tr>
<tr>
<td>1852-1880</td>
<td>23.2</td>
<td>5.3</td>
</tr>
<tr>
<td>1884-1916</td>
<td>1.4</td>
<td>3.4</td>
</tr>
<tr>
<td>Entire Period</td>
<td>3.1</td>
<td>4.7</td>
</tr>
</tbody>
</table>

**Table 2**

<table>
<thead>
<tr>
<th>Election Year Means, Based on All Stories, Compared by Periods with the Total 1852-1916 Mean (1.53)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Election Years Which Were Low on Bias High on Bias</td>
</tr>
<tr>
<td>1852-1880</td>
</tr>
<tr>
<td>1884-1916</td>
</tr>
<tr>
<td>*Significant &lt; .005, Fisher-Yates Exact Test.</td>
</tr>
</tbody>
</table>

*The weighted mean, which takes account of the sampling of papers done in the later election years — all preserved Wisconsin English-language papers were examined during the 1852-1876 years — was 1.36. Using the weighted mean would not substantially alter the results shown in Table 2. For more about weighted vs. unweighted sample values, see Leslie Kish, “Selection of the Sample,” in Leon Festinger and Daniel Katz, eds., Research Methods in the Behavioral Sciences (New York: The Dryden Press, 1953), pp. 172-239.
The table shows that half the election years in the 1852-1880 period were below and half above the bias mean of the entire period. The averages for all election years in the 1884-1916 period, however, fell below the mean of the entire period. These differences are statistically significant, and offer some evidence that as the amount of wire news carried increased, the amount of bias in other types of news stories of the campaign decreased. These other types of news stories included those from the papers' own reporters, news clipped from other papers, and in a few cases letters to the editor from persons who had been present at some campaign event.

Figure 3 shows, election year by election year, declining bias when all stories are considered as compared with declining bias when all stories, except wire stories, are considered.

Figure 3 shows that without consideration of wire stories bias declined

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VI to the Group I categories of Figure 1. The same relation holds for an index of membership in organizations with international concerns. Furthermore, there is little reason to expect much in the way of world-affairs communications between members of different sociological groupings.28

The sum total of all these factors on the less-educated strata must surely effect and reinforce provincial sentiments about the world and its problems. While extensive analysis of international attitudes across the six groupings cannot be discussed here, it was found that while 40% of the Group VI Detroit sample gave greater weight to international rather than domestic problems facing the government, only 7% of those in Group I did.

Indeed, with the low status of public information uncovered in this paper, one can even wonder why we bother to ask attitude questions on such "esoteric" topics as admission of Red China to the UN and nuclear disarmament. Similar misinformation or non-information can be found for domestic issues and electoral candidates (most people can't name the Congressman from their district) as well. It is now the pollster's responsibility to separate out the "know-nothings" before letting us in on the results of his latest survey. It is proposed that the Table I classification scheme should give him a good start in identifying the holders of "non-attitudes."

Put in Newtonian terms:

Those who are uninformed remain uninformed unless acted upon by some (catastrophic) outside source; those already informed continue to stay in motion.

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*(Continued from page 12)*

less sharply than it did when wire stories were included in computing bias averages. There still was, however, a relatively sharp drop between 1880 and 1884, which is consistent with our earlier findings. Figure 3 suggests that nonwire news became less and less biased as more and more wire news was used. One might conjecture that reporters learned to imitate the wire's relatively unbiased **news style** as time went on, although this of course would take a separate study to explore.

**Summary**

This study finds that presidential campaign news bias — at least as defined by this study — declined in the Wisconsin English-language daily press during the 1852-1916 years. The decline was sharpest between election years 1880 and 1884.

This 1880-1884 drop in news bias appears to have been directly related to an enormous increase in politically impartial use of relatively unbiased wire news which was noticeable in the Wisconsin press beginning in the early 1880s.

This increase in use of wire news appears to have been the result of at least five factors: the expansion of telegraph facilities; the decreasing relative cost of telegraph news; declining costs of newsprint; expansion of press association services; and reader demand for timely wire news.

Finally, there is some evidence to suggest that local reporters may have learned to write more unbiased political news copy from imitating the relatively unbiased style of wire news. This, however, needs further exploration.

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