# DO FONTS HAVE POLITICS? TYPOGRAPHY AND DESIGN OF PARTISAN AND NONPARTISAN WEBSITES

A thesis

presented to
the faculty of the Graduate School
at the University of Missouri-Columbia

In partial fulfillment of the requirements for the degree Master of Arts

by
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DECEMBER 2017

The undersigned, appointed by the Dean of the Graduate School, have examined the thesis entitled

## Do fonts have politics? Typography and design of partisan and nonpartisan websites

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#### **ACKNOWLEDGEMENTS**

Special thanks to Dr. Beverly Horvit, for her support during preparations and initial research into the topic, and for the push toward a topic that has little in the way of previous research. Thanks also to Dr. Laura Johnston, the chair of my committee, for her guidance and editing, and to Dr. Ric Wilson and Dr. Elizabeth Conner Stephens for their design expertise, input, and support.

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#### INTRODUCTION

Advertisers and graphic designers will tell you that typography and design are able to convey messages in a way similar to the words and images. Color, typography, and the use of photography can influence how a user sees the content in any medium and signify certain emotions or ideas. Designers use typography to organize content and to create visual cues to indicate the importance of a story. Some design is meant to be feminine or masculine, bold or subtle, active or passive. But can design be liberal or conservative?

News consumers on both sides of the debate may often think certain sources are biased and may make judgments about the credibility of a site before reading a single story. Design and typography are part of the surface credibility that a user reacts to when first visiting a site (Lowry, Wilson, & Haig, 2014). Designers and management need to understand how design decisions affect their organizations' credibility with the user so those designers can create websites that look credible. Many news organizations that brand themselves as independent or centrist will want to avoid the impression that they are a more conservative or liberal organization. Partisan media, on the other hand, may wish to reinforce the idea that they should be trusted by a political subgroup that shares the outlet's ideology.

The purpose of this research is to identify and analyze design choices made by online liberal and conservative media outlets and partisan interest groups with a focus on typography to identify design elements and font characteristics as signs of political ideology. Most news media outlets, whether their objective is to report the truth as an independent fourth estate, persuade citizens toward a partisan agenda, or to make money, strive to gain and retain readers. To do this, they deal in credibility with their target audience. Some media

sources target partisans and others do not, but they must persuade their readers that they are a credible source of necessary information. Typography can be part of the message — not just as part of the design's overall professionalism and credibility, but as a semiotic sign that lends meaning to the words (Stöckl, 2005). It is possible that left- and right-leaning sites will use typography in similar ways that differentiate them from centrist sites, or, that sites will select specific typography to demonstrate either a liberal or conservative bias.

Because designers use certain font characteristics to convey emotion, audiences may begin to associate these typographic decisions with those emotions. It may be useful to look for feminine and masculine qualities in typography as part of the analysis, especially given the election of Donald Trump over Hillary Clinton to the presidency of the United States. Trump was accused of sexual assault by multiple women and of misogyny by pundits and political opponents. Hillary Clinton, on the other hand, described herself as a feminist who hoped to break the highest of glass ceilings.

Most people would not argue with the idea that pink is a feminine color, and blue is more masculine (Cohen, 2013). Society has constructed these meanings over time, but what meanings have we lent to Georgia or Helvetica? The same way colors have been given meaning by society, fonts and typographic styles have taken on meaning, as well. Feminine fonts, for example, are generally thinner, while bolder type is considered more masculine (J. Johnson, 2012). All caps type is associated with emphasis, or even yelling, even in email where other design choices are rarely made by the person writing the message (Robb, 2014). Fonts can be grouped by using shared characteristics, and the simplest breakdown is the difference between serif and sans serif fonts. Within those categories, though, there are

several identifiable traits that can be used to group font families and look for similarities in the design of partisan websites. Also, within each font family, there are different styles or weights — like thin, extra bold, or bold italic — which may impart different meanings to the reader. Stereotypes can be created and reinforced by the ways in which designers (or anyone else) use typography. It stands to reason that this could lead to political meanings within certain design choices. As similar fonts are used in consistent ways, they begin to take on meaning in society based on these common usages.

There is increasing talk in the media of news consumers' partisan bubbles as some readers seek out media that confirms their beliefs (Nyhan, 2016). These partisan stories are also circulated on social media where the user is likely to follow like-minded individuals and organizations (Jacobson, Myung, & Johnson, 2016). As partisan news organizations are created and updated, designers may make typographic decisions to persuade these partisan users, or they may wish to stand out from the partisans as independent news sources. The rise of these partisan sites and the designs they employ may be changing what people see as credible. A user may look at a website that is meant to look impartial, and — perhaps subconsciously — compare it to more partisan sites. As users view more partisan news, it is possible that any similarities will begin to create meaning that the user could apply to future judgments about credibility and partisanship. A nonpartisan news site may wish to avoid this type of snap judgment about its surface credibility and avoid design that reminds users of the partisanship from either side.

The results of this visual analysis could be used by partisan or nonpartisan organizations to design websites or other materials that are more credible to their target

audiences. Whether a news outlet is trying to reach conservatives or liberals, or to appeal to the widest audience possible, a deeper understanding of how typography is used by partisan outlets will help them achieve better design and credibility. The results may also lead to further study of news consumers — partisan or not — and their preferences about which typographical properties make a site more or less attractive and lend credibility to them as a news source. News consumers could be shown different typography applied to the same headlines and photography on a page and predictable results should follow based on the respondents' political leanings if the analysis finds commonality among certain types of sites.

#### LITERATURE REVIEW

This research analyzes differences in how partisan news sites use typography to gain credibility among their users based on source credibility theory. An analysis of sites' typography might show differences in headlines, links, and other elements among partisan and nonpartisan sites. Font family, size, weight, and style may come into play beyond the simple classifications of fonts. Every font has personality and conveys meaning (Strizver, 2010), so why wouldn't some type be considered more conservative or more liberal?

#### **Source Credibility Theory**

Theories about source credibility date back to the time of ancient Greece. Aristotle called the appearance of credibility ethos and described it as the most important form of persuasion (Umeogu, 2012). While Aristotle may have been describing public speakers, the appearance of credibility is a necessary part of a news organization's reputation online. Hovland and Weiss (1951) have defined source credibility as the audience's belief in the information presented based on the perceived believability of the source. The source could be a public speaker, a politician, an advertisement, a magazine, a website, or just about anything else.

Credibility studies began with a focus on interpersonal communication — the source was a speaker and credibility was broken down into different facets such as trustworthiness and expertise (Hovland, Janis, & Kelley, 1953). Other studies expanded on this model. Whitehead Jr. (1968) added dynamism and objectivity as two more factors for measuring source credibility, and he defined objectivity as the source's perceived open-mindedness by the receiver. Scales of dynamism included activity factors such as aggressiveness, boldness, or

energy (Berlo, Lemert, & Mertz, 1969). Berlo et al. used a three-factor system: safety, qualification, and dynamism (1969). Safety included Hovland's idea of trustworthiness, but Berlo et al. add that safety is more general, including the perceived relationship between the source and the user (p. 574). Qualification, Hovland's expertise, and Whitehead Jr.'s professionalism are fairly similar in definition.

These studies use various criteria grouped in different ways to make up a broad, overarching idea of credibility. The distinctions force researchers to redefine the facets of credibility and outline how they might measure these factors. While there are many ways to group aspects of credibility, and many factors that some researchers found more important than others, Hilligoss and Rieh (2008) assert that trust and expertise are always relevant and are generally agreed upon as the key factors. Dynamism is the one factor from the studies that is generally not covered by broader definitions of trustworthiness and expertise and therefore should also be taken into account.

#### **Credibility in Web Design**

Credibility can be applied to the channel of the media, as well as to specific sources. Kiousis studied the credibility of channels, such as print, television, and online news, and ranked web sources as the weakest (2001). He noted, however, that certain sources will have different levels of credibility regardless of the channel. For example, *The New York Times* website may rate higher in credibility with readers of the print edition. Avid readers of a certain print outlet may also rate print in general to have higher credibility. Within each channel, different sources will be perceived by users to have more or less credibility. Johnson and Kaye (2009) examined the online channel even more deeply and found that blogs were

deemed to be more credible than campaign websites or chat rooms, though they did not compare blogs to the sites maintained by traditional news outlets.

Many aspects of web design do not directly relate to the actual credibility of the source. Robins and Holmes (2008) argue that these design aspects of a site fall under the category of the source's dynamism (citing Fogg et al., 2001), and found that more than 46.1% of respondents made credibility assessments on the "design and look" of a website and an additional 28.5% said that "information design" contributed to their judgments (p. 388). These features are grouped into two broader categories: visual aesthetics and appropriateness of design (Choi & Stvilia, 2015). Aesthetics and appropriateness are outlined in several studies as being key factors in website credibility (Fogg, 2003; Wathen & Burkell, 2002). Design in general is mostly about surface credibility, and Fogg (2003) notes that for a website, this means that the site "looks professionally designed" (p. 163) and points out that problems with the user experience, such as slow load times and intrusive advertising, will harm the site's credibility. Graphic design texts add that appropriate typography is a key factor in a professional appearance (R. Carter, Meggs, Day, & Maxa, 2014; Golombiski & Hagen, 2015). Other studies applied credibility theory to graphic design and web design (Lazar, Meiselwitz, & Feng, 2007; Lowry et al., 2014) and found that users' first impressions about credibility are based on good design. Robins and Holmes (2008) also found that sites with better aesthetics were deemed more credible by users and called it "the amelioration effect of visual design and aesthetics on content credibility" (2008, p. 397). While these studies looked at overall aesthetics and judged overall design to be important, they did not look specifically at typography within the designs as the current study does. Robins and

Holmes (2008) did change the typography as part of what they called "Low Aesthetic Treatment," which reverted all typography to a system default and was measured against real sites' actual designs. Berleant (2000) touched on typographic decisions in relation to how funding-proposal documents were perceived, though the study did not specifically examine source credibility, web design, or journalism.

Fogg (2003) breaks down source credibility theory, as applied to web credibility, into four types: Presumed, Surface, Reputed, and Earned.

Type of Credibility	Basis for Believability
Presumed	General assumptions in the mind of the perceiver
Surface	Simple inspection or initial firsthand experience
Reputed	Third-party endorsements, reports, or referrals
Earned	Firsthand experience that extends over time

Table 1: Types of credibility (Fogg, 2003, p. 131)

Surface credibility, as Fogg (2003) defines it, is judged on "simple inspection or initial firsthand experience" (p. 131) and will be a main focus of this research — particularly how typography can indicate the credibility of news websites. Web design is one of the first impressions that users get when opening a story. Researchers have determined that a surface credibility judgment is made within seconds on a web page and have linked these judgments to visual design (Peracchio & Luna, 2006; Selejan et al., 2016; Sillence, Briggs, Harris, & Fishwick, 2007). Lowry et al. (2014) examined the impact of logo design on surface credibility, and others have linked typography to branding, though not specifically to source credibility (Díaz, Martín-Consuegra, & Estelami, 2016; Efer, 2017; Farrelly, 2010). Studies have used source credibility theory to more generally examine marketing efforts (Ledford, 2009), advertising (Hill, 2012; McCarthy & Mothersbaugh, 2002) and website design

(Everard & Galletta, 2005; Kensicki, 2003), but have not related the theory to online journalism. The source credibility of visual elements such as photography has also been studied in the realm of celebrity endorsements on social media (Djafarova & Rushworth, 2017) and advertising (Clow, James, Sisk, & Cole, 2011). Johnson and Kaye (2004) found that partisanship actually increased credibility for about two thirds of blog readers, much like listeners of talk radio. Traditional news consumers, though, may view the more opinionated content negatively. This difference is a key to measuring whether partisans will react differently to components of surface credibility such as typography.

Katz et al. (1973) describe the relationship between media choice and the user as driven by the user's own needs — the audience is active. The audience decides what source of media will gratify its needs, and internet users now have a seemingly endless list of options for news. As Kaye and Johnson (2004) wrote, audience members can passively watch media such as television, but the interactivity of the internet forces them to continually make decisions about which media they wish to consume. They also found that the desire for political news online, though not necessarily partisan media, was driven by political interest and information seeking (Kaye & Johnson, 2002). Bimber and Davis (2002) took this further, examining partisan information online, and found that internet audiences were more active in politics and indeed sought out information that was favorable to their preferred candidate. The study, however, focused on campaign websites, not the news media.

While traditional news consumers may not consider partisanship to be an indication of credibility or a gratification they are seeking, the distrust of traditional media and of corporate ownership has played a part in users' preference for partisan websites (Regan,

2003; Wall, 2006). As some users seek out partisan media, and others distrust it, media organizations may be able to use common typographical characteristics on their sites to influence their surface credibility with these audiences. The partisan aspect of credibility means that different audiences may make different judgments about surface credibility, even based on something as seemingly nonpartisan as typography.

Once again, colors provide an example: News networks didn't always identify
Republicans as red and Democrats as blue. As recently as 1984, the colors were reversed on
at least one of the national TV networks, and before that, only blue or yellow was ever used
to signify Republicans (Bump, 2016). In fact, neither party wanted to be associated with the
color red for some time because of its links to communism and the Soviet Union, and it
wasn't until the 2000 election that the current colors became standard (Keneally, 2016).

After years of repetition, and the networks seeming to agree on how the colors were used,
people began to refer to red states and blue states as being more conservative or liberal,
respectively (Bump, 2016). Color and typography are both visual and visceral stimuli —
people react to colors and make judgments about their use without necessarily making
cognitive connections or intentional reactions (Robins & Holmes, 2008; Selejan et al.,
2016).

#### Categorizing typography

Typography has mostly been studied in terms of legibility (Barnhurst, 1993; Subbaram, 2004), rather than the meaning different typefaces may impart. Others (Stöckl, 2005; van Leeuwen, 2006), though, argue that typography is its own semiotic mode of communication and that designers express ideas and feelings, not just through the words and

photographs they publish, but through the images they create with typographic choices and other design elements. Designers understand that most fonts are not good or bad, but appropriate or inappropriate for the current design (Mayer, 2010). Larson and Picard (2005) even found that reading what they described as good typography could put readers in a better mood. Their study compared standard magazine styles with intentionally bad choices and poor spacing; the link between mood and typography was strong. Subtle differences and preferences, though, have not been measured. The idea that certain fonts, weights, and styles lend meaning and credibility to a design is not new (Serafini & Clausen, 2012), but it has not been studied in the realm of partisan politics.

The first, most important way to break typography into categories is the broad groups of serif and sans serif. According to Linotype, a major font designer and retailer, a serif is a small stroke at the ends of a letterform and is the key descriptor in serif fonts, like Times New Roman, one of the most widely known serif typefaces ("Serif Fonts," n.d.). Serifs have often been used to communicate a sense of heritage because they were popular in the earliest days of the written word, dating back to stone-carved letters in ancient Rome (Hill, 2012). The original intent of serifs in the era of the printing press was for legibility, which is especially important for text set at smaller sizes (H. Carter, 1984). Serif type is often considered to be more traditional, classic, and vintage, and identifies more with printed materials than with the web (Tiwari, 2016). The type is often considered more feminine as well (Cousins, 2012; J. Johnson, 2012). Sans means without, so sans serif fonts are fonts without serifs. They were developed in the late 1800s but rose to prominence in the middle of the 20th century (Frutiger, n.d.). Sans serif faces are considered more modern, minimalist,

clean, casual, or European (Kliever, 2015). There are other decorative categories, like script and blackletter faces, but they are not likely used in any news websites, except as a logo for some newspapers. *The New York Times* and *The Washington Post*, for example, both use blackletter fonts in their logos, but do not use them for content in print or online.

Another way to classify typographic choices is through the font's style. Almost every font family contains a bold and regular version, but many professional typefaces come in various weights: light, regular, medium, bold, and black. Web design allows for nine weights, 100 to 900, and many font families can utilize the different weights. Bolder fonts are often considered stronger or more masculine (J. Johnson, 2012). Using all caps is a similar way to make the type louder and more masculine (Robb, 2014). These effects are often used for emphasis, but can change the tone of a website with consistent use in headlines and links. Underline is a common tool in the web designer's handbook, as it was used as a default style for links at one point, but professionally designed sites have moved away from this style because underlines interfere with letterforms (Lynch, Horton, & Marcotte, 2016). Might some sites employ heavy underlining or other unprofessional choices to imply that they are not mainstream — that they are more amateur and partisan — to attract a specific subgroup of users? That possibility does not appear to have been studied until now.

In recent years, serifs have been used in more modern ways, especially through the use of slab serif fonts. They are an old style, but their use in display type has become more modern, and typographers are creating more modern-looking serif typefaces ("Typography: Reverting to type," 2009). Slab serifs are also considered more masculine than other serifs, along with harder-edged serifs that technically are not slabs.

Rob Carter et al. (2014 pp. 38-39) help classify the different fonts and are in general agreement with other designers, such as Golombiski and Hagen (2015 pp. 88-89) on how to group them: Old style serifs are based on the hand-cut styles of ancient letters (H. Carter, 1984). Both texts point out that the rounded portions of these letter forms are set at an angle and the letters have less stress, or variation between the thick and thin parts. These older serifs are the ones considered more masculine and classical. Modern serifs are straighter and have much more pronounced stress, and some fonts in between can be considered transitional (R. Carter et al., 2014; Golombiski & Hagen, 2015). Both textbooks also separately categorize slab serifs, which are identified by thick, square or rectangular serifs and letters with minimal stress. These fonts are also considered more modern.

Aside from the lack of serifs, the texts identify the first sans serif typefaces as grotesques, which have slight variation in the widths of different parts of the letters. The Capital R and G often have a slight foot and spur, respectively. Newer grotesques, they say are simpler, with less variation. Humanist sans serifs are based more on old style serifs, have a more hand-drawn look, may have a hint of calligraphy, and have more stress than most sans serifs (R. Carter et al., 2014; Golombiski & Hagen, 2015). Another, more modern variation is the geometric sans serif. The letter forms have little to no stress and are based strictly on geometry: Most resemble circles and squares, but a few variations have been extended or compressed (R. Carter et al., 2014; Golombiski & Hagen, 2015).

Old style	The rounded portions of these letters are set at an angle and the letters have less variation between the thick and thin parts. They also have more angled serifs. Note the inside of the "o" and the slant of the "e."	Golden ticket
Modern	Letters are more symmetrical, with straight serifs and seem to stand upright. There is more variation between thick and thin. Note the straight serif on the "G" and shape of the "o."	Golden ticket
Transitional	Slightly modern fonts that are not quite old style or modern.	Times New Roman Golden ticket
Slab Serif	Slabs are thick, rectangular serifs and often have geometric shaped letters and little to no variation in the letters' thickness.	Golden ticket
Grotesque	These old style sans serifs are very simple, and often have a foot on the "G" or "R" characters	Golden ticket
Geometric	These letters are strictly based on geometry, the "o" is usually a perfect circle, though variations of geometric fonts may be compressed or expanded.	Gotham Golden ticket
Humanist	These have a more hand-drawn feel for a sans serif and often have a slant on the top of the "t" or on other lowercase letters. There is a more variation in line thickness, which is unusual in other sans serifs.	Gill Sans Golden ticket

Table 2: Font classifications (R. Carter et al., 2014; Golombiski & Hagen, 2015)

#### Credibility of typography among partisans

The meanings implied by visceral and visual cues are highly subjective and mean different things to different audiences (Clow et al., 2011; Reich, 2011). Much like with

colors, the first step in assessing how partisans will view typography is to look for patterns in the political news media and partisan groups' designs. A detailed analysis of how type is being used by partisans and nonpartisans will help establish what partisan users are accustomed to seeing. Familiar designs and typography, similar to what users see in other sites that have already garnered credibility, lead to better surface credibility for a previously unknown site (Lazar et al., 2007).

Since there is little current research in the field, this paper will examine the usage of typography that is laying the foundation for users' views of surface credibility. While this research will try to identify liberal, conservative, and nonpartisan typography in news and partisan websites, the study will make no attempt to judge the actual credibility of these sites, nor to judge the success or failure of their efforts to garner surface credibility among specific users. Surface credibility is an important factor in how the user judges the source of mass media communications, but it only applies to the user's perception. Certain groups of people will give higher credibility to sites that appear to belong among the trusted sites within their group, based on social identity theory, the same way referrals garner more credibility if they come from within the consumer's social or political group (Metzger & Flanagin, 2013). Surface credibility on its own, however, is not a lasting form of credibility. While first impressions are important for websites, users who spend more time with a site will rely more on cognitive factors of credibility, diminishing the roles of visceral cues like typography (Robins & Holmes, 2008).

Credibility and professional design may clash with the idea of credibility among partisans. Partisans do not trust the mainstream press and are looking for sites or blogs that

break away from the mainstream. For these reasons, what is traditionally thought of as good design may not be the best choice for partisan news sites. Designers of these sites may wish to distance themselves from the mainstream media because the target audience perceives these visceral cues differently.

#### Partisanship in online news media

Mitchell et al. (2014) have done extensive studies on media use and partisanship over time for Pew Research. One of their analyses (2014) makes clear that the news consumption habits of liberals and conservatives are quite different. They found that consistent conservatives overwhelmingly favored one source — 47% chose Fox News as their primary source — while consistent liberals favored a wider variety of news outlets — CNN was the most popular with just 15%. In a more recent analysis, Barthel and Mitchell (2017) found that 81% of Democrats support the media's role as a watchdog while only 42% of Republicans agree. This may be in part due to the change in presidential leadership; the difference is much greater than any time in the history of the poll, where forms of this question have been asked since 1985. Also of note, in the same 2017 study, neither Democrats nor Republicans found the national news media to be "trustworthy" — only 34% on the left, and 11% on the right. As for online news consumption, 85% of U.S. adults use digital news sources (Barthel & Mitchell, 2017).

Nyhan's (2016) analysis of Guess's (2016) report notes that media consumption is centered on a relatively small number of users who consume a much greater amount of news than the average user. This is consistent with the Pew findings that add the idea that partisan

news consumers read or watch the most news and also participate most heavily in the political process, increasing the importance of partisan sites (Barthel & Mitchell, 2017).

The Guess (2016) study used alignment scores created by Bakshy et al. (2015) that ranked 500 news sites by analyzing Facebook data. Bakshy et al. identified which news sources were most shared by self-identified liberals and conservatives while Budak et al. (2016) relied on crowdsourcing to rate news and opinion articles from various sites, without revealing the names of the sites. Both found Yahoo! news to be as close to non-partisan as possible. Budak et al. found Reuters as similarly centrist while Guess added MSN.com as a centrist. Budak et al. (2016) went further, separating news articles from opinion articles and found that many sites had very centrist news, but skewed clearly to one side when it came to opinion. The Washington Post, BBC News, and CNN were centrist, or leaned slightly left for both sets of data, while the furthest outliers were Daily Kos on the left, and Fox News and Breitbart on the right. They found that Fox's new stories were right of center, while Huffington Post and The New York Times leaned similarly to the left. The opinion articles on Fox News were judged to be the furthest from center. Breitbart showed the highest levels of bias in straight news stories and was also biased in opinion stories.

Because of the large data set available from Facebook in the Bakshy et al. (2015) study, they were able to determine the alignment scores for a wide variety of sources, though without the ability to focus on different types of articles or ask specific questions. This study agreed with Budak et al. (2016) in that *Breitbart* and *Fox News* were on the extremes when it comes to partisan news. Bakshy et al. (2015) place *The Blaze* and *Townhall* on the far right as well. Notable outlets to the left of center included *The New York Times, The Los Angeles* 

Times, and Huffington Post, while the right-of-center sites included the Wall Street Journal and The New York Post (Guess, 2016). An interesting difference in the two studies is that one (Budak et al., 2016) hid the name of the outlet from the people judging each article for bias, while the other relied on what people were reading and sharing on Facebook; those readers clearly knew which sites they were using. The differences in methodology but similar results indicate that what we have learned about these sites and their biases is fairly accurate. The differences also raise an important distinction, though. One measures the bias of the journalists, while the other measures whether partisans prefer the site. While there are similarities in the results, they don't match up exactly. Liberals were more likely to use mostly centrist sites, while there were more conservatives in the right-wing bubble.

#### **Explication of key terms**

The main factor linking typography to surface credibility is that it contributes to the idea that a site is professionally designed. A site that utilizes professionally designed type, for the purposes of this study, will use type styles in line with current trends, such as simplicity and readability. Though not always related to typography, some sites lose credibility by mixing advertising in with content (Walther, Wang, & Loh, 2004). One way sites often differentiate these advertisements is through subtle changes in typography instead of clear labels that the content is a paid ad. Graphic design textbooks (R. Carter et al., 2014; Lester, 2011) define rules of type usage — such as using only one type style (like underline, italics, or bold) to add emphasis to a specific piece of text — to maintain legibility and professionalism. Other rules include limiting the overall design to two or three complementary font families, and not using multiple font families for similar purposes (for

example, two unique, but similar fonts for headlines). Professionalism also comes with clear hierarchy of headlines, which leads to easy-to-recognize organization. It should be clear which stories are most important through the use of type size and style. A final key to professional typography, especially in larger text like headlines, is attention to detail in letter spacing. Some fonts will seem to have too much space between letters at a larger size, and a professional designer will correct for this. All of these rules (Golombiski & Hagen, 2015; Strizver, 2010) have been applied to the sites analyzed in this study by the coders when determining whether each site uses type in a professional manner.

Appropriate use of type is the second key factor in credibility. Which kinds of typography is appropriate for each site is where the current study examines the different usage of typography for slightly categories of news sites. There is no current research on the appropriateness of type for partisan news sites, though there are best practices for news design and web design overall. While a variety of choices may lend credibility via professionalism, some may be used to distinguish the site as left- or right-leaning or nonpartisan. This examination of current usage will allow designers and editors to make more informed decisions about what type of site they wish to present. These typography choices may lend more credibility to a site among certain groups than other choices, even if they all look professionally designed.

#### **RESEARCH QUESTIONS**

As designers of news sites try to create surface credibility with typography, they may make different choices if they are targeting partisans of either side or nonpartisans. Liberal sites and conservative sites may make similar or different choices in an attempt to appear outside the mainstream or they may choose to appear more credible and professional through traditional design choices that match the mainstream, nonpartisan media outlets.

RQ1: Do slanted liberal, slanted conservative, and nonpartisan news sites use typography differently?

RQ2: Do news sites preferred by liberals, conservatives, and nonpartisans use typography differently?

RQ3: Do the most trusted sites, regardless of reader partisanship, use typography differently than less-trusted sites?

Some sites are fairly mainstream or centrist, but trusted more by liberals or conservatives. An examination of these sites may show different results than grouping the sites strictly by the partisanship of their content. This question may also speak more to user preferences and credibility among the specific audiences. One question examines the intent of the editors and designers, while the second and third may offer insight into the users' perceptions. These questions do not attempt to answer the intent of the sites' owners or designers, but begin to analyze the differences in type usage among these sites.

#### **METHODOLOGY**

The study will provide a systematic analysis of typography choices made by site designers across the ideological spectrum. The results can be analyzed and broken down two ways. The sites were grouped based on the perceived bias of news and opinion stories as ranked by Budak et al. (2016). Another grouping was by which sites are most shared by self-identified liberals and conservatives as identified by Bakshy et al. (2015) and those identified as most trusted by partisans in the Kearney study (2017). One is more focused on the political leanings of the journalists, the other on the audience's perceptions and usages of the sites.

The current study will use these findings to identify three categories of news sites:

- 1. Partisan liberal sites
- 2. Partisan conservative sites
- 3. Mainstream nonpartisan sites

Those same sites will then be grouped by audience:

- 1. Left or center-left sites favored by liberals
- 2. Right or center-right sites favored by conservatives
- 3. Sites used by nonpartisans and people across the ideological spectrum.

#### And finally, by trust:

- 1. Sites identified as trustworthy by a wide audience
- 2. Sites trusted by liberals
- 3. Sites trusted by conservatives

Since credibility is based on perceptions, the perceptions of a site's users are just as important in judging credibility as the actual bias shown in news and opinion articles. The New York Times is a good example of this difference. Budak et al. (2016) found the Times'

news coverage to be nearly nonpartisan, and, since the Times employs both liberal and conservative opinion writers, the opinion section leaned left, but not nearly as much as partisan sites. Guess (2016) found, however, that more self-identified liberals read the Times' stories. In the first grouping, then, the Times would be a centrist outlet, but in the audience alignment ranking, it could be grouped with the more liberal sites.

Another possible distinction to watch for among the sites is whether a site has a history in print, television, or other media, or if the site began as, and remains, an online-only publication. This may have an influence on how the site was designed, as some sites may wish to reflect the look and feel of their other products.

For each site studied, font characteristics will be measured for body text and main headline on the story-level page, and for the various levels of headlines and links on the home page. Other display type, such as pullout quotes or other highlights were considered, but were not added to the analysis after a pretest examination of the sites. Multiple days were checked to ensure that each site used a consistent design template.

Each piece of type was characterized by font family into the groups outlined: first, by serif or sans serif, then, within those categories by modernity. Serifs are classified as old style, transitional, or modern, while sans serifs are grotesque, humanist, or geometric. All of the types' sizes, weights (boldness), and widths (regular-width, condensed, or extended) will be noted. Any use of all caps, underline, or italics will also be recorded.

Web design sometimes relies on the user's available fonts, so a site may not always display the same on every screen. For this reason, the WhatFont? tool, a third-party extension of Google Chrome, will be used to examine the underlying code of the website to

determine the first-choice font family and weight of each typeface. WhatFont? will identify exact fonts, sizes, and weights. Measurements will be taken on the desktop, not mobile site, as sizes and other attributes may be adjusted for smaller screens on the mobile version.

Data collection would begin with a database entry for each site. Included fields:

- Site name:
- url:
- *News content slant*: Far left, Center-left, Center, Center-right, Far right. This would be based on the biases found by Budak et al. (2016).
- Audience alignment: Far left, Center-left, Center, Center-right, Far right. This would be based on the alignment rankings from the Bakshy (2015) study.
- *Trusted*: -2 to 2. Based on the Kearney study (2017), is the site among the most (2) or least (-2) trusted news sources? If the site is not listed, it is scored with neutral trust (0).
- *Trusted by partisans*: -2 to 2. Also based on Kearney (2017), is the site listed among those most trusted by liberals (-2) or conservatives (2)? Sites that were not mentioned will be given a neutral score (0).
- *Professionally designed typography*: Yes or No. The overall impression of the use of typography, based on current trends. This is a subjective classification by the researcher, but can be based on general rules found in design textbooks (R. Carter et al., 2014; Golombiski & Hagen, 2015). If the coders are unsure, or considers the site to be somewhat professionally designed but with some problems or errors, it was classified as professionally designed.

For each font tracked, the same entries would apply. Data will be recorded for the following font usages:

- Main headline, home page
- Secondary headlines, home page
- Story lists (such as a "Latest News" widget)
- Main headline, story-level

Each entry would contain this data (Main headline, home page is used as an example):

- Main headline, home page:
  - Font family: Lists the exact typeface to help coders check or identify the category. Specific category: Old style, Transitional, Modern, Grotesque, Humanist, Geometric
  - o Category: Serif, Sans serif
  - 0 Weight: Normal, Bold, Light
  - o Style: Caps, Italic, Underline, or a combination of these
  - o Width: Normal, condensed, extended
  - o Notes:

#### Sites included in the study

News	Partisan	Audience	Trusted by	Trusted
organization	content slant	Alignment	partisans	overall
DailyKos	-2	-2	0	0
The Nation	-2	-2	-2	0
Huffington Post	-2	-2	-2	-1
The Atlantic	-1	-2	-2	0
The N.Y Times	-1	-2	0	1
The L.A. Times	-1	-1	0	2
CNN	0	-1	0	0
BBC	0	-1	0	2
The Washington Post	0	-1	-2	2
NBC News	0	-1	0	0
Chicago Tribune	0	-1	0	0
Reuters	0	0	0	2
USA Today	0	0	0	1
Yahoo! News	0	0	0	-1
Wall St. Journal	1	1	2	2
The N.Y. Post	1	2	2	0
Info Wars	2	2	2	-1
Fox News	2	2	2	-1
The Blaze	2	2	2	-1
Breitbart	2	2	2	-1

The list includes six sites that are liberal and six that are conservative, both in their own slant (Budak et al., 2016) and in the way partisans share their content (Bakshy et al., 2015). The study will also examine seven nonpartisan sites, as defined in the Budak study (2016). Five of these have a liberal alignment score from the Bakshy study (2015).

Unfortunately, there were no nonpartisan sites identified that were shared more commonly by conservatives, which limits the study. There are also five sites that were not covered by the Bakshy study, and were judged based on reputation: *The Nation* and *The Atlantic* were considered very liberal, while *InfoWars*, *The Blaze*, and *The New York Post* were classified as very conservative.

Additionally, the data set will include scores from a Reynolds Journalism Institute study (Kearney, 2017) that tracks user trust in news organizations. "As part of the survey, respondents were asked to name three sources of news they typically trust and three sources they typically do not trust" (Kearney, 2017). This study will use the results to identify sites that are the most and least trusted overall, and will also track the sites that are most trusted among partisans.

The initial data collection will take place over a one-week period in September 2017, and for a week after, each site will be checked for changes in the templates. It is possible that large news events will cause the sites to switch homepage templates. In a pre-study, the New York Times changed story placement and font size during coverage of Hurricane Harvey. The current study delayed data collection for that site. In the case of *The Times*, though, the font selection was consistent before and after the template change. Even so, it is best to make sure that all sites are using their standard designs for the study.

Data was entered into a database to allow the study to examine different groupings of the news sites. Sites can be grouped by their own partisan lean or by the audience's perceptions of each site.

Other studies looking at design decisions have attempted to alter the design and then survey users (Fogg et al., 2001), but when it comes to typography among partisan sites, there is not enough research on which to base a hypothesis. Others have interviewed users about site design and credibility (Shaw, 2010), but a small sample of interviews could not cover the various partisan leanings or reveal patterns, especially with so little previous research on which to base the interview questions.

An initial study must be done on the current usage of typography, and those results may lead to additional studies that resemble the studies on more general design related to source credibility. The coding allows this study to group the sites differently to examine possible similarities and distinctions. In one analysis, *The New York Times*, which leans slightly left according to Budak (2016), would be grouped with *Daily Kos* and *Huffington Post*, which lean further left. In another portion of the analysis, though, *The Times* might be compared with *The Wall Street Journal*, a publication that leans slightly to the right.

As these different groups were analyzed, a chi-square test of independence was employed where applicable to see if the results differ from what would be expected of a random sample. IBM's SPSS software was used to determine what the asymptotic significance of the data, or p-value. A p-value of 0.05 or less is desired to show a relationship and disprove the null hypothesis that there is no difference between the observed and expected outcomes (Runyon, Haber, Coleman, & Pittenger, 1996) among different groups of sites such as partisan and non-partisan sites or liberal, centrist, and conservative sites. For these chi-square tests, all expected counts should be at least one, with no more than 20% of the cells expected to be below five (Yates, Moore, & McCabe, 1999).

Most visual analyses are focused on photography, the biases of photograph selection, or the effects of photographs on the audience (Coleman & Wasike, 2003). A visual analysis of design issues is rare but may begin with a structured list of items to analyze. One study (Weber & Rall, 2012) examining interactive infographics listed variables for examination in each graphic, and then examined the data collected. Along with interviews, researchers examined the connection between visual appeal and journalistic integrity, but the content analysis focused on the exact nature of the graphics. They created a set of data that could be compared and analyzed by setting up a structure to break the graphic down into small parts of data that required little judgment on the part of the researcher.

Coleman and Wasike (2003), focused on the use of certain visuals in public journalism, trained coders to look for specific visual elements in a sampling of stories. Like Weber and Rall (2012), they set out with a specific list of visual items to put into the data set. Both studies looked at ten news outlets. The study that compared groups (Coleman & Wasike, 2003), put five newspapers into each group, while the other was looking trends in infographics at the ten sites studied.

#### Possible problems

There is some overlap in how certain sites use typography. With only a few options in the broader categories of typography, all sites, for example, use at least some serif and sans serif type. Much of the distinctions will be subtle and required the researchers to make those distinctions. Attempts are made to classify the type on specific criteria, but the idea that the typography is professionally designed is especially subjective. The reliability of the coder was checked by one other expert, who coded a sample of data points from four of the 20 sites

that might be interpreted differently. Another subjective data point was the distinctions between specific categories of the font families, such as an old-style serif and a transitional serif. The study used the typefaces' creators' published classifications on sites such as linotype.com. A pretest conducted of the main headlines on four sites has shown agreement between two coders on professional use of typography and the font styles and categories 100% of the time. Even so, because of the smaller sample size, it was necessary to use the more-generic, easily-identifiable categories for analysis.

The professionalism in the use of typography presented another problem. While four headlines, or groups of headlines, are recorded as data points for the other categories, the professional use of typography can only be coded once per website. This sets the number of data points at just 20, and, with only five judged as unprofessional type, the expected results among a random sample were too low to conduct a chi-square analysis. A larger sample is needed to analyze significant differences.

The Budak et al. (2016) study that measured the slant of news and opinion content is limited in the number of sites analyzed. The analysis of sites, therefore, was limited in scope and required the current study to group together sites with a subtle slant into the centrist group or the more heavily partisan group. The RJI study (Kearney, 2017) was also used group the papers into larger, less-specific categories, rather than breaking the trust level into five groups.

#### RESULTS

In all areas of the research, there was insufficient data to use the specific font families or the seven font categories, to draw conclusions. A chi-square analysis could not be conducted because very few sites use the same font families, and much larger sample size would be required to break the category into seven specific groups. With regard to the exact font families, there was very little commonality, with four organizations using proprietary fonts, not available to anyone else. Sites that chose serif fonts did have a tendency to use more modern styles. In fact, none of the sites used the old-style serifs for headlines, opting for modern or transitional serifs. There did not seem to be any patterns in the use of geometric, grotesque or humanist fonts among the sites that chose to use sans serif fonts.

The more generic categories of font families, serif and sans serif, did show up as significant in the chi-square tests of independence. Font width and the use of all caps were also significant in some groups. The use of bold and italic showed no significance in any of the tests. Bold was often applied to both serif and sans serif headlines on sites in all categories.

Overall, the majority of the headlines studied were sans serif, approximately 66%. All-caps style was used only 13% of the time, and condensed fonts were used for 24% of the headlines studied. Bold was used for 76% of all headlines studied. Sans serif fonts, combined with bold styles, are considered more masculine, as are the louder all-caps headlines. Lighter (not bold), lowercase serifs are considered more traditional and nuanced.

### RQ1: Do slanted liberal, slanted conservative, and nonpartisan news sites use typography differently?

Slanted sites, for the purpose of this study are those sites ranked by Budak, et al. (2016) as having a slant in the way they report the news. Respondents did not know where the stories came from when they rated the outlets, so this is based on content, not reputation. Five sites in the current study were not ranked by Budak and were chosen because of their well-known partisan leanings. *The Atlantic* and *The Nation* are likely more liberal than *The New York Times*, and have therefore been labeled as slanted liberal for the purposes of the study. On the conservative side, *Info Wars*, *The New York Post*, and *The Blaze* were deemed to be to the right of *The Wall Street Journal*. The websites were originally broken down into five categories from far-left to far-right. However, because of the low frequencies of some variables, categories had to be collapsed to conduct statistical tests. The results are significant regardless of whether center-left and center-right sites are grouped as partisans or as centrists, and show similar meaning, as seen in results tables 1 and 2.

When center-left and center-right sites like *The New York Times* and *The Wall Street Journal* were grouped with the partisan sites, centrist sites used 78% sans serif headlines, and conservative sites matched the pattern, at 79%. Slanted liberal sites, however, used serif fonts for 63% of their headlines. The chi-square analysis in results table 1 found a p-value of 0.002 indicating statistical significant difference (N=80,  $x^2$ =12.681).

#### Results Table 1: Content Slant by Headline Font Category

In this table, the center-left (*The New York Times* and *The Los Angeles Times*) and center-right (*The Wall St. Journal*) outlets are considered part of the more partisan groups, rather than part of the centrist group.

		Ser	if	S	ans serif
Left-leaning sites DailyKos The Nation Huffington Post The Atlantic The N.Y. Times The L.A. Times		15	62.5%	9	37.5%
Centrist sites  CNN  BBC  Washington Post  NBC  Chicago tribune  Reuters  USA Today  Yahoo! News		7	21.9%	25	78.1%
Right-leaning sites The Wall St. Journal N.Y. Post InfoWars Fox News The Blaze Breitbart		5	20.8%	19	79.2%
	Chi-squar	e =12.681	n=80	ŗ	=0.002

Grouping center-left and center-right websites into the centrist category in results table 2 changed the numbers, but provided similar insights. Centrist and liberal sites have similar numbers: 56-57% of the headlines use sans serif, while conservative sites' use of sans serif headlines jumps to 95%. The chi-square test indicated statistical significance, with a p-value of 0.007 (N=80,  $x^2$ =9.860).

#### Results Table 2: Content Slant by Headline Font Category

In this table, the center-left and center-right outlets are considered part of the centrist group.

		Serif	S	ans serif
Left-leaning sites DailyKos The Nation Huffington Post The Atlantic	7	43.8%	9	56.3%
Centrist sites  The N.Y. Times The L.A. Times CNN BBC Washington Post NBC Chicago tribune Reuters USA Today Yahoo! News The Wall St. Journal	19	43.2%	25	56.8%
Right-leaning sites  N.Y. Post InfoWars Fox News The Blaze Breitbart	1	5.0%	19	95.0%
Chi-square=9	.860	n=80	þ	=0.007

Font width is also significant to this question. As results table 3 shows, only 3% of headlines studied on nonpartisan sites, including those considered center-left or center-right, used condensed type. On the liberal side, slanted sites use condensed on 49% of headlines, and conservative sites use it 29% of the time. To ensure adequate sample size for statistical analysis, center-left and center-right sites had to be classified as partisan, and the chi-square test produced a p-value of 0.0001 (N=80,  $x^2=14.369$ ). If the center-left and center-right sites

are considered centrist, then the expected values for some categories are too low to conduct the chi-square analysis.

#### **Results Table 3: Content Slant by Headline Font Width**

In this grouping, the center-left and center-right outlets are considered part of the more partisan groups, rather than part of the centrist group.

		Normal	Condensed	
Left-leaning sites  DailyKos The Nation Huffington Post The Atlantic The N.Y. Times The L.A. Times	13	54.2%	11	45.8%
Centrist sites CNN BBC Washington Post NBC Chicago tribune Reuters USA Today Yahoo! News	31	96.9%	1	3.1%
Right-leaning sites  The Wall St. Journal N.Y. Post InfoWars Fox News The Blaze Breitbart	17	70.8%	7	29.2%
Chi-square=14	4.369	n=80	ŗ	o=0.001

The most partisan sites on both sides also show statistical significance in the chisquare test when grouped together and separated from the more centrist sites with a p-value of 0.049 (N=80,  $x^2$ =3.890). Results table 4 shows that partisan sites use more sans serif font families, 78%, compared to the nonpartisan group which uses sans serif in 56% of the headlines studied.

## **Results Table 4: Content Slant by Headline Font Category**

In this grouping, the left, center-left, right, and center-right outlets are all considered nonpartisan.

		Serif	Sa	ans serif
Partisan sites  DailyKos The Nation Huffington Post The Atlantic N.Y. Post InfoWars Fox News The Blaze Breitbart	8	22.2%	28	77.8%
Centrist sites The N.Y. Times The L.A. Times CNN BBC Washington Post NBC Chicago tribune Reuters USA Today Yahoo! News The Wall St. Journal	19	43.2%	25	56.8%
Chi-squ	are=3.890	n=80	p	=0.049

The most partisan sites also utilize more condensed type, 42% compared to 21% as seen in results table 5. The chi-square test produced a p-value of  $0.001(N=80, x^2=11.602)$ .

#### **Results Table 5: Content Slant by Headline Font Width**

In this grouping, the left, center-left, right, and center-right outlets are all considered centrist, or nonpartisan.

		Normal	C	ondensed
Partisan sites  DailyKos The Nation Huffington Post The Atlantic N.Y. Post InfoWars Fox News The Blaze Breitbart	8	22.2%	28	77.8%
Centrist sites The N.Y. Times The L.A. Times CNN BBC Washington Post NBC Chicago tribune Reuters USA Today Yahoo! News The Wall St. Journal	40	90.9%	4	9.1%
Chi-square=1	1.602	n=80		p=0.001

Those same partisan sites were also less likely to use professional typography — 56% of partisan sites are judged to be professional compared to 91% of the nonpartisan sites, and

they use all-caps on 28% of the headlines measured, compared to none in the nonpartisan group. The sample sizes, however, were too small to conduct a chi-square analysis.

# RQ2: Do the sites preferred by liberals, conservatives, and nonpartisans use typography differently?

To identify outlets preferred by liberals, conservatives, and nonpartisans, the current study relies on two recent studies (Bakshy et al., 2015; Kearney, 2017). Bakshy used Facebook data to see which news stories were shared by self-identified partisans, and Kearney asked respondents which news outlets they trusted most. These results can be compared with data from the current study to examine which fonts and styles are used by sites that different groups of users prefer. As in the previous question, the five-point scale is reduced to three a sufficient sample size for the use of a chi-square analysis. Many of the news stories shared by liberals in the Bakshy (2015) study were from outlets that Kearney (2017) found to be nonpartisan in terms of editorial slant.

Sites shared on Facebook by partisans showed many differences in typography based on the alignment scores of the audience as measured by Bakshy et al. (2015), which is shown in results table 6. The sample produced results that could be analyzed with a chi-square test when sites aligned with a center-left or center-right audience were included in the centrist group. The results were statistically significant, with a p-value of 0.009 (N=80,  $x^2$ =9.453). In this group, the sites shared by centrists (or equally by people on both sides of the ideological spectrum) used sans serif fonts in 66% of the headlines measured. Those shared most by conservatives used many more sans serif headlines, 94% sans serif and only 6.3% serif. Websites shared by liberals, on the other hand, use sans serif in just 45% of their headlines — 55% are serif.

#### Results Table 6: Audience Alignment by Headline Font Category

In this table, the center-left and center-right outlets are considered part of the centrist group.

		Serif	s	ans serif
Shared by liberals DailyKos The Nation Huffington Post The Atlantic The N.Y. Times	11	55.0%	9	45.0%
Shared by Centrists  The L.A. Times CNN BBC Washington Post NBC Chicago tribune Reuters USA Today Yahoo! News The Wall St. Journal N.Y. Post	15	34.1%	29	65.9%
Shared by conservatives InfoWars Fox News The Blaze Breitbart	1	6.3%	15	93.8%
Chi-square=9	.453	n=80		0.009

Additionally, the sites shared the most by all partisans — regardless of ideology—

had some commonality. Only 45% are considered to use typography professionally, compared to 91% of the sites shared by centrists. Chi-square test analysis was not appropriate for this data, given the low sample size.

Websites shared by partisans also use more condensed type and all-caps in their headlines. Again, the chi-square test could not be used because of the scarcity of all caps headlines in the data. Websites shared by partisans used all-caps in 28% of their headlines, accounting for all of the uses of this style measured in this study. The websites shared by

centrists mostly avoid condensed type, only using it for 9% of the headlines, while it is much more common on the sites shared by partisans, appearing in 24% of those headlines.

Sites identified by Kearney (2017) as being trusted by partisan conservatives used sans serif font families for 95% of the headlines examined. Those trusted most by partisan liberals, on the other hand, used only 38% sans serif (63% serif). Centrist organizations or websites not mentioned as trusted by either set of partisans used more sans serif headlines, 64%, but not nearly as many as the sites trusted by the right. Refer to results table 7 for a breakdown of these data, which are statistically significant according the chi-square test that produced a p-value of 0.001 (N=80,  $x^2$ =13.443).

#### Results Table 7: Partisan Trust by Headline Font Category

These categories are grouped as they were originally coded, into three categories of partisan trust.

		Serif	S	ans serif
Trusted by liberals  The Nation Huffington Post The Atlantic Washington Post	10	62.5%	6	37.5%
Neutral trust  DailyKos The N.Y. Times The L.A. Times CNN BBC NBC Chicago tribune Reuters USA Today Yahoo! News The Wall St. Journal	16	36.4%	28	63.6%
Trusted by conservatives  N.Y. Post InfoWars Fox News The Blaze Breitbart	1	5.0%	19	95.0%
Chi-square=13	3.443	n=80	ŗ	0=0.001

Other aspects of the typography when measured against partisan trust, had unacceptably-low expected values and therefore could not be analyzed using the chi-square test.

# RQ3: Do the most trusted sites use typography differently than less-trusted sites?

For this question, the current study again relies on Kearny (2017) to identify sites that are trusted by respondents, but examines those that are considered trustworthy (or not)

regardless of the respondents' political affiliations. Organizations that received a neutral score or labeled as distrusted were grouped together as not trusted. Many of the neutral scores came from partisan sites that were trusted by some partisans and distrusted by others Also, any news organization not mentioned by the respondents is given a neutral score.

Most of these data were inconclusive because too many categories had low expected values, making it impossible to run a chi-square analysis. The most trusted sites according to Kearney (2017), though, all used typography professionally, while only half of those sites with the lowest trust score were professionally designed. A chi-square test was used to measure trust against the width of the type, but the results were insignificant. The sites mentioned as trustworthy by respondents were, however, more likely to use serif type. Websites of the trusted publications used both categories of typography — 54% of their headlines are serif and the remaining 46% are sans serif. The neutral and untrustworthy sites use more sans serifs. Sans serif font families accounted for 77% of those headlines as shown

in results table 8. The chi-square test placed the p-value for this analysis at 0.006 (N=80,  $x^2$ =7.569).

### Results Table 8: Overall Trust by Headline Font Category

Organizations with a positive trust rating are considered trusted, while any organization receiving a neutral score or worse is labeled not trusted.

		Serif	S	ans serif
Untrustworthy sites  DailyKos The Nation Huffington Post The Atlantic CNN NBC Chicago tribune Yahoo! News N.Y. Post InfoWars Fox News The Blaze Breitbart	12	23.1%	40	76.9%
Trustworthy sites  The N.Y. Times The L.A. Times BBC Washington Post Reuters USA Today The Wall St. Journal	15	53.6%	13	46.4%
Chi-square	=7.569	n=80	p	=0.006

#### **ANALYSIS AND CONCLUSIONS**

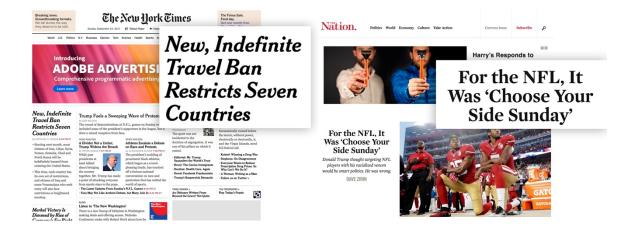
Research into the credibility of websites based on design is not new, but even a focus on the general credibility of typography has not been explored with much rigor or specific purpose. Most writings on the credibility of typography are listed among the rules of graphic design in textbooks. Designers are considered the experts in this field, but analysis of reader habits has not been done when it comes to specific typographic decisions. To go a step further and look at different political semiotics of typography is uncharted territory when it comes to academic studies. The previous writings on this topic are mostly by design experts who share their own opinions on specific usages. These experts create a base of ideas that may be expanded upon. The current research examined whether sites with certain political leanings use typography differently. Professionally designed sites, especially, serve as insight into whether the designers make conscious choices about typography for sites with either left or right political leanings, and if nonpartisan sites stand out with specific usages of typography not found in partisan sites.

Overall, there are indeed differences in the way partisan and nonpartisan websites use typography in their news sites. Whether you examine which sites are preferred by partisan users or the designs approved by the management of organizations with slanted content, the distinctions are clear. There are identifiable differences in all three research questions.

# Slanted news sites use typography differently

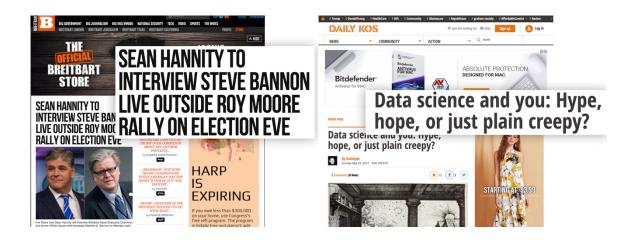
The category of font family is the most important difference discovered in the current study. Nonpartisan websites do not seem to use serifs or sans serifs more often, but depending on how you classify the sites that lean slightly left and right, you will see a

preference for sans serif. Liberal and center-left websites use many more serif headlines than centrists or conservatives. The *Nation* and the *New York Times* are examples of these sites.



Headlines on The New York Times and The Nation websites.

However, if we only examine the most partisan sites, those given the most heavily-partisan scores by Budak (2016), then all of those partisan sites use sans serif for the majority of their headlines, and for all of their larger headlines. This group only includes four websites. See examples from *DailyKos* and *Breitbart*. The only serifs used on any of these sites are the small lists on Breitbart.



Headlines on Breitbart and DailyKos websites.

Most of the websites with a history in print also use more serif headlines, but on the conservative side of the spectrum is where the exceptions lie. While the center-right *Wall Street Journal* uses serifs, the more partisan *New York Post* and the centrist, national newspaper, *USA Today*, use sans serifs for all of their heads.



Headlines on The Wall St. Journal and New York Post websites.

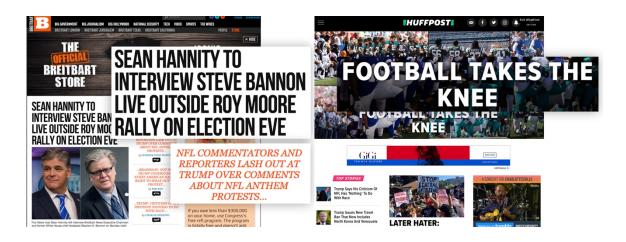
While *USA Today* is an outlier, the most-slanted sites use more sans serif, and this may be, partially, because of their online roots. These sites were never part of the print world, and while they may choose sans serif because of the modern usage of the fonts, it may also be a way to differentiate their identities from the mainstream media. Although the *New York Post*, who uses sans serifs, also has a print legacy, it is known as more of an outsider in the newspaper world.

Examining the typography relative to editorial slant is all about the design choices approved by management. This is how the editors or owners wish to present themselves.

Johnson and Kaye (2004) found that many blog readers prefer the partisan slant, and this

attempt to differentiate themselves is likely a driving factor in the decision to look different from established, mainstream outlets, as decision makers at partisan sites are likely to target this type of news consumer.

Another unconventional use of typography in the partisan outlets was the use of all caps and condensed type. The conservative *Breitbart* and the liberal *Huffington Post* use both on their main, home-page headlines. *Breitbart* also uses the style for story-level headlines, and the *Huffington Post* uses it for secondary homepage headlines. In another twist on these styles, *Breitbart* uses a combination of all caps and italic serifs for latest-news lists, a combination that appears nowhere else in the study.



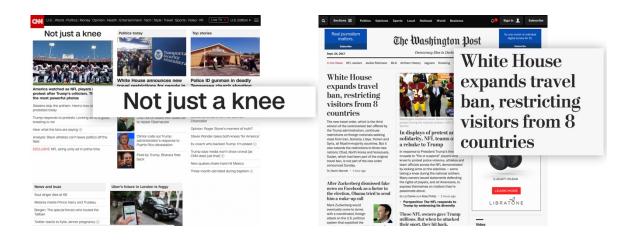
Headlines on Breitbart and Huffington Post websites.

Again, these breaks from traditional design appear to be attempts to differentiate themselves visually from traditional, mainstream outlets.

#### Sites preferred by liberals and conservatives use different typography

With most of the audience alignment numbers matching up with the content slant, the results are similar to RQ1. Partisan liberals, however, were more likely to share articles from more-centrist websites and more likely to trust centrist sites than the conservatives in the group. Despite the centrist sites using more sans serif headlines, and some very partisan liberal sites using sans serifs, the liberals studied by Bakshy (2015) and Kearny (2017) preferred websites with serif heads.

Liberal news consumers may be attracted to the traditional design and typography for many reasons, but it is possible that part of the difference lies in the fact that they are more likely to search for traditional, nonpartisan news. The most partisan, left-leaning site in the current study, *DailyKos*, while shared more by liberals, is not listed as a trusted source even by partisans on the left. The opposite sites, like *Breitbart*, *The Blaze*, and *InfoWars* on the right, are all considered trustworthy by partisan conservatives. On the left, the most-shared and trusted partisan sources are more traditional outlets like the *Nation* and the *Atlantic*, both older, print-based media. Liberals also trust and share more centrist sites like *CNN* and *The Washington Post*.



Headlines on CNN and The Washington Post websites.

So while the strongest differences in typography land on the extremes in slanted media, liberal news consumers do prefer some sites with sans serif heads. The sites preferred by liberals that use sans serifs, though, are centrist outlets like *CNN* and the *BBC*. The conservatives tend to trust and share the most right-leaning sites, which use, almost exclusively, sans serif headlines.

There may be emotional or subconscious meaning to these typefaces. Serif type, in addition to being more traditional, is often described as safe or nuanced and is reminiscent of textbooks, while the bolder sans serifs seen on conservative sites are described as simple, strong, and masculine (R. Carter et al., 2014; Dadich, 2009; Lester, 2011). It is possible that masculinity in typography is reflective of the more patriarchal tendencies of today's conservatism. These traits could be a factor in surface credibility and how partisans perceive the different websites. All caps is another style associated with sites preferred by partisans, especially on the right, such as *Fox News* and *Info Wars*, and is often equated with shouting over someone in email and other electronic correspondence (Robb, 2014).



Headlines on Fox News and InfoWars websites.

People who prefer these highly partisan sites may also be more comfortable with these headlines, likely subconsciously, because they are not open to opposing views. The only site preferred by liberals that uses prominent all caps was *The Huffington Post*. The websites preferred most by nonpartisans did not use any all-caps headlines, preferring a quieter presentation. Based on their preference for more centrist sites and multiple points of view, it is possible that liberals and nonpartisans would prefer more nuanced, complex typography.

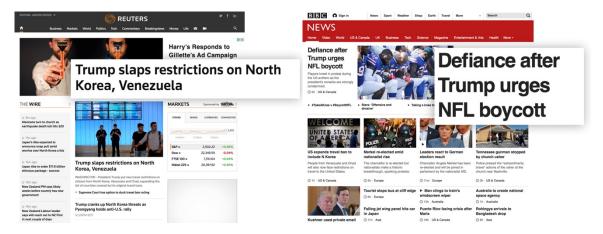
### The most trusted news websites use typography differently than lesstrusted sites

When it comes to overall trust as measured by Kearney (2017), the websites in the study with serif headlines are more often trusted, though the reason for significance is the large number of sans serifs used by less-trustworthy sites. The only site with a conservative slant to be trusted across party lines is the *Wall Street Journal*, which shares the serif type of more liberal, trusted sites like sites like the *Los Angeles Times*.



Headlines on The Wall St. Journal and Los Angeles Times websites.

There are also trusted websites using sans serif, however, and although most of the distrusted sites use it, it does not appear to harm the credibility of a site that has built a reputation like *Reuters* or the *BBC*.



Headlines on the Reuters and BBC websites.

Surface credibility is about quick, subconscious judgments and can be outweighed in the long run by more important criteria as a consumer gets to know and rely on a certain brand of media. These websites, with their different usages of typography, are viewed as credible by a variety of people. This study is unable to separate the surface credibility of the sites from the other forms of credibility, but it does find a significant difference in the usages of fonts and styles based on editorial slant, the partisan leanings of the user, and the overall credibility of the news organization.

#### Discussion and suggestions for future research

One way surface credibility and the rules of good design are created is the repeated use of visual cues by influential and trusted sources. An unknown source can create an impression of trust through the use of similar visuals. As partisans are exposed to different

typography and design in the sources they trust, they will likely make different surface credibility judgments for websites that they have never seen based on the design choices of the sites they already trust.

The current study begins to explore the use of typography in terms of partisanship and credibility, and could be built upon to examine the issue in more detail. Now that patterns on how different news websites use type have been observed, more work could be done with a narrower focus on serif and sans serif type or the use of all caps among a larger data set. The focus could also turn to the user's perceptions. It would be possible to design a study that measures users' opinions directly through surveys or elicitation interviews with a variety of news consumers about experimental redesigns of established sites, or about different designs of an experimental news site.

One shortcoming in the data of the current study is the inability to analyze the overall professionalism of the site's typography. While this was recorded in the data, only 20 sites were studied, and breaking them into categories left a data set with very low expected counts in the non-professional cells. It was not possible to employ a chi-square test on any of the data. It would be necessary to expand the study greatly to include a much larger sample size that would allow for chi-square analysis. Multiple expert coders would need to be employed, also, to ensure reliable data on this point, as this data point is the most subjective in the current study. The current study did find meaningful differences, though, and further study on the professionalism of typography as it relates to trust would be useful.

Other data in the current study with low expected values, but possible significance, are the usage of all-caps headlines. With few sites using them, this data was often not testable

against the null hypothesis because a relatively small number of sites use the style frequently.

This, however, would be easier to expand upon, with a larger data set within the methodology used in the current study. Italics were also rarely used overall and could not be tested for significance.

The current study also outlines possible ways to make sites look more conservative or more liberal through the use of typography. This knowledge could be used to create more detailed, user-centered studies. Would the average user trust a site with slanted headlines if it were designed to look more like the sites he or she already trusts? Experiments could also be designed to test, for example, if a partisan is more likely to read a story if the design matches the other sites that he or she normally uses and trusts. This could be tested through interviews, surveys, or blind usage testing.

Further study could also be explored in the use of type size. The use of all caps on the partisan sites indicates that font size could have a similar usage — to shout opinions at the audience, whether they agree or disagree with the partisan opinions contained on the site, with little expectation of nuanced arguments from both sides.

Over time, surface credibility is outweighed by deeper credibility related to the content (Fogg, 2003), but with the information about what current sites are doing with typography, and how sites trusted by partisans are designed, another study could explore whether typography could help news sites, partisan or otherwise, begin to break into partisan bubbles. Could a liberal website get a second look from conservatives if it uses more masculine, condensed sans serifs? Could a more traditional design with nuanced, serif fonts help a conservative start up reach a more liberal audience? It's possible. More likely, however,

is that the data is used to match a new site to its target audience. One unanswered question is, "How does a centrist news site use typography?" It seems from these initial findings that conservative and liberal sites have certain characteristics, but the centrist sites are split between those two. Perhaps a deeper look only at sites closer to the center could identify them by slight leanings, or perhaps there is not a specific look that makes a site look neutral. News organizations often strive for objectivity, but it seems as though sites do have to choose typography that presents them, in terms of surface credibility, as more liberal or conservative when it comes to typography.

So to redesign an existing site or start a new site from scratch, how should editors and designers choose typography if they would like to present themselves as a nonpartisan, trustworthy news organization? Centrist websites in the study used a variety of fonts, but there were clear indications of partisanship: San serifs, condensed fonts, and all caps. A presentation that strives for credibility among open minded, less partisan users should use serif headline fonts, and keep the type simple, with little use of styles like bold and all caps. While not all of the most trusted or least partisan sites utilize this type of design, the sites that are the most partisan, and least trusted, share a very specific look which should be avoided. While it may be helpful to change styles on centrist sites that use more partisan typography, many of these sites have a well-defined reputation and their users would be less likely to be influenced by the surface credibility of web design. For a newer news, site, however, this design change could be much more influential as users make their initial, surface credibility assessments.

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#### **APPENDIX**

#### **Definitions of coded data**

Audience alignment: (-2) Far-left, (-1) Center-left, (0) Center, (1) Center-right, (2) Far-right. This score is based on the alignment rankings from the Bakshy (2015) study. Any site with an alignment score more than 0.50 from center is considered "far" right or left.

Anything within 0.25 of center is considered to be in the ideological center.

Content slant: (-2) Slanted very liberal, (-1) Slanted Liberal, (0) Nonpartisan, (1) Slanted conservative, (2) Slanted very conservative. This is based on the biases found by Budak et al. (2016). Any outlet with a score less than 0.02 from center is considered centrist. A score more than 0.20 from center is considered far-right or far-left.

Trusted: (-2) Most distrusted, (-1) Distrusted, (0) Neutral, (1) Trusted, (2) Most trusted. Based on the ratio of mentions as being a trusted, or untrusted news source in the Kearney study (2017). A score of 0.375 to 0.625 is considered neutral. Anything more than .25 from the center is considered most trusted or distrusted. Sites that are not mentioned will be given a neutral score (0).

Trusted by partisans: (-2) Most trusted by liberals, (0) Neutral, (2) Most trusted by conservatives. Also based on Kearney (2017), any site with a score more than 0.5 from center (0), will be considered most trusted. Sites closer to the center are not ranked in this portion of the study, and will be given a neutral score (0).

Professional typography: Does the design use typography in a professional manner?

This will be determined by the main coder and checked by at least one other design expert.

Font family: The font family as identified by the CSS or html code embedded in the web page. This will be determined with the use of a Google Chrome plugin called WhatFont? that is available for free download and use.

Font category: Each font family will be categorized by its characteristics. It will be placed into one of the following categories: (1) Old style Serif, (2) Modern Serif, (3) Transitional Serif, (4) Slab Serif, (5) Grotesque Sans, (6) Geometric Sans, (7) Humanist Sans. This code will be checked for reliability by an outside expert if the description of the font family is not available from the owner or creator of the font. If the font owner or creator does not classify it, this study will rely on expert sites like Font Pool, Font Spring, and, if necessary, the crowdsourced site Wikipedia.

Font category (generic): Specific font categories can be directly translated into more generic categories. There should be no dispute between these categories as they are easily identifiable. Any font characterized as 1, 2, or 3 in the specific categorization will be classified generically as a (1) serif. Any font characterized as 5, 6, or 7 in the specific categorization will be classified generically as a (3) sans serif. (2) Slab serifs will be categorized on their own, but may be included with (1) serifs for analysis. The current study included no slab serif headlines.

Font styles: Within the font family, WhatFont? will be used to determine the exact typeface, including style, for each headline. Styles include underlines, italics, and non-standard capitalization. While bold is often considered a type style, it is recorded separately in the data.

Font weight: Within the font family, WhatFont? will be used to determine the exact typeface, including weight, for each headline. Most often, this will be classified as normal weight or bold, but it is possible to use a light variation as well.

Font width: Within the font family, WhatFont? will be used to determine the exact typeface, including width, for each headline. Most often, this will be classified as standard width, condensed, or extended.

*Legacy format*: If the organization is based on a publication outside of the internet, it will be noted here: (1) online only, (2) print, (3) television, (4) wire service.

#### **Results tables**

## **Results Table 1: Content Slant by Headline Font Category**

In this table, the center-left (*The New York Times* and *The Los Angeles Times*) and center-right (*The Wall St. Journal*) outlets are considered part of the more partisan groups, rather than part of the centrist group.

		Ser	if	S	ans serif
Left-leaning sites DailyKos The Nation Huffington Post The Atlantic The N.Y. Times The L.A. Times		15	62.5%	9	37.5%
Centrist sites  CNN  BBC  Washington Post  NBC  Chicago tribune  Reuters  USA Today  Yahoo! News		7	21.9%	25	78.1%
Right-leaning sites The Wall St. Journal N.Y. Post InfoWars Fox News The Blaze Breitbart		5	20.8%	19	79.2%
	Chi-squar	e =12.681	n=80	þ	=0.002

# **Results Table 2: Content Slant by Headline Font Category**

In this table, the center-left and center-right outlets are considered part of the centrist group.

		Serif	S	ans serif
Left-leaning sites  DailyKos  The Nation  Huffington Post  The Atlantic	7	43.8%	9	56.3%
Centrist sites  The N.Y. Times The L.A. Times CNN BBC Washington Post NBC Chicago tribune Reuters USA Today Yahoo! News The Wall St. Journal	19	43.2%	25	56.8%
Right-leaning sites  N.Y. Post InfoWars Fox News The Blaze Breitbart	1	5.0%	19	95.0%
Chi-square=9	9.860	n=80	þ	=0.007

# Results Table 3: Content Slant by Headline Font Width

In this grouping, the center-left and center-right outlets are considered part of the more partisan groups, rather than part of the centrist group.

		Normal	Condensed	
Left-leaning sites  DailyKos The Nation Huffington Post The Atlantic The N.Y. Times The L.A. Times	13	54.2%	11	45.8%
Centrist sites CNN BBC Washington Post NBC Chicago tribune Reuters USA Today Yahoo! News	31	96.9%	1	3.1%
Right-leaning sites  The Wall St. Journal  N.Y. Post InfoWars Fox News The Blaze Breitbart	17	70.8%	7	29.2%
Chi-square=1	4.369	n=80	ŗ	=0.001

# **Results Table 4: Content Slant by Headline Font Category**

In this grouping, the left, center-left, right, and center-right outlets are all considered nonpartisan.

		Serif	Sa	ans serif
Partisan sites  DailyKos The Nation Huffington Post The Atlantic N.Y. Post InfoWars Fox News The Blaze Breitbart	8	22.2%	28	77.8%
Centrist sites The N.Y. Times The L.A. Times CNN BBC Washington Post NBC Chicago tribune Reuters USA Today Yahoo! News The Wall St. Journal	19	43.2%	25	56.8%
Chi-squ	are=3.890	n=80	р	=0.049

# Results Table 5: Content Slant by Headline Font Width

In this grouping, the left, center-left, right, and center-right outlets are all considered centrist, or nonpartisan.

		Normal	Co	ondensed
Partisan sites DailyKos The Nation Huffington Post The Atlantic N.Y. Post InfoWars Fox News The Blaze Breitbart	8	22.2%	28	77.8%
Centrist sites  The N.Y. Times The L.A. Times CNN BBC Washington Post NBC Chicago tribune Reuters USA Today Yahoo! News The Wall St. Journal	40	90.9%	4	9.1%
Chi-square=1	1.602	n=80	ŗ	o=0.001

# Results Table 6: Audience Alignment by Headline Font Category

In this table, the center-left and center-right outlets are considered part of the centrist group.

	Serif		Sans serif	
Shared by liberals DailyKos The Nation Huffington Post The Atlantic The N.Y. Times	11	55.0%	9	45.0%
Shared by Centrists  The L.A. Times CNN BBC Washington Post NBC Chicago tribune Reuters USA Today Yahoo! News The Wall St. Journal N.Y. Post	15	34.1%	29	65.9%
Shared by conservatives InfoWars Fox News The Blaze Breitbart	1	6.3%	15	93.8%
Chi-square=9	9.453	n=80	ŀ	0.009

# Results Table 7: Partisan Trust by Headline Font Category

These categories are grouped as they were originally coded, into three categories of partisan trust.

	Serif		Sans serif	
Trusted by liberals The Nation Huffington Post The Atlantic Washington Post	10	62.5%	6	37.5%
Neutral trust  DailyKos The N.Y. Times The L.A. Times CNN BBC NBC Chicago tribune Reuters USA Today Yahoo! News The Wall St. Journal	16	36.4%	28	63.6%
Trusted by conservatives  N.Y. Post InfoWars Fox News The Blaze Breitbart	1	5.0%	19	95.0%
Chi-square=13	3.443	n=80	ŗ	=0.001

## Results Table 8: Overall Trust by Headline Font Category

Organizations with a positive trust rating are considered trusted, while any organization receiving a neutral score or worse is labeled not trusted.

		Serif		ans serif
Untrustworthy sites  DailyKos The Nation Huffington Post The Atlantic CNN NBC Chicago tribune Yahoo! News N.Y. Post InfoWars Fox News The Blaze Breitbart	12	23.1%	40	76.9%
Trustworthy sites The N.Y. Times The L.A. Times BBC Washington Post Reuters USA Today The Wall St. Journal	15	53.6%	13	46.4%
Chi-square	=7.569	n=80	p	=0.006

## **TYPOGRAPHY NOTES**

This paper's body text is set in Adobe Garamond Pro, a transitional serif designed for print legibility. It is a modernization of one of the most widely used old-style serifs. The title is Chronicle Display, a modern serif, while the headings and tables are set in Helvetica, a grotesque sans serif.