BURYING THE LEDE:

A LINGUISTIC ANALYSIS OF LEDE-WRITING STYLE OVER TIME

Adanya Lustig

ABSTRACT

The beginning of a news story is of the utmost importance: It is the first thing to catch a reader's eye, and it may be the only part of the story that is ever read (Scanlan 2003). Traditionally journalists have embraced the direct lede, which gives a summary of the pertinent details of the story in the first sentence, but other styles of ledes exist. I argue, using a linguistics framework for news analysis, that there was a change in lede-writing style over the last century. Weldon (2008) found an overall move away from direct ledes in 20 newspapers between 2001 and 2004; the current study covers a longer time frame with a more narrow focus. I analyzed 376 articles from the *New York Times* and the *Wall Street Journal* from 1927 to 2017. Recently, the *New York Times* has shifted from direct ledes towards delayed ledes, while the *Wall Street Journal* has been more changeable. The *New York Times*' changing style towards delayed ledes, which tend to be more anecdotal and humanistic, could be indicative of the huge pressure newsrooms face to keep readers engaged for longer, a cultural shift toward 'Everyman News,' in which laypersons are encouraged to identify with the characters in news stories (Weldon 2008), or something else entirely. The *New York Times*' shift from direct ledes to delayed ledes over the last century is a critical piece of the changing media landscape.

Burying the lede: A linguistic analysis of lede-writing over time
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1   Introduction

The beginning of a news story is of the utmost importance: It is the first thing to catch a reader's eye, and it may be the only part of the story that is ever read (Scanlan 2003). I argue, using a linguistics framework for news analysis, that there has been a change in lede-writing style over the last century. Traditionally journalists have embraced the direct lede, which gives a summary

of the pertinent details of the story in the first sentence, but other, less direct styles of ledes exist (Mencher 2000).

A direct lede gives the crucial parts of a story, like the who, what, when, where and why, immediately, as seen in (1), the first sentence of an article about the charges against President Trump's advisors. A delayed lede does not; it entices the reader to continue by piquing their interest, as seen in (2), the first sentence of an article about the Iraq's prime minister, Haider al-Ababi that began by describing one of the leaders of the Islamic State caliphate.

(1) "The special counsel, Robert S. Mueller III, announced charges on Monday against three advisers to President Trump's campaign and laid out the most explicit evidence to date that his campaign was eager to coordinate with the Russian government to damage his rival, Hillary Clinton" (Apuzzo et al. 2017).

(2) "Three years ago, Abu Bakr al-Baghdadi proclaimed the existence of an Islamic State caliphate and proceeded to sweep his forces through northern Iraq and toward Baghdad, threatening the viability of the fragile country" (Kesling 2017).

The second story did eventually discuss the prime minister of Iraq, but in a story with a delayed lede the writer either chooses to provide the pertinent facts of the story later or allows the story to go unsummarized.

Weldon (2008) found an overall move away from direct ledes in 20 local, regional and national newspapers between 2001 and 2004; the current study covers a longer time frame with a narrower focus on just two national newspapers. I analyzed 376 articles from the *New York Times* and the *Wall Street Journal* from 1927 to 2017. According to the present study, recently there has been a shift in how newspapers present ledes: the *New York Times* has shifted towards delayed ledes, while the *Wall Street Journal*, which favored delayed ledes through much of the 20th century, is using more direct ledes than delayed ledes in recent years.

The *New York Times*' changing style towards delayed ledes, which tend to be more anecdotal and humanistic, could be indicative of the huge pressure newsrooms face to keep readers engaged for longer in the age of internet news; a cultural shift toward 'Everyman News,' in which fewer experts are cited, and laypersons are encouraged to identify with the characters in news stories (Weldon 2008); or a trend towards narrative news that began with the first Gulf War. As the current study argues, *The New York Times*' and the *Wall Street Journal*'s changing lede style over the last century is a critical piece of the changing media landscape.

This study proceeds as follows: Section 2 presents background information on media linguistics, the state of the media, and ledes; section 3 provides an overview of the methods used to determine whether lede-writing style has changed, section 4 presents the findings, section 5 provides a discussion of the findings, and section 6 concludes the study.

2   Background and Literature Review

2.1   Changes in the news industry

Over the last 20 years, print media has undergone a revolution, in large part because of the advent of new technology, although social and political events have played a role as well. Newspaper circulation has fallen since 1980 (Barthel 2017). The first online newspaper was published in 1994, and the *New York Times* created its website in 1996 (Organization for Economic Cooperation and Development 2010). Print readership has drastically decreased in the United States: In 1964, 81 percent of Americans surveyed reported that they read a daily newspaper, but by 2008, just 30 percent said that they read a print newspaper (Organization for Economic Cooperation and Development 2010). Figure 1 shows declining newspaper circulation since 1990, and a sharp decline in circulation after 2000. Digital media has not stepped in where

print media has fallen: Overall newspaper revenue has drastically fallen since 2000 (Barthel 2017).

Newspaper circulation continues to fall
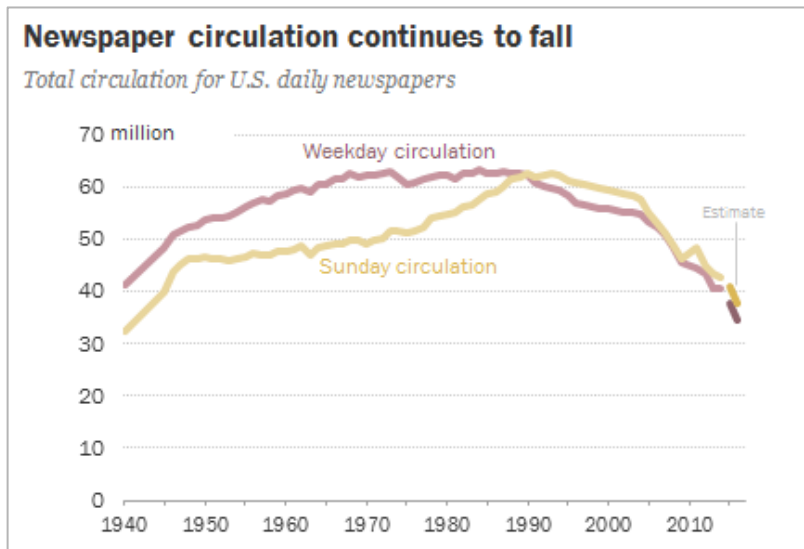
Total circulation for U.S. daily newspapers

Figure 1: Newspaper circulation (Replicated from Barthel (2017:1)).

Furthermore, media credibility is currently precarious: Public trust in the media was at an all-time low in 2016, when just 32 percent of Americans said that they had either a "great deal" or a "fair amount" of trust in the media (Swift 2016). Trust and confidence in the media was at its highest in 1972, following the Vietnam war and the Watergate scandal (Swift 2016). "As recently as the early 1970s, the news media was one of the most respected institutions in the United States. Yet by the 1990s, this trust had all but evaporated," wrote Ladd (2012:1). Trust in the media is a multifaceted issue, but there is some evidence that shows that trust in the media is engendered by the way that articles are written.

2.2   Narratives effect on reading

Lede style could contribute to the reader's evaluation of trustworthiness of an article. Newhagen and Nass (1989) showed that readers judge news stories as more credible when they include

more of a human element. If readers' perceptions of the news are affected by the style in which they're written, then it's important to know whether the style of the news has changed, and why. Kelly et al. (2003) showed that readers' evaluations of informativeness, accuracy, and believability are affected by whether an author uses a narrative structure or a straight news structure. They also found that subjects rated narrative stories as less interesting than straight news stories, regardless of the content of the story. However, the subjects found the narrative news stories more informative, accurate and believable.

2.3   Front page analysis: Everyman News

Weldon (2008) conducted an analysis similar to the present study that found an increase in the percentage of delayed ledes on the front page. She analyzed 20 newspapers between 2001 and 2004 to find a stark increase in the percentage of feature stories that make the front page, the percentage of delayed ledes as compared to direct ledes, and the percentage of stories that use unofficial sources. Weldon (2008) named the new, post 9/11 style of news "Everyman News:"

> The kind of story in abundance now is as much about our tolerance—and desire—for the nonfiltered ramblings on youtube.com, as it is the expectation that the newspaper will speak to us as friend, not as civics instructor. We want to tell the newspaper our story and tell it well. (Weldon 2008:3)

Weldon and her team coded 160 front pages in total from 20 newspapers. They coded four front pages from each paper from 2001 and four front pages from each paper from 2004. Between 2001 and 2004, the number of stories with delayed ledes had increased by 36 percent, which meant nearly half of the stories were written with direct ledes and half were written with indirect ledes (Figure 2).

All newspapers studied

Number of stories

350
300
250
200
150
100
50
0

Number of front page stories with narrative, anecdotal or humanistic leads

Number of front page stories without narrative, anecdotal or humanistic leads
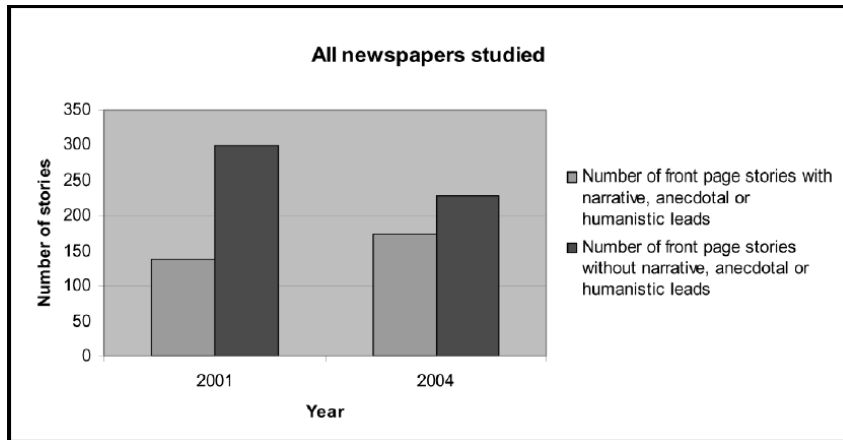
2001   2004

Year

Figure 2: Number of direct ledes as compared to delayed ledes (Replicated from Weldon (2008: 171)).

The trend towards delayed ledes was independent of the trend towards features stories. Some features stories have direct ledes, some news stories have indirect ledes, and vice versa (Weldon 2008).

Interestingly, not all the newspapers studied showed the same trends. Six of the newspapers showed a 100 percent increase in their use of feature ledes (the *Anchorage Daily News, Arizona Republic, Arkansas Democrat-Gazette, Chicago Tribune, Cincinnati Enquirer* and *San Antonio Express-News*) while five newspapers showed a decrease in the use of indirect ledes (the *Boston Globe, Los Angeles Times, New York Times, Portland Press Herald* and the *Times-Picayune*.) Those latter five newspapers did show an increase in the percentage of feature stories on the front page, which illustrates the dissociation between story type and lede type (Weldon 2008). Of the 20 papers analyzed, 16 showed a decrease in the percentage of front-page stories that used a direct lede (Weldon 2008).

Weldon's research was limited in that she and her team only examined newspapers in 2001 and 2004. Therefore, her conclusion that overall change in newspaper tone was due to the 9/11 attacks, the advent of blogging, and the overall declining circulation numbers for the nation's newspapers does not take into account shifts in style before the 21st century and general

fluctuations that could lead to epiphenomenal results. Furthermore, Weldon selected newspapers that varied greatly from national publications to hyperlocal news, which might have exhibited entirely different trends in the early 2000s. Additionally, she only analyzed eight front pages per newspaper, which is not necessarily a representative sample of the style of each paper in 2001 and 2004.

There's no research that shows systematically how ledes were written prior to 2001: during the late 1900s, narrative journalism was popularized, but it's unknown whether that narrative journalism style bled into front page news.

2.4   The Gulf War Shift

Narrative-style reporting is not new, but it was popularized in the 1960s and 1970s by famed authors like Gay Talese, Tom Wolfe, Norman Mailer, and Joan Didion in a style of writing called narrative journalism, new journalism, or creative nonfiction (Kerrane and Yagoda 1997). Narrative journalism describes events through characters; it's based in facts but takes a storytelling approach (Krieken 2017). Unlike front-page news, narrative journalism usually took the form of magazine articles or books. "Literary journalism is not mainstream journalism, espousing neither the direct language, inverted pyramid, direct quotes, and attribution of traditional hard news, nor the delayed lead, nut graph, and standard transitions between sources and information chunks found in mainstream feature stories" (Saliba and Geltner 2012:5). Narrative journalism is different from front-page news, but techniques from narrative journalism might be applied to front-page news and the popularity of a certain style might have an effect on front-page news.

The field of war reporting was traditionally marked by front-page, breaking-news kind of stories, but during the first Persian Gulf War in 1991, narrative approaches to war reporting were adopted by many reporters, including *Esquire's* John Sack, *The Guardian*'s Martin Wollacott, and the *Independen*t's Patrick Cockburn. Sack's work was typical of narrative war reporting of the time. He used a novelist's approach to many articles, using scene-by-scene construction, dialogue, metaphor and foreshadowing (Saliba and Geltner 2012). "As before, Sack writes not of grand strategy but about the grunts on the ground tasked with implementing it. There is little mention of air power or wonder weapons" (Saliba and Geltner 2012:8). Similarly, Cockburn reported on how the war affected ordinary people. He was "anxious to record the stories of those who have suffered rather than the self-justifications of those who haven't" (Wollacott 2017:63). The importance of the "grunts on the ground" mirrors Weldon's "Everyman news," but Sack's reporting on the first Persian Gulf War came out about ten years before the 9/11 attacks. Again, Sack's reporting appeared in magazine articles in *Esquire*, but the shift from the use of narrative journalism in the 1960s and 1970s to talk about broad societal trends to the war front shows that perhaps writers and editors were reconsidering the ways that breaking news, front-page news, should be told.

3   Methodology

In order to ascertain whether the nationwide change in lede-writing style occurred between 2001 and 2004, or earlier, I extended Weldon's research on ledes to the last century. By limiting my analysis to two major newspapers I broadened the longitudinal scope of the study while still analyzing the news that millions of readers see every day. The *New York Times* has won the most Pulitzer prizes of any newspaper in the world (Silver 2014), and both papers have among the

highest circulation numbers within the United States (Beaujon 2014). The papers are also ideologically distinct: The *Wall Street Journal* historically covered business interests and is currently widely read by democrats and republicans, while the *New York Times* is favored by democrats (Mitchell 2014). In order to ground the analysis of ledes in a linguistic framework, I applied a combination of Rhetorical Structure Theory and feature assignment to stories from the *New York Times* and the *Wall Street Journal*.

This research was conducted using a descriptive longitudinal approach that relied on a new analytic framework. In the following section, first the materials analyzed will be described, then the system for coding ledes as direct or delayed, and then a brief overview of the analysis will follow.

3.1   Materials

In total, 376 articles from 60 front pages of the *New York Times* and the *Wall Street Journal* from 1927 to 2017 were analyzed. For both newspapers, two front pages from each decade within 1927-2017 were selected, and four front pages from each decade within 1977-2017 were selected. Since the purpose of the study is to detect changes over decades, I follow Myhill's (1995) method of drawing samples ten years apart (Table 1). Dates were chosen biannually (January and July) from 1927 to 1967 and then quarterly (January, April, July, October) from 1977 to 2017, generally from the 2nd of the month or the next available date, if the 2nd of the month was not published. The *Wall Street Journal* did not publish on the 2nd of the month if the 2nd was a holiday or Sunday, which occurred in 1927, 1967, 1977 and 2017. More articles were analyzed between 1977 and 2017 to more thoroughly document changes before and after the advent of online news, which occurred in the late 1990s.

	1927	1937	1947	1957	1967	1977	1987	1997	2007	2017
January	√	√	√	√	√	√	√	√	√	√
April						√	√	√	√	√
July	√	√	√	√	√	√	√	√	√	√
October						√	√	√	√	√

Table 1: The years and months sampled

The front pages were accessed from the Proquest Historical Newspapers database, the Proquest digital microfilm database, and Northeastern University's microfilm collection.

3.2   Coding system

In order to make my analysis reproducible and grounded in linguistics I used a combination of feature assignment and an adaptation of Rhetorical Structure Theory (Mann 1988). This is in contrast to Weldon's (2008) analysis of ledes, which relied on journalistic assumptions about what a direct and indirect lede are. The method for classifying ledes as direct or delayed that I created is carefully scaffolded so that someone without a background in journalism would agree that a lede is direct or delayed.

Rhetorical Structure Theory, a method for analyzing the rhetorical structure of a text by marking the relationships between the elementary discourse units within the text (Mann 1988), was used to create an analytic framework that was objective and didn't rely on the intuitions of those trained in journalism. Many other researchers have used Rhetorical Structure Theory to analyze the rhetorical structure of a text, like Fries' (1992) analysis of magazine advertisements.

Rhetorical Structure Theory shows the reader's interpretation of the text: "The definitions do not rely on morphological or syntactic signals. Recognition of the relation always rests on functional and semantic judgements alone" (Mann and Thompson 1987:250). In order to make

the research reproducible, in this study the discourse unit relevant for direct and delayed ledes is defined with a feature system.

Rather than coding the entire text according to the discourse tags provided by Rhetorical Structure Theory, I chose to only query the first sentence, and see if it fulfilled the role of 'summary' for the article. A summary sentence provides a brief account of the story to come, and it must answer three of the six questions about the story as a whole (3). Sometimes a direct lede can be spread across the first two sentences, so only three of the six key questions are required to be answered in the first sentence.

(3)   a.   Who are the key players in the event/phenomenon?
       b.   What event/phenomenon occurred?
       c.   When did the event/phenomenon occur?
       d.   Where did the event/phenomenon occur?
       e.   Why did the event/phenomenon occur?
       f.   How did the event/phenomenon occur?

Initially, this study was designed to find the summary sentence within each article, and then track whether that sentence was the first, second, or third sentence. However, when I initially tested the reliability of this coding system, the results were mixed. I trained five colleagues on how to apply the coding system and presented them with a news story (replicated in (4)) with a delayed lede to see how reliably they were able to use the coding system. One coder selected the first sentence (4a) as being a summary, three selected the third sentence (4c), and one person selected the sixth sentence (4f).

(4)   Strength of Pope Continues to Wane
       a.   Calling on Pope Pius at 7 o'clock this morning, Dr. Amanti Milani learned his patient had had a few hours of broken sleep.
       b.   The Pope was able to listen as Mgr. Venini celebrated mass.
       c.   The condition of the Pontiff yesterday, the first day of the fifth week of his illness, showed a slight improvement over last week.
       d.   He was no longer so tortured by pain and could obtain the rest necessary to bolster his powers of resistance.

e. No very great hopes can be founded on this fact, however, for his strength has been waning with every day that has passed and his advanced age has robbed his body of the strength to react against the gradual decline into which he has fallen.

f. Every one at the Vatican now seems resigned to see him sink lower and lower, by almost imperceptible degrees, until in a few weeks, perhaps a month or two hence, life's last fiber will snap.

(Cortezi 1937)

In this article, the first sentence answers the question, "Who are the key players in the event/phenomenon?" but the time mentioned (Seven o'clock this morning) and the event mentioned (the pope having a few hours of broken sleep) are not actually central to the story as a whole. The story, as indicated by the headline and the rest of the text, centers around the pope's declining health and imminent demise. Sentences (4e) and (4f) better summarize the article, but neither clearly answer three of the six key questions to determine a summary sentence.

A more reliable system was to identify whether the first sentence was a summary or not. If the first sentence was a summary sentence (answers three of the six who, what, when, where, why questions) then the article has a direct lede. While a lede can be composed of more than one sentence, those kinds of direct ledes were covered by not requiring all the questions answered in the first sentence, just three.

In sentence (5), the questions who, what and when are clearly answered in the first sentence. The 'why' question is also somewhat answered, because the reason for the charges is presented: the campaign's coordination with the Russian government.

(5) "The special counsel, Robert S. Mueller III, announced **charges** on **Monday** against **three advisers to President Trump's campaign** and laid out the most explicit evidence to date that his campaign was eager to coordinate with the Russian government to damage his rival, Hillary Clinton" (Apuzzo et al. 2017).

However, in sentence (6), only the question 'where' was answered. A person was mentioned, but he was not the key player in the rest of the story (the prime minister). A time was mentioned, but

the story focused on the recent past, not three years ago. The event or phenomenon that the article actually centered around was not the proclamation of an Islamic State caliphate but the prime minister's successes in unifying Iran. Again, the first sentence did not answer why or how the prime minister accomplished these feats, because the first sentence discussed a different person altogether.

(6)   "Three years ago, Abu Bakr al-Baghdadi proclaimed the existence of an Islamic State caliphate and proceeded to sweep his forces through **northern Iraq and toward Baghdad**, threatening the viability of the fragile country" (Kesling 2017).

I also tracked whether the article was above the fold (the vertical halfway point) or not, seeing as the most important news is typically reserved for the above-the-fold position. If a story had just the first paragraph on the front page, with the rest of the story in the body of the newspaper, they were not counted because those stories were teasers for the articles that would follow in the rest of the newspaper rather than typical examples of front-page news. Similarly, pieces labeled as 'opinion' were not counted. The dateline, which can include a time or place capitalized before the first sentence of the article, was able to answer the key questions.

A research assistant coded 10% (37) of the articles as direct or delayed in order to test that the coding system was effective and reproducible. The rate of reliability was 76%: the research assistant's assessment agreed with the author's coding in 28 of the 37 articles tested. The discrepancy in the findings is likely to be the result of confusion regarding the dateline, the place and time that often appear capitalized before the beginning of a story. The second rater did not take into account the dateline, so coded more articles as delayed than I did. If those eight articles were set aside, then the rate of reliability would be 95%.

3.3   Analysis

Once each article was coded as having a direct or delayed lede, I calculated the proportion of direct ledes to delayed ledes in each decade for both newspapers together and each individually. I used the proportion rather than the total number of direct and delayed ledes to account for the *Wall Street Journal* putting many fewer articles on the front page than the *New York Times*.

4   Results

Both newspapers showed major shifts in lede style throughout the 20th century, but the *New York Times* showed a clear trend towards delayed ledes while the *Wall Street Journal*'s style was more variable over time. First, I will provide a rhetorical analysis of two prototypical stories from the *New York Times*, one from 1927 and one from 2017, in order to illustrate typical structures of articles with direct and delayed ledes, and then I will present the quantitative findings from the *New York Times* and the *Wall Street Journal*.

4.1   Rhetorical Analysis of two ledes

To illustrate the quantitative trends, the following is an analysis that uses Rhetorical Structure Theory to describe two prototypical stories--one direct and one delayed, from the *New York Times* from 1927 and 2017. The rhetorical structure of articles from the *New York Times* and the *Wall Street Journal* are very similar, so examples of prototypical stories from one newspaper are indicative of both. In the following analyses, several rhetorical structure tags are used, as defined in table 2. Relations are conceptualized in terms of a nucleus and a satellite; the satellite is the piece of the text that is doing something to the nucleus.

Relation Name	Nucleus	Satellite
Background	text whose understanding is being facilitated	text for facilitating understanding
Elaboration	basic information	additional information
Preparation	text to be presented	text which prepares the reader to expect and interpret the text to be presented.
Summary	text	a short summary of that text
Non-volitional Result	a situation	another situation which is caused by that one, but not by anyone's deliberate action
Justify	text	information supporting the writer's right to express the text

Table 2: Relational structures of Rhetorical Structure Theory (Mann and Thompson 1987)

4.1.1 Direct Lede Rhetorical Analysis

Stories with direct ledes typically follow this format: first preparation, then summary, and then maybe elaboration, justification, non-volitional result, or some other rhetorical tag. Example (7) is a story with a direct lede from 1927.

(7)   a.   15 Children Hurt, 4 Badly, as Sled Hits Auto Crossing its Path on Steep Mamaroneck Hill
       b.   Fifteen boys and girls were injured, four seriously, when the bobsled on which they were coasting down a hill on Maple Avenue crashed into an automobile tonight.
       c.   The driver and another occupant of the automobile were injured, although only slightly.
       d.   The four children were Joseph Warren, 15 years old of 84 Prospect Avenue who was steering the sled; his sister, Rose Louise, 12; Madlyn Roy, 10, daughter of Mr. and Mrs. Charles A. Roy of 70 Prospect Avenue, and Amy Parmlee, 10, of 95 Prospect Avenue.
       e.   They were taken to the United Hospital in Port Chester. (New York Times 1927)

In (7), the headline (7a) prepares the reader for the story to come by making the reader ready and interested in reading the entire story. The first sentence of the main text (7b) summarizes the story as a whole, before the reader has read the whole story. The second sentence (7c) elaborates on part of the first sentence, the driver of the car. The third sentence (7d) elaborates on part of the first sentence, the children injured. The fourth sentence (7e), shows the non-volitional result,

the children's hospitalization, of the injuries mentioned in (7b). Each subsequent sentence

elaborates on the summary sentence, provides background, or gives evidence.

4.1.2   Delayed Lede Rhetorical Analysis

Example (8) shows a different kind of story, one that follows a few narrative arcs and uses a

delayed lede in order to paint the picture of a situation. Stories with delayed ledes do not have

such a clear organization as those with direct ledes. Often, the first sentence further prepares the

reader for the story by enticing them with an anecdote or witty saying. Example (8) is a story

with a delayed lede from 2017.

(8)   a.   Scientists Loved and Loathed by an Agrochemical Giant
       b.   EXETER, England — The bee findings were not what Syngenta expected to hear.
       c.   The pesticide giant had commissioned James Cresswell, an expert in flowers
            and bees at the University of Exeter in England, to study why many of the world's
            bee colonies were dying.
       d.   Companies like Syngenta have long blamed a tiny bug called a varroa mite, rather
            than their own pesticides, for the bee decline.
       e.   Dr. Cresswell has also been skeptical of concerns raised about those pesticides,
            and even the extent of bee deaths.
       f.   But his initial research in 2012 undercut concerns about varroa mites as well.
       g.   So the company, based in Switzerland, began pressing him to consider new data
            and a different approach.
       h.   Looking back at his interactions with the company, Dr. Cresswell said in a recent
            interview that "Syngenta clearly has got an agenda."
       i.   In an email, he summed up that agenda: "It's the varroa, stupid."
       j.   For Dr. Cresswell, 54, the foray into corporate-backed research threw him into
            personal crisis.
       k.   Some of his colleagues ostracized him.
       l.   He found his principles tested.
       m.   Even his wife and children had their doubts.
       n.   "They couldn't believe I took the money," he said of his family.
       o.   "They imagined there was going to be an awful lot of pressure and thought
            I sold out."
       p.   The corporate use of academia has been documented in fields like soft
            drinks and pharmaceuticals.
       q.   But it is rare for an academic to provide an insider's view of the relationships
            being forged with corporations, and the expectations that accompany them.
       r.   A review of Syngenta's strategy shows that Dr. Cresswell's experience fits
            in with practices used by American competitors like Monsanto and across the
            agrochemical industry.

s. Scientists deliver outcomes favorable to companies, while university research departments court corporate support.
t. Universities and regulators sacrifice full autonomy by signing confidentiality agreements.
u. And academics sometimes double as paid consultants. (Hakim 2017)

In (8), the headline (8a) prepares the reader for the story to come by making the reader ready and interested in reading the entire story, just like in a story with a direct lede. The first sentence of the main text (8b) further prepares the reader for the story by interesting the reader--it does not answer any questions but rather leaves the reader curious. Sentences (8b) through (8o) begin to tell the story of one scientist who was involved with an agrochemical corporation, but it is not until the 15th sentence that James Cresswell's story begins to be tied in to a larger picture. (8p), which describes the soft drink and pharmaceutical industries, shows the contrast between what we already know, and what this story is about (8q). Sentence (6r) explicitly ties James Cresswell's story into the larger picture. This kind of sentence is common in journalism--it follows an anecdotal lede and links that anecdote to the larger picture, and often takes the form of "Jane Doe is one of many." However, it does not fit neatly in a previously defined rhetorical structure tag. Sentences (8s, 8t, 8u) elaborate on sentence (8r), specifically what practices are commonly used by agrochemical companies. The article goes on to tell three scientists' stories that contribute to the larger theme of academia mixing with the agrochemical industry.

The rhetorical structures of articles with direct ledes and delayed ledes were very different, primarily in whether the first sentence's role was to entice or inform the reader.

4.2   Results of *New York Times* Analysis

A total of 252 articles were examined from 30 front pages across 10 decades. Of these, 180 were above the fold and 72 were below. Given that the number of direct and indirect ledes did not

change given the position of the article relative to the fold, no further results will be presented regarding location on page.

The articles on the front pages of the *New York Times* showed a clear trend that went from primarily using direct ledes (94% of the time, or 17 of 18 articles) in 1927 to using fewer direct ledes (35% of the time, or eight of 23 articles) in 2017. Between 1927 and 1977, direct ledes were the norm on the front page, occurring between 88% of the time (1957, when 21 of 24 articles were direct) and 94% of the time (1927, when 17 of 18 articles were direct). 1987 was the first year with a noticeable trend towards delayed ledes, when direct ledes made up 84% of the front-page articles (26 of 31). In 1997, 64% of articles had direct ledes (16 of 25), and by 2007, less than half of the stories on the front page had direct ledes (42%, or 10 of 24). See table 3 for the percent of direct ledes by year.

Year	Month	Direct ledes	Delayed	%Direct ledes	%Direct ledes
1927	Jan	13	0	100%	94%
	July	4	1	80%	
1937	Jan	12	1	92%	92%
	July	12	1	92%	
1947	Jan	12	0	100%	93%
	July	13	2	87%	
1957	Jan	8	3	73%	88%
	July	13	0	100%	
1967	Jan	8	1	89%	91%
	July	11	1	92%	
1977	Jan	6	1	86%	94%
	April	10	0	100%	
	July	6	1	86%	
	Oct	9	0	100%	
1987	Jan	6	1	86%	84%
	April	9	0	100%	
	July	5	2	71%	
	Oct	6	2	75%	
1997	Jan	3	2	60%	64%
	April	5	2	71%	
	July	4	3	57%	
	Oct	4	2	67%	
2007	Jan	2	4	33%	42%
	April	3	3	50%	
	July	1	5	17%	
	Oct	4	2	67%	
2017	Jan	2	3	33%	35%
	April	1	5	17%	
	July	1	5	17%	
	Oct	4	2	67%	
Total / Average		**197**	**55**	**78%**	**78%**

Table 3: Percent of direct ledes on the front page per decade for the *New York Times*

4.3   Results of the *Wall Street Journal* Analysis

A total of 122 articles were examined from 30 front pages across 10 decades, fewer than the

number of articles from the same number of front pages of the *New York Times* because the *Wall*

Street Journal tended to put fewer articles on the front page. Of those articles, 88 were above the

fold and 34 were below. No further results will be presented regarding location on page because

the number of direct and indirect ledes did not change given the position of the article relative to the fold.

The *Wall Street Journal*, similar to the *New York Times*, used direct ledes on 89% of all stories (16 of 18) in 1937 but quickly shifted to primarily delayed ledes through the mid 1900s (0% direct in 1957, or zero of 9 articles). From 1957 to 1997, there was a range from zero direct ledes on the front page to 25 percent direct ledes (1987, when three of 12 articles were direct). However, in the 21st century, there was a shift towards direct ledes (38% direct in 2007 with six of 16 articles direct and 63% direct in 2017 with 12 of 18 articles direct). See table 4 for the percent of direct ledes by year.

Year	Month	Direct ledes	Delayed	%Direct ledes	%Direct ledes
1927	Jan	5	2	71%	69%
	July	4	2	67%	
1937	Jan	7	2	78%	89%
	July	9	0	100%	
1947	Jan	2	2	50%	63%
	July	3	1	75%	
1957	Jan	0	3	0%	0%
	July	0	6	0%	
1967	Jan	0	3	0%	17%
	July	1	2	33%	
1977	Jan	0	3	0%	8%
	April	0	3	0%	
	July	0	3	0%	
	Oct	1	2	33%	
1987	Jan	1	2	33%	25%
	April	0	3	0%	
	July	2	1	67%	
	Oct	0	3	0%	
1997	Jan	0	3	0%	0%
	April	0	3	0%	
	July	0	3	0%	
	Oct	0	3	0%	
2007	Jan	1	3	25%	38%
	April	0	4	0%	
	July	2	2	50%	
	Oct	3	1	75%	
2017	Jan	3	1	75%	63%
	April	3	2	60%	
	July	3	1	75%	
	Oct	3	2	60%	
Total / Average		**53**	**71**	**43%**	**43%**

Table 4: Percent of direct ledes on the front page per decade for the *Wall Street Journal*.

4.4 Comparison of the two newspapers

Between 1927 and 1947, both the *New York Times* and the *Wall Street Journal* used direct ledes on more than half of the front-page articles. By 1957, the papers' trends diverge. When the *New York Times* had primarily direct ledes, the *Wall Street Journal* had primarily delayed ledes: from 1957 to 1987, the *Wall Street Journal* put an average of 13% direct ledes (Five of 39 stories) on the front page and the *New York Times* put an average of 89% direct ledes (97 of 109 stories) on

the front page. Then, both papers reversed position and the *New York Times* put fewer direct ledes on the front page (35% of the time, or eight of 23 articles) in 2017 and the *Wall Street Journal* put more direct ledes on the front page (63% direct, or 12 of 18 articles direct). See figure 3 for a chart of the two newspapers trends over the last century.
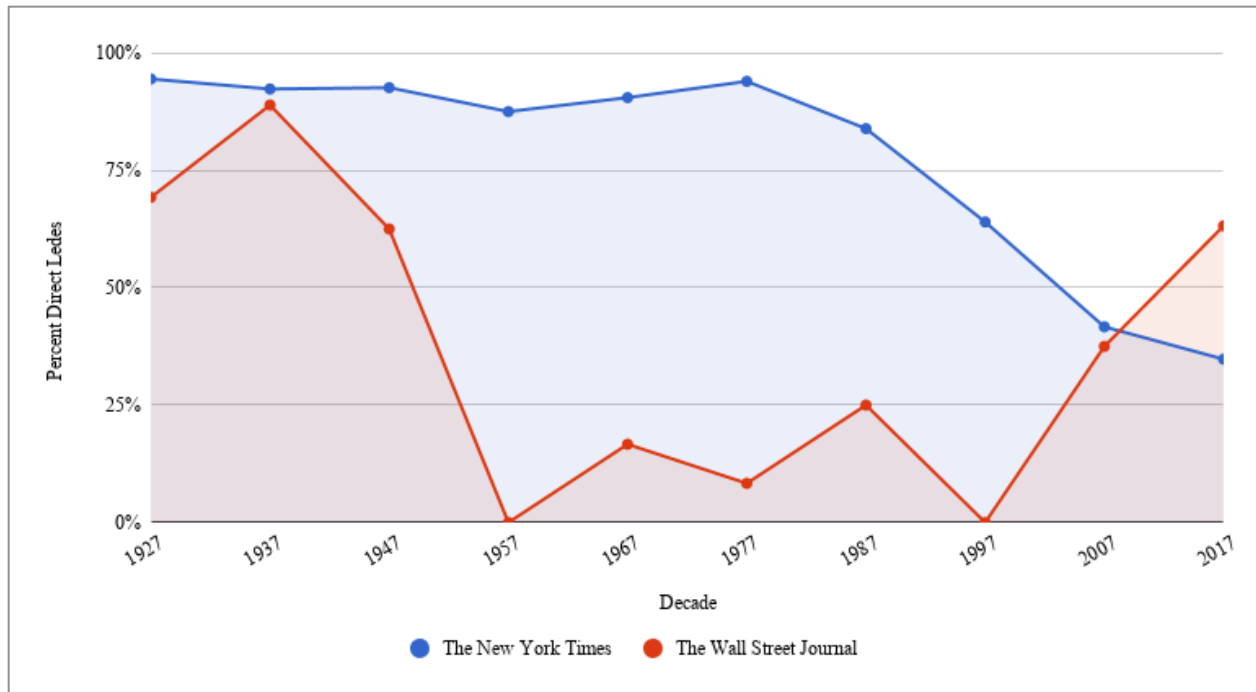

Figure 3: Proportion of direct ledes to delayed ledes per decade

5   Discussion

In this study, I analyzed lede styles of the past century and identified several shifts in lede-writing style. In the following section, the findings will be explained and situated within a sociolinguistic context. Limitations of this study, implications, and the potential for future research will also be discussed.

5.1   Diverging trends

The *New York Times* shows a definite and clear shift in lede-writing style over the last century, from mostly direct ledes to more delayed ledes on the front page. The evidence from the *Wall Street Journal* was muddier--while there were a couple apparent shifts in lede-writing style, it looks like the *Wall Street Journal* once preferred direct ledes, then moved towards delayed ledes, and more recently has moved again towards direct ledes. Because the *New York Times* and the *Wall Street Journal* are ideologically distinct and cater to different readers it makes sense that they would not follow the same trends. In fact, the papers' trends seem to be mostly at odds-- while the *New York Times* is using direct ledes, the *Wall Street Journal* is using delayed ledes, and vice versa. The *Wall Street Journal*'s insistence on using delayed ledes throughout much of the 20th century feels at odds with the newspaper's public perception of serious business, but again, the use of a delayed lede is a stylistic choice rather than a choice in content. The *Wall Street Journal* was still covering the news, just opting to do so using delayed ledes.

The trends for the *Wall Street Journal* and the *New York Times* were not the same, indicating that either there was a broad trend in lede-writing style that one paper bucked, or there was no single lede-writing style trend for American news over the last century.

The results from the *Wall Street Journal* run contrary to Weldon's (2008) overall findings, that American newspapers are putting more delayed ledes on the front page, indicating that perhaps the *Wall Street Journal* is an outlier in American media. Since the late 1980s, the *Wall Street Journal* has been using more and more direct ledes on the front page while the *New York Times* has been using more and more delayed ledes on the front page. The present study's findings on the *New York Times* contradict Weldon's findings in two ways: (1) Weldon found an overall shift towards delayed ledes in the early 2000s but the present study found that the *New*

York Times started putting more delayed ledes on the front page earlier, in the 1980s, and (2) While Weldon found a shift towards delayed ledes across the 20 newspapers she studied, the *New York Times* was one of her outliers that had more direct ledes on the front page in 2004 than in 2001, but the present study did show the *New York Times* putting more and more delayed ledes on the front page.

5.2   The timeline of the delayed lede shift

Weldon (2008) hypothesized that the 9/11 attacks of 2001 and the advent of online blogging in the early 2000s were two major catalysts for the shift towards delayed ledes, but based on my findings, that seems unlikely because the *New York Times'* shift started earlier than 2001, and the *Wall Street Journal* showed an opposite trend. The findings show that the narrative shift that Weldon noticed was present in the *New York Times* since the 1980s.

Additionally, it does not appear that the *New York Times*' changing lede style is in response to pressures resulting from the move from print media to digital media because the stylistic shift began in the 1980s and gradually continued to 2017, while the shift to digital media happened in the early 2000s. However, it's possible that the narrative trend that began in the 1980s for the *New York Times* has been maintained because delayed ledes are well-suited to digital media, where the metrics for advertising revenue are clicks and time on page rather than subscriptions. Before digital media, newspapers earned money from subscriptions and from advertisers based on the number of subscriptions, but now newspapers earn money from subscriptions, advertisers based on the number of subscriptions, and advertisers based on the number of page views, the length of time readers spend on the page, and some other metrics of engagement. Before digital media, the most important thing for journalists was to provide a

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product that the readers would want to continue to subscribe to, but with digital media, journalists are incentivized to provide a product that readers want to click on or spend more time looking at. The rise of digital media has led to so-called clickbait headlines, which encourage the reader to click on the story to actually find out what happened. Blom (2015) conducted an in-depth analysis of clickbait headlines and found that commercial and tabloid media was more likely to use these kinds of headlines than non-commercial and non-tabloid media. ". . .Forward-referring headlines are primarily used as click bait luring the readers into clicking on and reading the full article thus making the news site more attractive for advertisers" (Blom 2015:99). Similarly, a delayed lede would help news organizations by encouraging readers to stay on the page for a longer amount of time, which drives advertising revenue. Advertising revenue is more important to the *New York Times* than the *Wall Street Journal,* because they have different funding models. Non-subscribers can read up to 10 free articles per month from the *New York Times* or unlimited articles with a subscription. The *Wall Street Journal* can only be viewed digitally by subscribers. Therefore, digital advertising revenue is more important to the *New York Times* than the *Wall Street Journal* because it makes up a larger portion of the overall revenue.

The narrative trend driven by war reporters during the first Gulf War coincides neatly with the *New York Times*' shift towards delayed ledes. Saliba and Geltner (2012) described how John Sack's narrative reporting during the Persian Gulf War was immensely popular. Further research would have to examine whether the *New York Times'* stylistic shift was actually caused by the Gulf War narrative war reporting trend or whether the shift was a delayed response to the style of Narrative Journalism popularized in the 1960s or something else entirely. It seems that the *Wall Street Journal* was either unaffected by the Gulf War narrative reporting trend or met it by moving away from a narrative approach.

At first, it seems contradictory that two of the biggest newspapers in the United States would meet external forces (the narrative war reporting trend, the 9/11 attacks, the digital media revolution) with entirely opposite approaches, but considering that the *Wall Street Journal* caters to a conservative audience while the *New York Times* caters to a liberal audience, it's entirely possible that the conscious and subconscious editorial decisions of each paper would be in opposition. Perhaps the *Wall Street Journal* saw the Gulf War Narrative reporting trend, which focused on the soldiers and families affected by war, as too sentimental for their conservative readers, while the *New York Times* rushed to adopt the narrative style to illustrate the human toll that war can take, mirroring their readerships' more liberal leanings.

There are several possible causes for the shift towards delayed ledes, and continuing research could build upon this work.

5.3   Possible limitations and suggestions for future research

There are four suggestions for future research that would build on and improve the results found in this study. The first is sampling articles every five years rather than every 10 so that stylistic changes could be pinpointed to specific historical events or editorial decisions.

The second suggestion is to focus on lede-writing at the *Times* from 1980 to 2015 to better pinpoint whether there was a year during which a great deal of change occurred in order to determine what exactly brought about the shift towards delayed ledes.

The third suggestion is to compare these findings with those of other major newspapers. One could examine a few other major American newspapers like the *Washington Post* to better determine nationwide trends over the last century. A comparison with European newspapers could help to determine whether the *Times'* change in lede-writing style was primarily caused by

the 9/11 attacks, a distinctly American tragedy, or the Gulf War narrative shift, which was a global event, or something else.

The fourth suggestion is to look further at the relationship between the number of articles on the front page and the style of lede chosen.

The combination of Rhetorical Structure Theory and a feature assignment system seems well-suited to a rhetorical analysis that focuses on one discourse tag, in this case the summary sentence. Traditionally, Rhetorical Structure Theory is used to provide the reader's understanding of the writer's intention, but the use of a feature system allows for a more objective account of the rhetorical structure of a text. By defining the requirements of a discourse tag, the study was grounded in linguistic theory rather than personal opinion. Future research could employ a similar approach.

6   Conclusion

This study showed major shifts in lede-writing style for two major American newspapers over the last century. The *New York Times* has undergone a drastic change from primarily using direct ledes to primarily using delayed ledes. The *Wall Street Journal*'s trends show that the newspaper has been more changeable in style than the *New York Times*, and that the papers usually show opposing style.

Research to date has shown that narrative structure affects reader trust in the media (Kelly et. al 2003), and that trust in the media was at an all-time low in 2016 (Swift 2016). Therefore, the style of lede chosen could make a big difference for newspapers, especially at a time when more and more newspapers are losing revenue.

Weldon's (2008) research showed that there was a trend across 20 American newspapers towards delayed ledes and narrative-style news overall. However, her findings were that the change happened sometime between 2001 and 2004, while my findings point to an earlier start for the *New York Times* and the opposite trend for the *Wall Street Journal*. There are several possible political, cultural and technology-driven reasons for the changing style of lede-writing, which further research could expand upon.

The history of ledes can inform the stylistic choices that journalists choose as they strive to engage and educate their readers. The lede, buried or not, is a crucial part of the changing media landscape which informs our political and social climate.

7   References

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