The Journal of Social Media in Society
Fall 2018, Vol. 7, No. 2, Page 252-273
thejsms.org

Real or Fake News: Who Knows?

Danny Paskin
Department of Journalism and Public Relations, California State University Long Beach
Danny.Paskin@csulb.edu, @DPaskin, http://orcid.org/0000-0003-3006-9845

After it became one of the most discussed issues during the 2016 U.S. presidential election, this study analyses how often college students are able to tell real from fake news, by applying concepts of news credibility research, using real and fake news stories previously published online. The study surveyed 394 college students on their ability to tell real from fake news, their news consumption and news research behavior. It also compared results to respondents' personal characteristics. Results show that the amount of information provided matters, while most personal traits do not. And although most are aware of fake news, they do not act as such.

Keywords: fake news, fake, social media, SNS, Facebook, Trump, president

---

The ability to discern good information from bad information, good sources from bad sources, is something journalism and mass communication educators have long trained their students to do. The year 2016 and the U.S. presidential election brought that practice to the spotlight, with fake news sites and articles popping up online, especially in social networking sites (SNSs) like Facebook and Twitter. It caused the public to start doubting the news it saw or believing news it shouldn't. And many Americans, knowingly or not, found themselves further propagating fake news stories, by sharing them (Barthel et al., 2016).

Established news organizations have tried to combat fake news (Local Media Consortium, 2017), as has Facebook (Ortutay, 2016). And yet, fake news has become an active part of the daily lives of Internet users, with top fake news stories generating more combined engagement on Facebook than the top (real) stories from major news outlets concerning the 2016 election (Silverman, 2016). Whether fake news did (Parkinson, 2016) or did not (Alcott & Gentzkow, 2017) sway the elections in one direction or another is still being debated. Presidential candidates have accused fake news sites of getting in the way

of a clean election cycle (Nelson, 2016). The elected U.S. president and his White House staff (Hensch, 2017; Savranksy, 2017, respectively) have accused established news organizations like CNN of being fake news sites, creating a news information chaos that was seldom, if ever, seen before.

Even though "fake news" has been a focus of scholarly research for years now, it has taken a whole new meaning, angle and renewed emphasis recently. This study expanded the limited but growing literature of this new type of fake news by looking into how external and internal factors may influence how the public is able to tell fake from real news. Namely, this study looked into amount of information, demographics and personal preferences, and news research behavior. Since no theoretical framework has been developed so far especially dedicated to studying fake news, this research applied established concepts of news credibility research to understand more of how the public discerns real from fake news.

LITERATURE REVIEW

History of Fake News

While for many the term "fake news" may seem brand new, it has for long been used in scholarly research. Scholars have previously applied the term to examine "satirical news shows" (Reilly, 2012; Rubin et al., 2015), "parody news shows" (Day & Thompson, 2012), "fake-news comedy shows" (Pavlik, 2005) or simply "fake news shows" (Rahman & Marjan, 2013; Storksdieck, 2016). "Fake news" has described when an entire TV show, or a specific part of it, was devoted to political satire (Holbert, 2005), forming the "fake news genre" (Balmas, 2014; Baym, 2005).

Included in this genre have been old-staples such as Saturday Night Live's "The Weekend Update" segment, or the very popular The Daily Show (with Jon Stewart) and its direct or indirect spin-offs, The Colbert Report and Last Week Tonight with John Oliver. Although often exaggerating news stories for comedic effect, these shows have frequently provided strong coverage of real issues, becoming the main news source of many younger viewers (Pavlik, 2005). Their news stories were called "fake" not for their content, but for parodying network news, applying sarcasm and comedy to discuss real public issues (Marchi, 2012).

The New Fake News

That, however, has changed. Recently, the term "fake news" has gained a new, more literal definition. It refers to particular news articles that originate either on mainstream media (online or offline) or social media and have no factual basis, but are presented as facts and not satire. This includes news reports, editorials, exposes and more that are intentionally (Alcott & Gentzkow, 2017; Rubin et al., 2015) and knowingly (Klein & Wueller, 2017) deceptive, with the purpose of either political or monetary gain (Hunt, 2017). They do so by pretending "to be factual, but (…) contain intentional misstatements with the intention to arouse passion, attract viewership or deceive" (p. 5).

Fake news stories have often been spread by those did not know those stories are actually false (Klein & Wueller, 2017). Fake news starts when false information is spread multiple times, and end when the stories are no longer shared (Giglietto et al., 2016). Politicians – including President Trump (Grynbaum, 2017) – have tried to expand the definition of fake news to include investigative reporting that is critical of their activities, or that they simply disliked or was felt was unflattering (Klein & Wueller, 2017).

Facebook, a website where many fake news stories have appeared and been disseminated, has offered its own definition of fake news (Weedon et al., 2017). Facebook has defined "fake news" – which it calls "disinformation" – as "inaccurate or manipulated information/content that is spread intentionally" (p. 5), and can "involve more subtle methods (…including…) feeding inaccurate quotes or stories to innocent intermediaries, or knowingly amplifying biased or misleading information" (p. 5). Facebook has also made a clear distinction between fake news/disinformation and "misinformation," the "inadvertent or unintentional spread of inaccurate information without malicious intent" (p. 5).

News columnist have discussed the dangers and consequences of fake news (Pitts, 2016; Ruth, 2016), who to blame for its rise (Swaim, 2016; Warren, 2016), and what news organizations (Rutenberg, 2016) and SNSs (Levin, 2016; Mossberg, 2016) should do about it. In the U.S., The Local Media Consortium, an enterprise of more than 1,600 media outlets, has called on its member organizations and readers to develop better ways to protect the public against fake news. Abroad, after Russia was accused of spreading fake news through the mainstream media during its crisis with Ukraine (Khaldarova & Pantti,

2016), the European Union created a task force to combat the spread of fake news in the region (Scott & Eddy, 2017).

Scholarly Research of Fake News

Due to its novelty, a limited amount of scholarly research has been published (so far) on this "new fake news" (to which, for clarity and simplicity, this paper will refer merely as "fake news" henceforth). One of the earliest studies into fake news (Polage, 2012), published in a psychology journal, found that, when people were repeatedly exposed to fake news presented as real, they often attributed these stories to other, more reliable sources. Since then, some have argued that the spread of fake news among teens can be linked to students' current poor ability to judge information available online (Stanford History Education Group, 2016), making media literacy (Craft et al., 2016; Williams, 2016) and school librarians (Johnson, 2017) a simple solution for the problem. Others have blamed fewer students now being required to take Humanities in college, which forces professors in freshman composition classes to bare the weight of teaching students how to discern between real and fake news (Wayland-Smith, 2017). And yet, no study until now, for example, has compared students' ability to recognize fake news to their education – something this study addressed.

Using a combination of audience data, data from fact-checking websites and an original survey to look into the role of fake news on the 2016 presidential election, Alcott and Gentzkow (2017) found that only 8% of respondents reported having seen and believed a fake news story. Alcott and Gentzkow argue, however, that the unexpectedly low number may be attributed to self-reporting. Meanwhile, the Stanford History Education Group (2016), analyzing responses from students from middle school through college students throughout the U.S., found students were very ill-prepared for differentiating real news from fake news. For their study, college students from selective and prominent colleges in the U.S. rated articles from unreliable sites as trustful as those from reliable sites, which the authors attributed to "their evaluation of surface features" (Wineburg & McGrew, 2016). For the authors, respondents failed to do three important steps that professional fact-checkers do: check the source of the information; check if the source may be biased; and look past the top results when using search engines. Giglietto, Iannelli, Rossi and Valeriani (2016) also looked into what causes one to believe fake news, and

found three factors: the story itself, the context, and the source. Even though not addressed by name, Giglietto et al.'s (2016) approach was quite similar to a much more established body of media research, which this study used as its basis: news credibility.

News Credibility

News credibility has been defined as "a multidimensional construct that measures the perceived believability of a message (article), source (journalist or media company), or medium (newspaper, website, radio station, etc.)" (Meyer et al., 2010, pp. 104-105), with the three concepts overlapping at least partially (Choi et al., 2006). "Message credibility" has been related to the credibility of the message itself, including quality and accuracy (Li & Suh, 2015). "Source credibility," on the other hand, has often been related to the "expertise and trustworthiness of the source" (Li & Suh, 2015, p. 316) and the chance the source will provide information that is credible (Berlo et al., 1969). Finally, "Medium credibility," initially developed by Roper a little later (1971, 1985), has been often related to the believability of the news channel itself (Bucy, 2003; Kiousis, 2001).

While previous research has looked into a plethora of factors affecting the credibility of news off and online, this study focused on three specific factors that could affect how well the public can tell real from fake news, drawn from news credibility research: amount of information, demographics and personal preferences, and news research behavior.

Concerning the amount of information, whereas one would've assumed the more information people receive the more credible they are about the news story, studies have found contradictory results. Park (2005) found the amount of information not to be a statistically significant factor in the credibility of either print or TV news. Park also found the amount of information only having a weak positive relationship to the credibility of online news. Hall, Ariss and Todorov (2007) found that, when predicting the outcome of basketball games, the more information people were provided, the less accurate they were. Prior knowledge and bias, in those cases, the authors argue, became detrimental rather than helpful. Tsai, Klayman and Hastie (2008) agreed, finding that more information only increased a person's confidence in their answers, and not their actual accuracy.

On the other hand, Peters, Covello and McCallum (1997) found a significant, strong correlation between amount of information and its credibility when examining

environmental risk communication. Similarly, Levy and Gvili (2015) found a strong correlation between amount of information and their credibility with the public when examining the effectiveness of advertising campaigns.

Demographics and personal preferences were also found to affect the public's credibility of news online (Choi et al., 2006; Sun, 2014). Political affiliation, for example, has been found to affect one's perceived credibility of the media (Johnson & Kaye, 2000), with conservatives finding the media more credible than liberals. This result is similar to that of a study by Jones (2004), who found conservatives to consider the media to be fairer and more balanced than their liberal counterparts. Age has also been found to be a factor: Bucy (2003) found that the younger the person, the more credible they deemed news online to be, with the same being true for the less educated. Mulder (1981) found that men, as well as those older, more educated, were often more critical of the media, and therefore, less credible of the media compared to women and those younger and less educated.

Mistakes and inaccuracies in news stories have also been suggested as a key problem with the credibility of news online (Choi et al., 2006, p. 212), including why online news may have been perceived as more vulnerable and less credible than offline. A number of studies, including Andaleeb, Rahman, Rajeb, Akter and Gulshan (2012), Fischer, Jonas, Frey and Schulz-Hardt (2005) and Marier (2005), have found a positive correlation between the quality of the reporting of an article and its credibility. Applying the same concept to fake news, one could predict that the more errors (including grammatical) in a (fake) news story, the less credible it would be with the public.

Finally, how much research the public does on news it reads has also been shown to affect one's perceived credibility of the news (Mackay & Lowrey, 2011). Chen, Conroy and Rubin (2015) have raised concerns about the decontextualization of online information. They've argued that the increasing amount of information online also increases the need for more verification of news found online. A national survey showed that 67% of respondents considered news website they often used as credible "most or all of the time" (Consumer Reports WebWatch, 2005). Flanagin and Metzger (2000) found in their survey that respondents saw information online as credible as that of most mainstream news outlets (television, radio and magazines), but still less credible than of newspapers.

Flanagin and Metzger's respondents stated they rarely verified information they found online, even less so when they perceived the information to be inherently credible. As Flanagin and Metzger explained, that was despite a push for more verification of online information from the likes of the American Library Association (Kapoun, 1998), the National Institute for Literacy (Rosen, 1998) as well as a number of colleges and universities (Smith, 1998). Studies (Metzger et al., 2003; Parmelee & Perkins, 2012) have found a positive correlation between incredulity of online news and how often the public verifies news found on one site using not only one but a variety of other sites to cross-check the information.

All these studies on news credibility, however, present major differences from the current research. For one, they focused only on information respondents actively sought, instead of information that may have reached them, as happens online, especially on SNSs. Moreover, these studies focused on why respondents would doubt information that, at least in principle, was inherently accurate, correct and real. This study flipped that question, by instead analyzing why the public may have believed information that was, ultimately, fake.

Research Questions

Given the literature review presented above, this study addressed three main research questions:

RQ1: How does the amount, quality and source of information provided relate to one's ability to discern between real and fake news?

RQ2: How do demographics, personal characteristics and behavior relate to one's ability to discern between real and fake news?"

RQ3: Given the current dissemination of fake news, how do people check the veracity of news stories with which they're presented?

Concerning RQ3, based on research presented above, this study hypothesized that people do not often fact- or double-check stories with which they're presented and, instead, trust their own personal judgement on their veracity.

METHODS

In order to address those questions, a survey was conducted with college students using an online questionnaire on Qualtrics. Respondents consisted of undergraduate

students from an ethnically diverse public university with 31,000 undergraduate students. Responses were collected online, via Qualtrics, between February 28 to March 31, 2017. The survey was approved by the university's Institutional Review Board before being administered. Students were used as the sample for this study since many studies have argued that students nowadays may be more susceptible to fake news, as explained above.

A total of 415 surveys were completed. Of those, 21 were discarded for being incomplete ("drop outs"), or improperly completed. Ultimately, 394 completed usable surveys were collected from the known total population at the university surveyed (31,000 undergraduate students). A vast majority of respondents identified as female (71.1%, N = 280), with a mean age of 22.01 years (SD = 1.091). The majority of respondents were Caucasian (50.1%, N = 197), with 42.4% (N = 167) identifying as Hispanic/Latino. Respondents came from 52 different majors across seven different colleges, with the majority coming from the College of Liberal Arts (50.2%, N = 198). Department-wise, the largest cohort was of nursing majors (17.5%, N = 69). Most respondents were seniors (37.4%, N = 147), and the vast majority had a self-reported GPA between 3.1 and 4.0 (71.6%, N = 282).

Of the respondents who reported their political views, most identified as "Liberals" (33.4%, N = 129), with 60.6% (N = 235) identifying as "very liberal," "liberal" or "somewhat liberal", 24.9% (N = 96) identifying as "moderates", and 14.8% (N = 56) identifying as "very conservative," "conservative" or "somewhat conservative".

The survey included a total of 21 open and close-ended questions, including multiple choice, yes/no, categorical, and ordinal questions divided into four main sections. The first section tested how often respondents could tell real from fake stories. It presenting respondents with three sets of multiple-choice questions with gradually more information provided, concerning either the story itself (message) or the writer and publisher (source). It asked respondents to check which of the stories they believed were real – as many as they see fit – leaving the fake ones unchecked. An introduction screen shown before the multiple-choice questions informed respondents that the survey was not timed, and respondents should take as long as necessary to answer each question (allowing them to verify the story elsewhere, for example, if they so wished).

To further emphasize the point of the study, all stories used in the multiple-choice questions, whether real or fake, were stories actually published in different websites of varying levels of reputability throughout 2016. Also on purpose, stories included varied contents and topics, including politics (a fake news story on Donald Trump calling Republicans "the dumbest group of voters" in a 1998 article in People Magazine, for example), sports (a fake news story on football player Cam Newton being arrested for fixing Super Bowl results, for example) and other, more odd stories (a fake news story on the founder of Corona beer dying and leaving $210 million in his will for the 80 residents of his hometown in Spain, for example).

The first set of stories (Question 1) included seven stories that provided respondents only with the headline of the story, exactly as written in the original source. Of those, three stories were real and four were fake. The second set of stories (Question 2) included five questions that provided the headline of the story and the name of the website where the story had originally appeared, as well as the writer of the story. Of the five entries, three were real and two were fake. The third set of stories (Question 3) included all the information from Question 2 as well as the first couple paragraphs of the story, copied and pasted from the original website "as is." Question 3 included three stories: one real and two fake stories. To avoid results being skewed, the order of the options within each question was randomized by Qualtrics for each respondent. As the amount of information grew from question to question, the number of questions in each group was lowered, as to keep the overall duration of the survey manageable. Once respondents completed all three multiple choice questions, Qualtrics showed them how many real news stories were correctly marked as real, and how many fake news stories were correctly left unmarked.

The second section of the survey asked respondents about their research behavior and thought process when answering the multiple-choice questions, including whether they sought help in order to tell real from fake news, and where. The third section focused on respondents' overall news behavior, including questions on most used news sources and frequency of news consumption, for example. Finally, the fourth section asked a number of standard questions on demographics, including gender, age, education, political views and more, allowing for an analysis on whether personal traits and political views correlated

with views of real versus fake news, similar to what has been done when analyzing news credibility.

RESULTS

The first research question asked how the amount, source and quality of information provided relate to one's ability to discern between real and fake news. As explained, respondents were presented with three sets of multiple-choice questions, each with increasingly more information than the previous. Each set of stories included both real and some fake news stories, for a total of 15 different stories. Respondents who could identify all eight fake news stories as "fake" and all seven real stories as "real" received a perfect score of 100% in each question, and a final overall perfect score of 100%

To ease the description of findings, the first of the multiple-choice questions, which included only the headline of the story, will be referred as "Question 1," while the second multiple choice question, which also included source and byline, will be referred to as "Question 2." The third multiple choice question, which also included a couple paragraphs of body copy, will be referred to as "Question 3."

Overall, out of all 15 stories presented, respondents could identify, on average, a little more than half correctly (M = 51.5%, SD = 12.0%). Of the 394 respondents, four (1.0%) could only correctly identify as few as 20.0% of all stories correctly, while two (0.5%) were able to identify 80.0% of all stories correctly. No respondent could identify all 15 stories correctly.

This study then analyzed each multiple question separately. In Question 1, on average, respondents were able to identify 47.4% (SD = 19.1%) of the seven stories correctly, properly marking fake news as fake, and real news as real. In Question 2, on average, respondents could identify 52.0% (SD = 20.8%) of the five stories correctly. In Question 3, on average, respondents could correctly identify 77.3% (SD = 39.9%) of the three stories presented.

A repeated measures ANOVA test was performed comparing the overall percentage score of respondents throughout the three questions. Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated, ($\chi 2(2) = 22.115$, $p < .001$), and therefore, a Greenhouse-Geisser correction was used. Ultimately, there was a

significant effect of the amount of information provided on how often respondents could correctly tell real from fake news, ($F(1.795, 631.896) = 127.669$, $p < .001$). As more information was provided – from just a headline to headline, source and byline and then adding a couple paragraphs of the story itself – the more respondents were able to correctly tell real from fake news stories.

Post hoc tests using the Bonferroni correction allowed for a series of pairwise comparisons between each set of two questions, with all tests confirming a progressive, significant increase in how often respondents were able to tell real from fake news accurately as more information was added. Accuracy of respondents increased by 7.155 from Question 1 to Question 2, a significant change ($p < .01$). There was an even steeper increase in accuracy (19.339) from Question 2 to Question 3, once again a significant change ($p < .01$), allowing one to conclude, then, that more information in a story did increase how often a respondent could tell real from fake news accurately, confirming what Peters, Covello and McCallum (1997) and Levy and Gvili (2015) had found.

Overall, throughout all three questions, respondents identified, on average, fake news stories accurately more often than they did real news stories. On Question 1, respondents identified the four fake news stories correctly ($M = 44.8\%$, $SD = 25.5\%$) on average more often than they identified the three real news stories correctly (38.7%, $SD = 26.6\%$). On Question 2, respondents identified (the two) fake news stories correctly ($M = 59.0\%$, $SD = 31.4\%$) more often on average than they identified (the three) real news stories correctly ($M = 47.3\%$, $SD = 24.3\%$). And, on Question 3, respondents once again identified (the two) fake news stories correctly (66.0%, $SD = 30.5\%$) more often they identified the (one) real news story correctly (54.4%, $SD = 10.8\%$).

Moreover, to test whether there was a correlation between errors in a story and its credibility as previously suggested, one of the two fake news stories included in Question 3 had a number of clear grammatical errors. Those errors also appeared in the story it its original source. The other fake news story in Question 3 contained no grammatical errors. Contrary to what was expected, although respondents correctly identified the error-free story as false 81.6% of the time, they only identified the error-ridden story as false correctly 77.9% of the time. More mistakes, or lack of accuracy in the writing of the story

alone, then, did not seem to be a factor affecting how well respondents could correctly identify the story as fake.

Answering the first research question, then, providing more information on average did increase respondents' score positively. The more information people received – both in terms of the content of the story, and about its source/writer – the more often they could correctly tell whether a story was real or fake. However, the quality of a story alone was not a factor, as errors in the story did not correlate to respondents telling whether the story was real or fake.

The second research question asked how demographics and behavior relate to one's ability to discern between real and fake news, based on factors previous analyzed in news credibility research. Respondents' demographics and personal characteristics were compared to their overall score, measuring how often they correctly identified stories as real or fake, to test, as others have suggested, whether demographics and personal preferences showed any correlation to respondents' overall scores.

Variables measured concerning students' education did not yield a strong correlation to respondents' overall scores. Those included GPA ($r(374) = .010$, $p = .856$), year in school ($r(383) = .042$, $p = .439$) or which college within the university students attended ($F(6, 368) = 1.117$, $p = .352$). Variables concerning demographics also did not yield a strong correlation to respondents' overall scores. Those included age ($r(377) = -.087$, $p = .110$), gender ($t(382) = .325$, $p = .745$), or whether the respondent was of Hispanic or Latino origin ($t(383) = .109$, $p = .913$). Race was also not a factor ($F(5, 321) = 1.404$, $p = .223$), with a Turkey Post-Hoc test indeed showing absolutely no significant difference between any of the racial groups.

Political affiliation, however, did – to an extent – influence how well one could tell real from fake news: the more conservative they were, the more often respondents were able to to accurately tell real from fake news. That relationship, however, was very weak ($r = .120$, $N = 387$, $p = .026$).

This study also tested whether the political inclination of the source of the story could have affected respondents' judgement of whether the story was real or fake. To address that, two two of the news stories included in Question 3, which listed the source of the story, were found in openly-political news sites: one from Breitbart (a conservative

news site), and another from MSNBC (a liberal news site). Comparing liberals' and conservatives' views of the veracity of the Breitbart story, a t-test showed no significant difference ($t(289) = .048$, $p = .962$). A similar comparison of the MSNBC story also showed no significant difference ($t(289) = .992$, $p = .322$). In neither case, therefore, did political affiliation influence respondents' perception of whether the stories were real or fake, even when the source of the story was an openly-political news site.

Asked about their news consumption behavior, most respondents reported checking news often, with most stating they did so several times a day (48.2%, N = 190) or at least once a day (28.7%, N = 113). There was, however, no significant correlation between respondents' overall scores and the more often they consumed news($r(394) = .016$, $p = .818$.

Of all the most common news sources nowadays (newspapers, magazines, television, radio, news websites, and SNSs), respondents overall stated they used SNSs as a news source more than any other outlets, with a mean weighted ranked score of 5.35. Online news sources in general were ranked the highest, followed by electronic news sources in second, and print news sources third. "Word of mouth," YouTube, news aggregator such as Google News, podcasts and news apps were sometimes also listed as "other" sources of news. An Analysis of Variance comparing respondents' main source of news to how accurately they could tell real from fake news, however, showed no statistical difference ($F(6, 380) = 1.167$, $p = .324$), with a Turkey Post-Hoc test indeed showing absolutely no significant difference between any of main sources of news used. Therefore, a respondents' preference on main news outlet did not show any correlation to how accurately they could tell real from fake news.

Answering the second research question, there was little to no correlation between personal characteristics or news behavior and how often respondents could accurately tell real from fake news stories. Respondents did show a clear predilection for electronic media, especially online media as their source of news, but media channel preference and frequency of news consumption did not show a correlation to how well they could tell real from fake news.

The third research question addressed how people check the veracity of news stories with which they're presented, given the current dissemination of fake news. To answer that, respondents were asked a series of questions specifically concerning their behavior

towards the news stories presented in this study immediately after making the judgement of whether those stories were real or fake.

For this study – conducted, on purpose, online – respondents were never told whether they could or could not research the news stories presented before deciding whether they were real or fake using other sources. (They were, however, clearly told the study was not timed.) This was done to best approximate respondents' experience when presented with news stories on SNSs. On SNSs, in order to verify the veracity of a news story with which they're presented, one can easily open a new tab on their browser and check the story against other sources. They can also reach out to others and ask, before liking or sharing it.

Asked, then, whether they had done any research prior to doing deciding if a story was real or fake, almost all respondents (97.2%, N = 383) stated they had not done any research. Of the 11 respondents that stated they had done some research, the vast majority (81.8%, N = 9) mentioned using a search engine (Google) as their secondary source, instead of directly visiting a specific website, or asking another person. Paradoxically, when asked what they do in general when faced with a story they believe may be fake, 44.2% of respondents (N = 174) stated they would verify the story with other sources to confirm its veracity. Another 23.6% (N = 93) stated they would actually click on the link and check its content to help them decide. And 28.7% (N = 113) stated they would trust their "gut feeling."

Answering the third research question, then, although most respondents stated they would usually cross-check news found on SNSs they thought could be fake, by using secondary sources, most did not when it came to this study, confirming the Initial Hypothesis for RQ3.

DISCUSSION

This study set out to examine the phenomenon (and efficacy) of fake news – namely, how able people are to identify it. To do so, the study applied concepts of media credibility, a much more established field of study than fake news. It focused on three specific elements that could influence how well the public can tell real from fake news: amount of information, demographics and personal preferences, and news research behavior.

Ultimately, of all variables analyzed, only one (amount of information) presented a strong correlation to how well respondents were able to tell their veracity. No other demographic or personal traits analyzed in this study yielded any strong correlation to how often a respondent was able to their veracity, contradicting what had been found in previous studies (Choi et al., 2006; Johnson & Kaye, 2000; Sun, 2014).

As shown, the more information respondents had about the story, including source, writer and body copy, the more they were able to accurately discern real from fake news – contrary to what had been previously found (Park, 2005). The more information provided, the more accurately respondents were able to tell real from fake news. In an era and media where "time" is a precious commodity, then, the tendency to be brief does affect how much the public is able to correctly discern real from fake news. And, by making it easy (and quick) for users to share anything they see, the Internet has also made it easy for fake news stories to be shared often.

The results in this study should be interpreted as a clue on how to combat the spread of fake news: SNSs and news websites should be displaying enough information in each news item shared in their sites to allow the public to make an educated, proper decision. Instead of simply presenting a catchy headline and photo, SNSs and news sites should clearly present the source and/or some of the content of the story, allowing users access to more content to better be able to discern between real and fake news – a practice this study showed to be effective.

That, however, goes contrary to how news sites and especially SNSs operate. Increasingly, posts on news sites, on Facebook and especially on Twitter try to grab users' attention as quickly as possible with as little information as possible, creating an ideal environment for the dissemination of fake news. Not only does that appeal to people's decreasing availability and attention span, but it increases the chances of one clicking on the link, or at least remembering it.

Moreover, even though one's education had been previously found to be a good predictor of one's ability to properly evaluate news (Bucy, 2003; Mulder, 1981), in this study, it wasn't. If young people indeed have the ability and potential to think critically about news (Craft et al., 2016), educators have a duty, more than ever before, to develop that ability in them as early as possible. That would allow youngsters – the largest

segment to use SNSs – to gradually learn to identify the veracity of a news story more accurately, eventually and naturally causing fake news to be ineffective and, ultimately, disappear. Institutions of higher education should teach students about media literacy and critical thinking often and as early as possible, with grade and high school teachers also doing their part.

Better educating the public could stop them from doing so, or at least slow them down enough to avoid a rash decision, as the Stanford History Education Group (2016) had suggested. More education could also make the public more aware of mistakes or lack of accuracy in the writing of the story alone which, in this study, did not affect how well respondents could correctly identify the story as fake, showing that respondents overlooked those problems, did not pay enough attention to the stories as they read and evaluated them or – as a worst case – did not recognize the basic mistakes. Since this study showed that even college students, who often seek information online (something that is only bound to increase) and are arguably the most proficient at finding news online, are often deceived by fake news stories, something indeed should be done to combat the spread of this fake news stories, whether through a change in the behavior of online news channels or of those who read news online.

The results in this study also contradicted other findings from previous, similar research. For example, grammatical errors in a story did not significantly change how often a respondent correctly identified a news story as fake, as had been suggested (Marier, 2005; Choi, Watt and Lynch, 2006). Respondents who did do research before deciding whether a story was real or fake used a search engine (Google) as their secondary source, instead of a specific website, as had been suggested (Metzger et al., 2003; Parmelee & Perkins, 2012).

Overall, this study showed that the public has to be better prepared to be exposed to fake news. Even though respondents could have checked whether the stories were real or fake by simply opening a new tab on their browser and comparing the information with that of other sites, they chose not to do so. This outcome may have been a consequence of respondents interpreting this survey as a "test" (including a personal one), implicitly seeing cross-checking information with other sources as "cheating." But it could also be the sign of a much bigger problem where, rather than spending the proper time and effort

doing research on the topic to make an educated decision on the veracity of stories, the public simply makes decisions on news veracity based on their "gut feeling," showing that (over)confidence (Tsai et al., 2008) does play a part in the decision-making process concerning fake news.

Suggestions for Future Research

Just like research in news credibility has evolved over time, so should research into this related-yet-different field. For example, only a selected few variables used in this study showed a strong correlation to how often respondents were able to tell real from fake news correctly. More research is necessary to more accurately identify which factors do come into play, which could be done by either using other factors common in news credibility research – such as the one used by Gaziano and McGrath (1986) or Abdulla, Garrison, Salwen, Driscoll and Casey (2004) – or by creating a whole new set of criteria that would be, in itself, unique.

Future studies should also focus on comparing the believability of stories within or across different topics, comparing, for example, the believability of fake news stories concerning politics with other fake news stories concerning politics, or stories on politics compared to sports or international affairs, for example. Moreover, while this study focused on a large public university in California, other studies focusing on universities across the state, the country or the world could yield interesting results. Similarly, a comparison of different institutions of higher education could also yield interesting results, including a comparison of community colleges, junior colleges and 4-year universities, or between public and private universities.

References

Abdulla, R. A., Garrison, B., Salwen, M. B., Driscoll, P. D., & Casey, D. (2004). Online news credibility. In M. B. Salwen, B. Garrison, & P. D. Driscoll (Eds.), *Online news and the public* (pp. 147–163). New York, NY: Routledge.

Alcott, H., & Gentzkow, M. (2017). *Social Media and Fake News in the 2016 Election.* Retrieved from Stanford University. https://doi.org/10.3386/w23089.

Andaleeb, S. S., Rahman, A., Rajeb, M., Akter, N., & Gulshan, S. (2012). Credibility of TV News in a developing Country: The case of Bangladesh. *Journalism & Mass Communication Quarterly, 89*(1), 73-90.

Balmas, M. (2014). When fake news becomes real: Combined exposure to multiple news sources and political attitudes of inefficacy, alienation, and cynicism. *Communication Research, 41*(3), 430-454.

Barthel, M., Mitchell, A., & Holcomb, J. (2016). *Many Americans believe fake news is sowing confusion.* Retrieved from Pew Research Center: http://www.journalism.org/2016/12/15/many-americans-believe-fake-news-is-sowing-confusion/

Baym, G. (2005). The Daily Show: Discursive integration and the reinvention of political journalism. *Political Communication, 22*(3), 259–276.

Berlo, D. K., Lemert, J. B., & Mertz, R. J. (1969). Dimensions for evaluating the acceptability of message sources. *Public Opinion Quarterly, 33*(4), 563-576.

Bucy, E. P. (2003). Media credibility reconsidered: Synergy effects between on air and online news. *Journalism and Mass Communication Quarterly, 80*(2), 247–264.

Chen, Y., Conroy, N. J., & Rubin, V. L. (2015). News in an online world: The need for an "automatic crap detector". *ASIST.* St. Louis, MO. https://doi.org/10.1111/j.1083-6101.2007.00334.x.

Choi, J. H., Watt, J. H., & Lynch, M. (2006). Perceptions of news credibility about the war in Iraq: Why war opponents perceived the Internet as the most credible medium. *Journal of Computer-Mediated Communication, 12*, 209-229.

Consumer Reports WebWatch. (2005). *Leap of faith: Using the Internet despite the dangers.* Retrieved from http://www.ConsumerWebWatch.org/pdfs/princeton.pdf

Craft, S., Ashley, S., & Maksl, A. (2016). Elements of news literacy: A focus group study of how teenagers define news and why they consume it. *Electronic News, 10*(3), 143-160. https://doi.org/10.1177/1931243116656716.

Day, A., & Thompson, E. (2012). Live From New York, It's the fake news! Saturday Night Live and the (non)politics of parody. *Popular Communication* (10), 170–182. https://doi.org/10.1080/15405702.2012.638582.

Fischer, P., Jonas, E., Frey, D., & Schulz-Hardt, S. (2005). Selective exposure to information: the impact of information limits. *European Journal of Social Psychology, 35*, 469–492. https://doi.org/10.1002/ejsp.264.

Flanagin, A. J., & Metzger, M. J. (2000). Perceptions of Internet information credibility. *Journalism & Mass Communication Quarterly, 77*(3), 515-540. https://doi.org/10.1177/107769900007700304.

Gaziano, C., & McGrath, K. (1986). Measuring the concept of credibility. *Journalism & Mass Communication Quarterly, 63*(3), 451–462.

Giglietto, F., Iannelli, L., Rossi, L., & Valeriani, A. (2016). *Fakes, News and the Election: A New Taxonomy for the Study of Misleading Information within the Hybrid Media System.* Retrieved February 9, 2017, from SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2906444

Grynbaum, M. H. (2017, February 17). *Trump calls the news media the enemy of the people.* Retrieved from New York Times: https://www.nytimes.com/2017/02/17/business/trump-calls-the-news-media-the-enemy-of-thepeople.html?_r=0 Institute of Education

Hall, C. C., Ariss, L., & Todorov, A. (2007). The illusion of knowledge: When more information reduces accuracy and increases confidence. *Organizational Behavior and Human Decision Processes, 103*(2), 277–290. https://doi.org/10.1016/j.obhdp.2007.01.003.

Hensch, M. (2017). *Spicer: White House 'disgusted by CNN's.* Retrieved from The Hill: http://thehill.com/homenews/administration/319032-spicer-wh-disgusted-by-cnns-fake-news

Holbert, R. L. (2005). A typology for the study of entertainment television politics. *The American Behavioral Scientist, 49*, 436-453.

Hunt, E. (2017, January 24). *'Fake news' named word of the year by Macquarie Dictionary.* Retrieved from The Guardian: https://www.theguardian.com/australia-news/2017/jan/25/fake-news-named-word-of-the-year-by-macquarie-dictionary

Johnson, L. (2017). *The Smell Test.* Retrieved from School Library Journal: http://www.slj.com/2017/01/industry-news/the-smell-test-educators-can-counter-fake-news-with-information-literacy-heres-how/#_

Johnson, T. J., & Kaye, B. K. (2000). Using is believing: the influence of reliance on the credibility of online political information among politically interested Internet users. *Journalism and Mass Communication Quarterly, 77*(4), 865–879.

Jones, D. A. (2004). Why americans don't trust the media-a preliminary anaylsis. *The International Journal of Press/Politics, 9*(2), 60-75.

Kapoun, J. (1998). *Teaching undergrads Web evaluation: A guide for library instruction*. Retrieved from American Library Association: http:/ /www.ala.org/acrl/undwebev.htm

Khaldarova, I., & Pantti, M. (2016). Fake News. *Journalism Practice, 10*(7), 891-901.

Kiousis, S. (2001). Public trust or mistrust? Perceptions of media credibility in the information age. *Mass Communication and Society, 4*(4), 381-403.

Klein, D. O., & Wueller, J. R. (2017). Fake News: A Legal Perspective. *Journal of Internet Law, 20*(10), 1, 6-13.

Levin, S. (2016, September 10). *'Facebook needs an editor': media experts urge change after photo dispute.* Retrieved from The Guardian: https://www.theguardian.com/technology/2016/sep/10/facebook-news-media-editor-vietnam-photo-censorship

Levy, S., & Gvili, Y. (2015). How credible is e-word of mouth across digital-marketing channels? The roles of social capital, information richness, and interactivity. *Journal of Advertising Research, 55*(1), 95-109.

Li, R., & Suh, A. (2015). Factors influencing information credibility on social media platforms: Evidence from Facebook pages. *Procedia Computer Science, 72*, 314–328. https://doi.org/10.1016/j.procs.2015.12.146.

Local Media Consortium. (2017). *Local Media Consortium Members and Partners Release Position Statement On So-Called "Fake News".* Retrieved from Local Media Consortium: http://www.localmediaconsortium.com/local-media-consortium-members-partners-release-position-statement-called-fake-news/

Mackay, J. B., & Lowrey, W. (2011). The credibility divide: Reader trust of online newspapers and blogs. *Journal of Media Sociology, 3*(1-4), 39-57.

Marchi, R. (2012). With Facebook, blogs, and fake news, teens reject journalistic "objectivity". *Journal of Communication Inquiry, 36*(3), 246– 262.

Marier, S. (2005). Accuracy matters: A cross-market assessment of newspaper error and credibility. *Journalism and Mass Communication Quarterly, 82*(3), 533-551.

Metzger, M. J., Flanagin, A. J., & Zwarun, L. (2003). College student Web use, perceptions of information credibility, and verification behavior. *Computers and Education, 41*(3), 271–290.

Meyer, H. K., Marchionni, D., & Thorson, E. (2010). The journalist behind the news: Credibility of straight, collaborative, opinionated, and blogged "news". *American Behavioral Scientist, 54*(2), 100-119.

Mossberg, W. (2016, November 30). *Mossberg: Facebook can and should wipe out fake news.* Retrieved from The Verge: http://www.theverge.com/2016/11/30/13787750/walt-mossberg-facebook-fake-news.

Mulder, R. (1981). A log-linear analysis of media credibility. *Journalism Quarterly, 58*, 635–638.

Nelson, L. (2016, October 24). *Trump accuses Democrats of 'making up phony polls' to suppress supporters.* Retrieved from Politico: http://www.politico.com/story/2016/10/trump-tweet-dems-phony-polls-230224

Ortutay, B. (2016, December 15). *Facebook gets serious about fighting fake news.* Retrieved from The Associated Press: http://bigstory.ap.org/article/22e0809d20264498bece040e85b96935/facebook-takes-fake-news

Park, C.-Y. (2005). Decomposing Korean News Credibility in the Internet Age. *International Journal of Public Opinion Research, 18*(2), 238-245.

Parkinson, H. J. (2016, November 27). *Click and elect: how fake news helped Donald Trump win a real election.* Retrieved from The Guardian: https://www.theguardian.com/commentisfree/2016/nov/14/fake-news-donald-trump-election-alt-right-social-media-tech-companies

Parmelee, J. H., & Perkins, S. C. (2012). Exploring social and psychological factors that influence the gathering of political information online. *Telematics and Informatics, 29*, 90-98.

Pavlik, J. V. (2005, Fall). Fake news: One man's experience on The Daily Show with Jon Stewart. *Television Quarterly, 36*(1), 44-50.

Peters, R. G., Covello, V. T., & McCallum, D. B. (1997). The Determinants of trust and credibility in environmental risk communication: An empirical study. *Risk Analysis, 17*(1), 43-54.

Pitts, L. (2016, November 25). *Fake news will have real consequences — it already has.* Retrieved from The Miami Herald: http://www.miamiherald.com/opinion/opn-columns-blogs/leonard-pitts-jr/article117144133.html

Polage, D. C. (2012). Making up History: False memories of fake news stories. *Europe's Journal of Psychology, 8*(2), 245–250.

Rahman, S., & Marjan, S. M. (2013). Talk shows in Bangladeshi satellite TV channels: Audience perceptions and perspectives. *Social Science Review [The Dhaka University Studies, Part-D], 30*(2), 147-164. https://doi.org/10.2139/ssrn.2634598.

Reilly, I. (2012). Satirical fake news and/as American political discourse. *The Journal of American Culture, 35*(3), 258-275.

Roper, B. W. (1971). *An extended view of public attitudes toward television and other mass media, 1959-1971: A report by The Roper Organization, Inc.* New York, NY: Television Information Office.

Roper, B. W. (1985). *Public attitudes toward television and other media in a time of change.* New York, NY: Television Information Office.

Rosen, D. J. (1998). *Driver education for the information superhighway: How adult learners and practitioners use the Internet.* Literacy Leader Fellowship Program Reports, Vol. 2, No. 2. Washington, DC: National Institute for Literacy.

Rubin, V. L., Chen, Y., & Conro, N. J. (2015). Deception detection for news: Three types of fakes. *Paper presented at annual meeting of the Association for Information Science and Technology*. https://doi.org/10.1002/pra2.2015.145052010083.

Rutenberg, J. (2016, November 6). *Media's next challenge: Overcoming the threat of fake news.* Retrieved from The New York Times: https://www.nytimes.com/2016/11/07/business/media/medias-next-challenge-overcoming-the-threat-of-fake-news.html?_r=0

Ruth, D. (2016, December 5). *Ruth: Fake news causes real trouble.* Retrieved from Tampa Bay Times: http://www.tampabay.com/opinion/columns/ruth-fake-news-causes-real-trouble/2305193

Savranksy, R. (2017, January 11). *Trump berates CNN reporter: 'You are fake news'.* Retrieved from The Hill: http://thehill.com/homenews/administration/313777-trump-berates-cnn-reporter-for-fake-news

Scott, M., & Eddy, M. (2017, February 20). *Europe combats a new foe of political stability: fake news.* Retrieved from The New York Times: https://www.nytimes.com/2017/02/20/world/europe/europe-combats-a-new-foe-of-political-stability-fake-news.html?emc=edit_th_20170221&nl=todaysheadlines&nlid=34713153&_r=0

Silverman, C. (2016, November 16). *This analysis shows how viral fake election news stories outperformed real news on Facebook.* Retrieved from BuzzFeed: https://www.buzzfeed.com/craigsilverman/viral-fake-election-news-outperformed-real-news-on-facebook

Smith, A. G. (1998). *Evaluation of information sources*. Retrieved from Victoria University of Wellington: http:/ /www.vuw.ac.nz/-agsmith/evaln/evaln.htm

Stanford History Education Group. (2016). *Evaluating information: The cornerstone of civic online reasoning.* Retrieved from Stanford History Education Group: https://sheg.stanford.edu/upload/V3LessonPlans/Executive%20Summary%2011.21.16.pdf

Storksdieck, M. (2016). Critical information literacy as core skill for lifelong STEM learning in the 21st century: reflections on the desirability and feasibility for widespread science media education. *Cultural Studies of Science Education*(11), 167-182.

Sun, Y. (2014). *The Effect of self-censorship on news credibility: public's perception of Hong Kong newspapers after the 1997 Handover (Dissertation)*. Iowa State University, Ames, IA.

Swaim, B. (2016, December 12). *Who's to Blame for Fake News? America's real newsrooms.* Retrieved from The Washington Post: https://www.washingtonpost.com/opinions/the-rise-of-fake-news-is-an-indictment-of-

americas-real-newsrooms/2016/12/12/9ccd7ac2-be52-11e6-94ac-3d324840106c_story.html

Tsai, C. I., Klayman, J., & Hastie, R. (2008). Effects of amount of information on judgment accuracy and confidence. *Organizational Behavior and Human Decision Processes, 107*, 97-105. https://doi.org/10.1016/j.obhdp.2008.01.005.

Warren, J. (2016, December 2). *The real problem with fake news? Citizen stupidity.* Retrieved from Vanity Fair: http://www.vanityfair.com/news/2016/12/the-real-problem-with-fake-news-citizen-stupidity

Wayland-Smith, E. (2017, February 26). *Commentary: Where do students learn About fake news? In Freshman Comp.* Retrieved from The Chronicle of Higher Education: http://www.chronicle.com/article/Commentary-Where-Do-Students/239266?cid=cp95

Weedon, J., Nuland, W., & Stamos, A. (2017). *Information operations and Facebook.* Retrieved from Facebook: https://fbnewsroomus.files.wordpress.com/2017/04/facebook-and-information-operations-v1.pdf

Williams, B. J. (2016). *Educating the public through news media (Master's Thesis).* Retrieved from https://qspace.library.queensu.ca/handle/1974/14982

Wineburg, S., & McGrew, S. (2016, November 1). *Why students can't google their way to the truth.* Retrieved from Education Week: http://www.edweek.org/ew/articles/2016/11/02/why-students-cant-google-their-way-to.html

Funding and Acknowledgements

The author declares no funding sources or conflicts of interest.

Online Connections

To follow Danny Paskin in social media: @DPaskin