



Digital Media Attention  
and Cognition Lab

*Grady College of Journalism  
and Mass Communication*

UNIVERSITY OF GEORGIA

# DESIGNING FOR TRUST:

## How users view and interpret explanatory transparency boxes in online news

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in collaboration with



## SUMMARY

In order to help guide future research in understanding how to best optimize news media website design for increased transparency and to gauge the impact of the positioning and display of transparency boxes on feelings of credibility, an in-person eye-tracking experiment was conducted (n=90). The goal for this study was to understand how the location and design of transparency boxes impacted audience attention and feelings of credibility. After answering some initial questions on news habits and perceptions, each study participant read two news articles containing transparency boxes, which are visually distinct pieces of information that are packaged with the intention of explaining the reasoning, standards and reporting transparency for the story the audience is reading. After reading each article, participants were asked to answer a series of questions about their perceptions of the article, the publishing news site, recall of the transparency box, and whether the contents of the transparency box altered their perceptions of credibility. Results showed that both a no-box design and high-contrast box design drew readers' attention to information boxes, and that attention to box content situationally affected perceptions of reporting ethics, but did not significantly influence credibility.

# KEY FINDINGS

- Articles that incorporated a “no-box” design and a “high-contrast” box design received more attention from participants.
- The traditional box design (“control”) received longer reading times than other designs.
- Attention to the transparency boxes did not have a significant impact on feelings of credibility.

## BACKGROUND

A perceived decline in trust in news media over the past few decades has been cause for concern both with respect to the business of journalism and the future of democracy.<sup>1</sup> In the United States, for example, a slight majority of adults in 2020 say that they have little to no confidence in the news media as a whole, or in journalists to act in the public interest.<sup>2</sup> Low levels of trust in media can be found in many other democratic countries, from Greece to Taiwan, and trust in news media seems to decrease as political polarization rises.<sup>3</sup> While local news outlets may be perceived as more trustworthy than national news organizations, they still face declining trust ratings as sentiments of “fake news” and misinformation continue to impact audience thoughts of credibility.<sup>4,5</sup>

One way in which news organizations may seek to enhance their perceived trustworthiness is by increasing public awareness of the news process, including why a story was reported, how it was reported, and why certain decisions about the reporting were made. Audiences value transparency in the journalistic process.<sup>6</sup> Researchers have subsequently recommended that journalists enhance the quality of their reporting by integrating explanations of news gathering methods, source vetting and corroboration of facts in order to counter mistrust.<sup>7</sup> In recent years, several local news organizations have sought to integrate this information into the layout of online article pages, in the form of footnotes, authors’ notes, and even as a graphically separate sidebar or “transparency box.” Prominent among the non-profit organizations that have sought to address the crisis in news trust are The Trust Project ([thetrustproject.org](http://thetrustproject.org)) and Trusting News – both of which supply guidance to news organizations across the country and globe about best practices

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<sup>1</sup> (Mourao et al, 2018)

<sup>2</sup> (Gottfried, Walker, & Mitchell, 2020)

<sup>3</sup> (Ritter, 2019)

<sup>4</sup> (Masullo et al, 2021)

<sup>5</sup> (Peifer & Meisinger, 2021)

<sup>6</sup> (Newman & Fletcher, 2017)

<sup>7</sup> (Henke et. al, 2020)

for boosting credibility. Trusting News features [guidance on their website](#) on utilizing transparency boxes specifically, and the model they recommend is utilized as one of the methods tested in our experiment.

However, in order for any online design elements, such as transparency boxes, to be effective, audiences need to be able to first notice them, and then to understand them.<sup>8,9</sup> An experiment by Curry and Stroud<sup>10</sup> found that the addition of transparency-related elements to an online news article did lead to increased perceptions of article credibility, but that many users did not see the elements. The present study sought to understand the role that the design of transparency boxes may place in both users' noticing and interpretation of such boxes in the scope of perceptions of trust and credibility, in addition to the goal of building on previous literature in this area by isolating a single applied method of transparency in reporting. The two main questions we sought to explore were:

1. Do audiences notice transparency boxes?
2. For those who do notice transparency boxes, does that influence their feelings of credibility?

## METHOD

To test the effects of transparency box positioning and design in the context of real online news, we conducted an in-person experiment in which each participant read two online news articles containing transparency boxes that differed in design and placement. Participants answered a series of questions about their perceptions of the article and publication after each article. With two different articles in this study, there were three versions of each article: one article where we manipulated the positioning of the transparency box (top of the text column, bottom of the text column, and floating along the left side of the text column) and one article where we manipulated the design (no contrast, gray box, and high contrast).

While participants read the articles, we used an eye-tracker mounted on the bottom of the computer monitor to record information about where participants were looking. The Tobii X2-60, was calibrated to each participant's eyes before starting the study session, and recorded the on-screen location of participants' gaze 60 times per second. The data from the eye-tracker was used to calculate whether, and for how long, participants looked at certain areas of the page.

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<sup>8</sup> (Oeldorf-Hirsch et al, 2020)

<sup>9</sup> (Wojdowski et al, 2017)

<sup>10</sup> (2021)

## PARTICIPANTS

A total of 90 participants took part in the study. Participants were recruited from the University of Georgia and surrounding Athens communities between March 2020 and June 2021. All participants were aged 18 and older. Participants were randomly assigned to two articles, each with three possible transparency box configurations.

## MATERIALS

We used two news articles in the experiment, each of which had three potential configurations. Both articles covered the subject of suicide, of which news organizations typically have established policies on when they will and will not report on this subject. These articles present an appropriate scenario in which a transparency box contributes to transparent reporting.

The first article was a 2019 news article from *The State*, a daily newspaper based in Columbia, SC, titled “Student dies in USC Greek Village, president confirms. Authorities investigating.”<sup>11</sup> The story covers the death of a University of South Carolina student and the subsequent response from the university community.

The second article was a 2019 news article from *The San Francisco Chronicle*, also a daily newspaper, titled, “Losing Summer: 10 months. Nearly 30 visits to San Francisco’s psychiatric ER. And a suicide.”<sup>12</sup> The article tells the story of a woman named Summer, her interactions with the health care system, and her declining mental health before she committed suicide.

The *State* article contained three versions (labeled as A, B, and C), and the *San Francisco Chronicle* article contained three versions (labeled as 1, 2, and 3). Each participant was randomly assigned one of 18 potential combinations of the two articles (such as A1, B3, etc.).

The *San Francisco Chronicle* article was about 1,900 words, whereas the *State* article was about 600 words. Each article contained display advertisements and other links, which were chosen from the content appearing on the original news organization site on the basis of avoiding controversial or dated content. Otherwise, all aspects of the articles’ original presentation as published were retained, with the exception of the manipulation of the transparency box location and design.

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11 (Dapril et. al, 2019)

12 (Lange, 2019)

# TRANSPARENCY BOX DESIGN CONDITIONS

*Transparency box visual configuration* was manipulated across three conditions with three separate configurations per article (for a total of six possible versions of the articles). Each participant received one configuration from *The State* and one configuration from *The Chronicle* in a random order. In the *State* article, the three article variations contained transparency boxes that varied in design in order to measure the impact of visual prominence. The location of all three transparency boxes remained the same. In the first configuration (“control”), the transparency box mimicked the default styling from *The State*, which consists of a gray box within the body text. The second configuration (“high contrast”) utilized colors of high contrast to see if these colors would draw more attention. The third and final configuration (“no-box”) of *The State* article did not include a transparency box at all. Rather, the verbiage from the previous iterations of the transparency box was integrated into the article text to see if the integration avoided readers skipping over a box that visually interrupted the flow of the piece.

*We designed three different versions of transparency boxes to embed in this article from The State. Here you can see the visual distinctions in the design while keeping the content consistent between each article. The top image shows the control condition as published, the middle image shows the high-contrast condition and the bottom image depicts the no-box in-text condition.*

## Experimental Transparency Box Visual Configuration Versions from The State

### Control Condition

Many students were leaving one of the fraternity houses at about 12:30 p.m. At least five police cars were on the scene from the Columbia Police Department, USC Police Department and SLED.

#### BEHIND OUR REPORTING

##### Why did we report on suicide?

Discussion of suicide can be difficult, especially for people who may already be thinking of harming themselves. As a general practice, The State does not report on suicides unless they involve prominent individuals or occur in public places. In the case of this story, we felt the incident warranted fact-based reporting accessible to members of our community.

The State generally does not identify individuals who die by suicide unless it is a public figure.

The State maintains rigorous standards when reporting on public health issues like suicide. If you or someone you know needs help, call the National Suicide Prevention Hotline 24 hours a day at 1-800-273-8255.

People dressed in clothes with fraternity and sorority letters hugged and cried on the street near one fraternity house.

### High-Contrast Condition

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Read more here: <https://www.thestate.com/news/local/crime/article234429497.html#storylink=cpy>

People dressed in clothes with fraternity and sorority letters hugged and cried on the street near one fraternity house.

### No-Box Condition

"In the aftermath of a campus tragedy, it's normal to [feel sadness, anxiety, fear or any mix of these emotions](#)," Student Health Services tweeted, saying it is ready to help any student with a counselor.

#### Why did *The State* report on suicide?

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University of South Carolina @USC



In the *San Francisco Chronicle* article, the three articles contained transparency boxes that varied in shape and coloring. In the first configuration (“control”), the transparency box mimicked the default styling from *The San Francisco Chronicle*. The second configuration (“tabbed high-contrast”) utilized colors of high contrast as well as a tabbed heading to break up the otherwise boxy design of the overall page layout. The third configuration (“floating expandable”) abandoned the idea of an embedded text box and rather had a floating expandable along the left rail of the page. As the user scrolled through the article, the expandable transparency box followed their movements.

## Experimental Transparency Box Visual Configuration Versions from The Chronicle

### Control Condition

In October 2015, doctors at the psychiatric ER sent her to Shrader House, an acute diversion unit where people can stay for up to 14 days and get therapy, food and shelter. But when she told workers that voices were telling her to jump out of a window, they sent her back to the psychiatric ER. After six hours there, she was sent back to Shrader. The next week, she returned to the psychiatric ER, saying she was suicidal.

At least twice, staff at S.F. General said Summer needed a case manager. According to her records, she never got one.

#### Editor's note

The Chronicle strives to attribute all information we report to credible, reliable, identifiable sources. Presenting information from an anonymous source occurs extremely rarely, and only when that information is considered crucially important and all other on-the-record options have been exhausted. In such cases, The Chronicle has complete knowledge of the unnamed person's identity and of how that person is in a position to know the information. The Chronicle's detailed governing the use of such sources, including the use of pseudonyms, is available here: <http://sfchronicle.com/source-policy>

### Tabbed High-Contrast Condition

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#### IF YOU NEED HELP:

National Suicide Prevention Lifeline: Call 800-273-8255 to reach a counselor at a locally operated crisis center 24 hours a day for free.

Crisis Text Line: Text "Connect" to 741741 to reach a crisis counselor any time for free.

### Floating Expandable Box Condition

#### EDITOR'S NOTE

On May 22, 2016, just two weeks after her last admission to the psychiatric ER, Summer killed herself. A police officer and a chaplain visited her parents to tell them the daughter they'd known as a voracious reader and a halfhearted runner had died. Her mother, Jeanine, answered the door. "I couldn't process it," she said. Three years later, she can barely talk about her daughter's death. She shared Summer's medical records with The Chronicle, but at the family's request, The Chronicle is not using Summer's last name, in accordance with its [policy on identifying sources](#).

San Francisco's Behavioral Health Services system helps many of the 30,000 people it works with every year, and many receive high-quality or even lifesaving treatment. But Summer's experience highlights weaknesses in the \$370 million system — a system Mayor London Breed and the Board of Supervisors say is broken.

was sick for 'a number of days'



Coronavirus uncontained: First case in U.S. from unknown source is from Bay Area



An Oakland street dweller generously helped others. When he died, thieves helped themselves



No 'carnageddon' on auto-free Market Street. Study shows bikes and buses benefit



Coronavirus hits Bay Area: What residents need to know



We designed three different versions of transparency boxes to embed in this article from The San Francisco. Here you can see the visual distinctions in the design while keeping the content consistent between each article. You'll notice for this article, we experimented with using an expandable design (at bottom), in readers could click on the "editor's note" button to view the explainer."

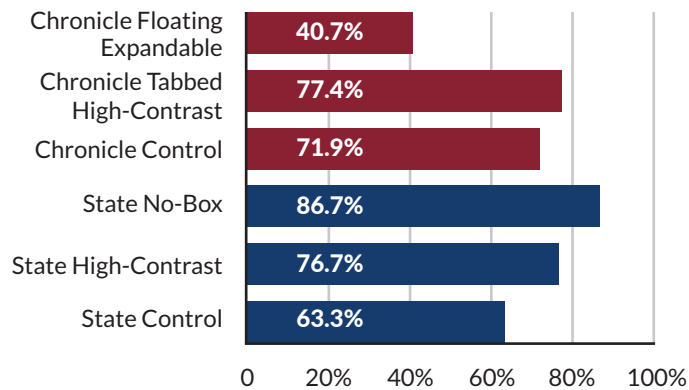
# RESULTS

## Noticing the Transparency Box

From the results, we first looked at whether the design of the transparency box affected the likelihood that readers would view its content. Viewing the transparency box was defined by participants having at least one visual fixation inside the process box versus no fixations. Design had a significant effect on participants' viewing the process box. On the article from *The State*,

participants shown the "no-box" process box were significantly more likely to view its contents (86.7 percent viewed) than those shown the original version (63.3 percent viewed). When reading the article from *The Chronicle*, readers shown either tabbed high-contrast process box (77.4 percent) or the original published version (71.9 percent) were far more likely to view the process box contents than those shown the expandable floating version (40.7 percent).

Percent of Readers Who Viewed Process Box

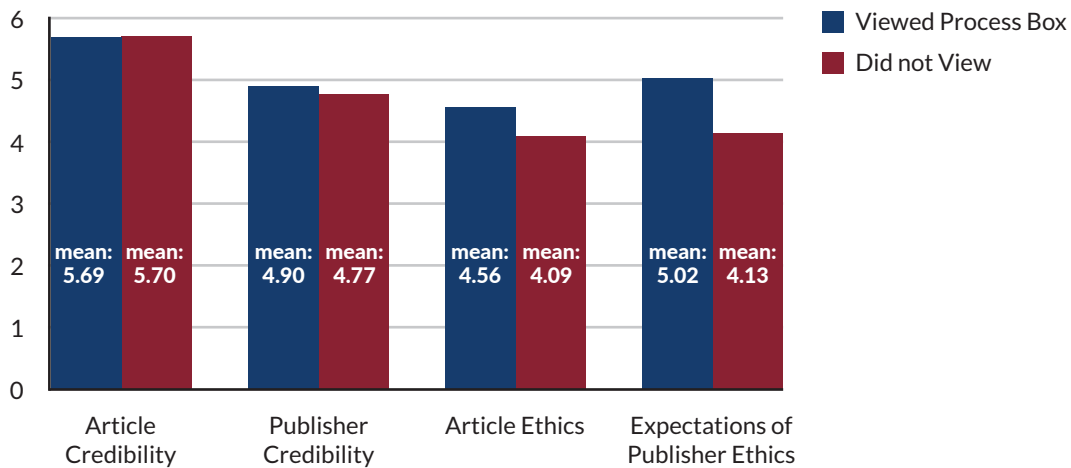


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## Effects of Noticing the Transparency Box on Article and Publisher Perceptions

We next sought to assess whether viewing the process box (defined by at least one fixation) increased perceptions of article ethics, article credibility, publisher credibility, and publisher's future ethical treatment of the issue at-hand (in this case, reporting on suicide). The data showed that overall, participants who viewed the process box were more likely to believe that the article was reported ethically and that they expected the publisher to ethically report on suicide in the future (see Figure 2). However, there were no significant differences in participant perceptions of the credibility of the articles, which were high across the board, nor in perceptions of the credibility of the news organizations.

## Effect of Viewing Process Box on Perceptions

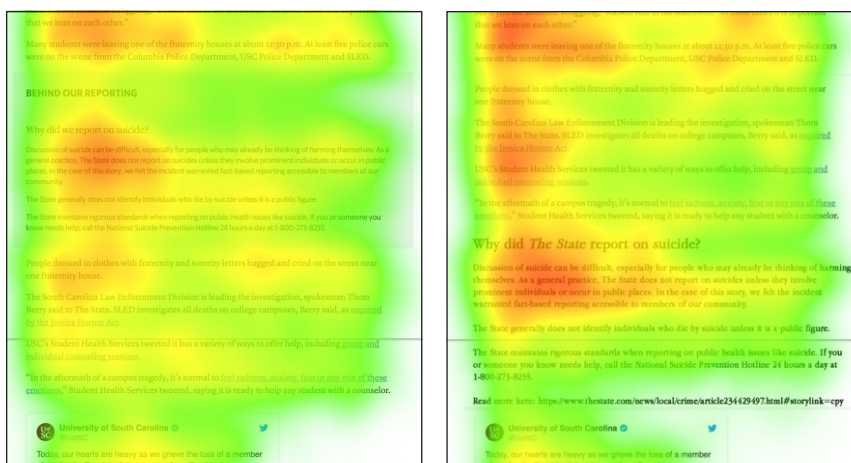


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## Effects of the Transparency Box on Reading Time

To analyze the effects of transparency boxes beyond merely a binary approach to viewing, we also analyzed whether the amount of time participants spent reading the contents of the process box was related to perceptions of credibility and journalistic ethics. Participants spent more time reading the transparency box in the “control” condition than in the “high-contrast” design condition in the *Chronicle* article. Results were not significant for the *State* article conditions.

### Heat Maps of Attention to Process Box, State Article (Control vs. No-Box Condition Shown)



Note: Data shown is absolute mean attention duration, with a 50-pixel radius for each fixation. Areas shown in red denote a mean attention duration of 3 seconds or longer. Areas shown in yellow denote a mean attention duration of 1.5 seconds or longer.



## IMPLICATIONS AND NEXT STEPS

### Transparency Box Viewing

The findings show that while a number of users miss seeing these transparency elements, designers have several options that can improve, relative to current practices, the likelihood of the information being noticed, and even how long the information is read. While both increasing and decreasing the visual contrast drew participants attention, the “high-contrast” text boxes did not retain this attention any better than the originals, and in fact were read for less time, on average, than the “control” condition. In contrast, the “no-box” design tested within the State article not only yielded both the highest percentage of viewers, but also held viewers’ attention for a nominally longer period than the other variations.

### Transparency Box Impact

On a more pessimistic side for news organizations, the study found that readers who viewed the contents of the transparency boxes often did not have much higher feelings of trust in the article or news organization than those who didn’t see the box. Readers who viewed the box found one of the two articles to be more ethically reported than those who did not view the box, but there were no significant differences on article or publisher credibility. Perhaps news publishers can take some positivity from the fact that nominal differences in all our credibility and ethical perceptions across both articles showed more positive perceptions among transparency box viewers, but most of these differences were slight. Nonetheless, echoing the conclusions of Masullo and colleagues<sup>13</sup>, our results suggest that viewing news transparency elements alone may not provide much of a cure for contemporary news media credibility woes.

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<sup>13</sup> (2021)

**SUGGESTED CITATION:** Norsworthy, C.F., Wojdyski, B.W., Binford, M.T., & Duncan, J. (2022, October). Designing for trust: How users view and interpret transparency boxes in online news. Digital Media Attention and Cognition Lab. <http://dmaclab.com/reports/missingthemark.pdf>

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