

**Young Adults and Fake News: Perception and Evaluation Progress Throughout and After
University.**

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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Introduction

“White supremacy”, “slave auction”, “rally”, “killed” circulating news headlines as ones searching for “Charlottesville” on Google Incognito mode. As a student who has lived full-time in this city for more than 2 years, I was confused by this search result. It would be a pity if a potential high school senior sees this alarming search result and decides not to go to UVA, or a couple researching for a weekend getaway deem Charlottesville as not worth visiting. In today's era where information is more ubiquitous and approachable than ever, information is abundant and ubiquitous thanks to the Internet, but also information can be false and misleading, such as manipulated news. This is particularly alarming when it comes to young audiences since they have been reported to gather most of their news on non-traditional, alternative sources such as entertainment and social media. The information this cohort collects from the Internet, together with their evaluation, judgment and probable prejudice dictates their philosophy, behaviors and civic participation. Therefore, it is important for STS pupils to examine how young people experience and understand social media as a source of news. This paper will attempt to study information resources young adults fall back to when they are in doubt and their progress of news evaluation from freshmen to seniors and post-grads.

Literature review

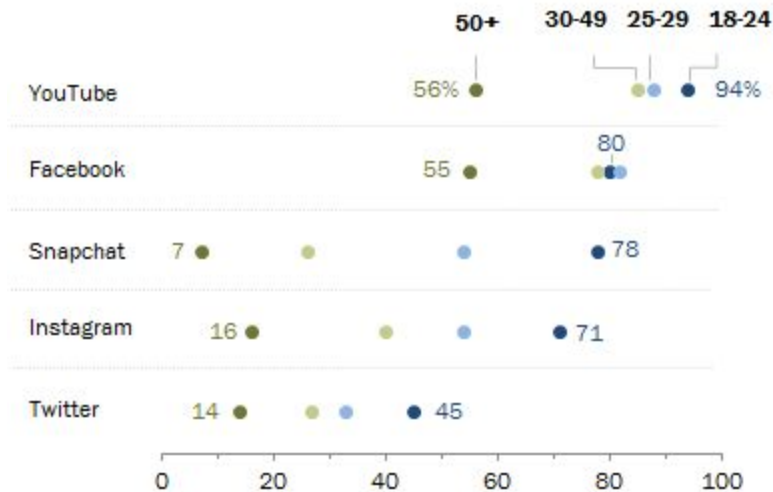
Youth's news consumption through social media

People in the 15-24 age group account for the highest percentage of all users on popular social media platforms such as Facebook, Instagram, and Youtube (figure “Social platforms like Snapchat and Instagram are especially popular among those ages 18-24) (Anderson and Smith,

2018). Besides, social media is recorded as the number one news source for young adults (figure “Television dominates as a news source for older Americans”) (Shearer, 2018). Studies from several countries have shown that young people are less interested in news (particularly political news) and less informed than their counterparts in earlier decades (Buckingham, 2000). The decline in young people’s news consumption does not necessarily mean that they are disinterested in news or politics. Rather, according to Marchi (2012), this means young people get their news from other sources. From research conducted on 61 highschool students aged 14-19, Marchi found that teenagers regard broadcast news and print newspapers as boring, repetitive and irrelevant. Even though most teens did not make a daily habit of reading newspapers, watching TV news, listening to news radio, or logging onto official news websites, nearly all expressed that keeping up with the news was important. There were three main alternative ways that the young people learned about news: (a) Via trusted adults; (b) Internet social networking sites and blogs; and (c) humorous and/or acerbic current events programs. In a world of “information overload,” where youth report feeling overwhelmed by an onslaught of information (Marchi), trusted adults served as news “filters” and “translators” for the teens, pointing out important issues and explaining their relevance. In comparison, personal connections with friends and family on social media served as news “filters,” bringing different stories to the teens’ attention. Interestingly, young people prefer this way of collecting news in contrast to traditional news platforms because of their convenience. Furthermore, posts on social media also have commentaries, which help young people understand their relevance and be introduced to different points of view that they did not think of, therefore, help shape their stand on the matters.

Social platforms like Snapchat and Instagram are especially popular among those ages 18 to 24

% of U.S. adults in each age group who say they use ...

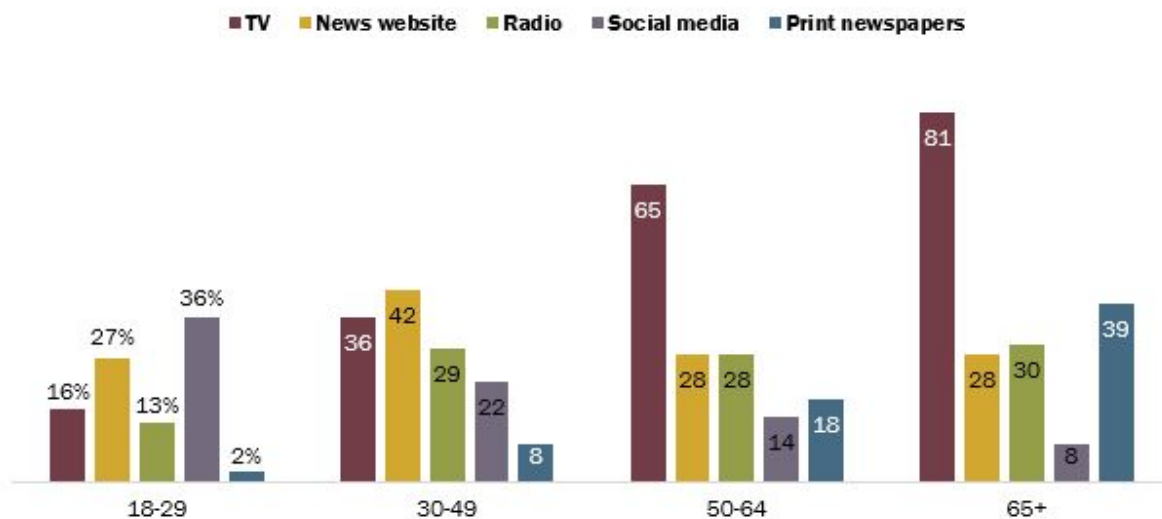


Source: Survey conducted Jan. 3-10, 2018.
"Social Media Use in 2018"

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Television dominates as a news source for older Americans

% of each age group who often get news on each platform



Source: Survey of U.S. adults conducted July 30-Aug. 12, 2018.

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According to Sveningsson (2015), the sharing of news on social media can be divided into three levels. First, private individuals can post comments on current news matters in their own social media circles. Second, we find comments from public individuals who have many followers who read their posts and, perhaps, share them with their own networks. The third, and most public, level consists of posts from established news organizations. Most news distribution occurs at the first and second levels, when users (both private and public people) share, recommend, or like articles and video clips, thereby passing them forward to their networks. The respondents were twice as likely to prefer news links and recommendations on Facebook and Twitter that came from friends and family, as compared to those posted by journalists or news organizations. This tendency from Sveningsson's informants aligns with Marchi's (2012) informants, who experienced conventional news as boring, repetitive, and irrelevant to their daily lives, "the personal connections with friends and family in social networks served as news 'filters', bringing various stories to the teens' attention and helping them understand their relevance via posted commentaries"

Undergraduates' fake news perception

A study on undergraduates' news evaluation was conducted on 91 undergraduates at Purdue University (Zakharov, Li, and Fosmire, 2019). Most participants identified fake news as "phony facts, false information, misinformation, fabricated news, both intentional and unintentional". This result aligns with most scholars' definitions, which also emphasize the content aspect of fake news. In terms of purpose, 47 percent of the students defined fake news from the aspect of intention. They believe fake news is fabricated mainly for the purposes of amusement, to draw attention, for financial gain, to mislead, or to advance a political or personal

agenda. Most believe that fake news is used to “draw attention and mislead people.” Some scholars believe that, in most of the cases, by drawing notice and misleading people to believe certain propaganda, the real intention behind fake news might be to seek either political or financial gain. Students also see advertisements and “pop-up links” that include sponsored content as a kind of fake news. They appear to have problems discerning between news articles and commercials on news sites because they encounter both in the same context. Source wise, twenty-two students (24.7 percent) indicated fake news comes from sources that are less known, have no peer review, have non-credible or untraceable authorship, or some combination of the three. Most student remarks associate fake news with online stories, especially on social media (some mentioned Facebook postings and online chat groups). Some undergraduates considered well-known traditional media, such as CNN or Fox, as credible sources and tended to believe that they do not report fake news. These undergraduates rely on the legitimacy of the established media to decide whether to trust the content of a news item, even though budget cuts have compromised the traditional media’s ability to provide independent research and fact-checking. Therefore, those traditional sources may also be vulnerable to distributing fake news. Furthermore, students do not always discern the difference between opinion, or op-ed, columns and investigative pieces. According to Marchi (2012), they think mainstream media has been corrupted by either corporate or government influence and so does not report unbiased news, while social media allows individuals to voice the truth.

Undergraduates’ fakes news evaluation

A study was set out by Paskin and his colleagues to examine the phenomenon (and efficacy) of fake news – namely, how able people are to identify it. (Paskin, 2018) It focused on

three specific elements that could influence how well the public can distinguish real news from fake news: the 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 identify their veracity. The study found that the more information respondents had about the story, including the source, writer and body copy, the more likely they were able to accurately discern real from fake news. In an era and media where “time” is a precious commodity, 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: social network sites (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 remember it.

Since this study showed that even college students, who often seek information online 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. 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 does play a part in the decision-making process concerning fake news.

Individual empirical research

Methodology

From the literature review, there are three main points I will circulate and use as starting points for my empirical research:

1. Young people get most of their news online indirectly through a circle or bubble of connections, i.e through their friends/family members/acquaintances shares, posts, reposts or likes.

2. Young people can define fake news, recognize common format/appearance/source of ones, yet can also be confused/misled by how real news and manipulative posts displayed interlaced on online platforms.

3. Ones' amount of present information correlates most strongly with how they are able to tell a piece of news' veracity, in comparison to other metrics such as demographic, personal preference or news research behaviors.

My individual empirical research attempt to find information resources young adults fall back to when they are in doubt and their progress of news evaluation/perception from freshmen to seniors and post-grads. To accomplish that, I conducted interviews with first-year, fourth-year students and recent graduates. Interviews were asked the same set of questions circulating how they get their news on social media, their process/habit of news evaluation, and how/why they develop such process/habit. The purpose of this research is to find out an effective way academic environment such as the University can prepare students to be well-informed civic participators in the age of mass and open media.

Data analysis

Interviews were conducted on six students: two first-years, two fourth-years and two recent graduates (less than 2 years in the workforce).

The two first-years reported reading more news and academic articles than they were in highschool mostly because it was required for course work. There was diversity in what kind of news they read depending on the courses they were taking. They also read more posts on Reddit because "kids here use Reddit" and they thought the content voting feature on this platform helped filter unrelated spammer posts. They reported to have been shown in their writing courses,

both in high school and college, of how to check for academic, scholarly resources from the library or online, but they never used it or could not remember an instance they used that knowledge to fact-check a piece of news online that they were suspicious about. Instead, they usually check it with their friends. When asked if they validate news with adults, informants said they limited the contents of their conversation with adults to ordinary daily routine or school results with parents and academics with professors. When prompted if they see any changes in the news platform (Reddit and Facebook in this context) over the year, they reported there were a noticeably higher volume of news posts and shares on his Facebook news feed in the past months, while they hardly saw any recognizable changes on Reddit beside users interface.

For the fourth-year informants, personal interests play an important role in influencing what kind of news they consume. For instance, one common trend of news both informants were interested in at the time of this interview was news regarding the coronavirus and travel advisory, as they both were making travel plans post-grad. One informant particularly mentioned that even though he actively kept updates about the epidemic's condition in different countries, he had more trust in conditions reported by countries that had laws to protect free speech than those reported by countries with no freedom of expression reinforcements such as China or Vietnam. When inquired, the interviewee mentioned his background knowledge of how SARS in the early 2000s was concealed by the Chinese government and how Communist countries such as China hid discrediting incidents from the international press. In addition, informants claimed to read very little news from social media platforms. Rather, they read their news from "mainstream news resources" they identified as "credible and reliable" such as CNN, Wall Street Journal, Washington Post. These informants also read more subscription-based newspapers such as Wall

Street Journal, New York Times because of the quality of their contents and they were encouraged by their professors because they are “free for students or offer student discounts”. When they found an article on these sites suspicious, their first response was to check for the same story on other sites, most often sites they usually visited. If the news was repeated on more than two resources, “there is a high probability that it’s true”. If not, they both “[...] just forget about it and move on [...]” because “it wouldn’t do any harm to my life” or “there is fake news everywhere every day now”. They also reported discussing their doubt with close friends and/or roommates. In regards to changes in content over the years, the interviews reported to see no noticeable changes in terms of editing “mainstream news resources”, but observed a higher population of click-bait, potentially fake news posts mingling with posts from established news publishers such as CNBC, CNN.

In the case of recent graduates, interviewers reported reading more news from mainstream publishers since they started working. The common reason was that they felt it is necessary as a responsible worker and taxpayer to be informed. The platforms they frequently get news from also changed according to their profession and personal interest post-grad. For example, one reported reading more news on technology as he worked in information technology news, while the other said she had been reading mostly The Guardians recently as she planned to pursue her Master’s Degree in the UK. Profession and work-related experience also influence the interviewer’s judgment for news. The interviewer who majored in communication said since the word “fakes new” was ubiquitous in her field, it became intuitive for her to be skeptical toward news on social media because it is the most tweaked news-serving platform. In terms of content, over the years, they said there was no noticeable change in contents of their frequent news

platforms, however, they mentioned some platforms did change the way they titled the headline to attract users' attention, though it was not very obvious. However, when such posts were shared on social media they were sometimes confused with a piece of unreliable news.

Discussion

1. Social connections and news validation

The results from the first-year interviews above align with Marchi's point that young people prefer online news because they are filtered by the reader's circle of connections, hence, young people find this news more related and reliable. The informant news evaluation also agrees with Paskin's finding that, even given the necessary resources, young people rarely double-check news with reliable online resources. Rather, in this case, the informants chose the alternative that requires less effort which was to check with their friends. Similarly, fourth-year and post-grads informants used their social connections in their process of news validation, but not as first-level filters like first-years but rather as fallback resources when they were in doubt. The difference in how people at different age groups use their social connections for news evaluation can imply, in my opinion, the progress of intuitive self-esteem. Fourth-year and post-grads read news from non-filter news platforms, use their background knowledge to judge the new piece of information, and validate with their connections, while the first-years depend on their social connections to filter out and serve news to them first before they get a chance to evaluate the news first handed. According to psychologist Daniel Schacter from Harvard University, communication shape memories (Spinney, 2017). During a communication process, the speaker can emphasize a specific piece of information by repeating it, hence making it more memorable. Yet unrelated, or false, information gets repeatedly mentioned is also better

remembered than unmentioned related facts. This effect is known as retrieval-induced forgetting. Moreover, an experiment conducted by psychologists Alin Coman at Princeton University in New Jersey and William Hirst of the New School for Social Research in New York City reported that a person experiences more induced forgetting when listening to someone in their social group than if they see that person as an outsider (McGrew, 2017). As a result, data bubbles created by social media connections have an impact on young people's perception and memory depending on the characteristics of the bubble and the people inside it. Regardless of the credibility of the data, the more young people get exposed to a specific trend of information, the more convinced they are, since this information indirectly approved by the people in their social group by actions such as liking and sharing.

2. *The border between fake and real news*

All informants reported seeing more posts with a short, appealing yet misleading titles on social media platforms recently. Post-grad interviewees specifically mentioned experiencing difficulties differentiate credible news from manipulated, false ones on such platforms. This last piece of information matches Panskin's argument of how 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. Whether this method of catching users' attention is effective or not, the engineer behind the scene play an important role that I will talk more of in the conclusion.

3. *Becoming adult news consumers*

As mentioned in section 1 above (*Social connections and news validation*), one noticeable improvement of fourth-year and post-grads from first-year is the order at which they

use social connections in validating news. To put more precisely, older young adults apply their background knowledge in evaluation before seeking for confirmation while younger counterparts do roughly the opposite. On the same notes, the fourth-year interviewee who expressed his trust preference in news sources indicates two implications. First, his distrust showed progress in news evaluation, where evaluators use background knowledge to evaluate the credibility of information, which was not clearly indicated in first-year informants. Second, however, judging credibility based on existing belief implies news consumers can have confirmation bias.

Confirmation bias can have a two-edged sword effect on news evaluation. However, I will leave this as a suggestion for future work since it is outside the scope of this paper and there has been abundant public research on confirmation bias.

Conclusion (Engineers' role in combating fake news)

From analyzing interview data, I observe two main problems which avert ones from objectively evaluate and validate news:

1. Younger portion of undergraduates tend to be “lazy” validating news.
2. Social network sites' practice of displaying “eye-catching”-titled posts in between credible news posts makes it difficult for users to distinguish real from fake news.

Some of the reasons I got for why fourth-year read more news from credible publishers was their contents' quality and their promotional subscription for students. Young people do care about the contents' quality, but why do they wait approximately three years later (since first year) to shift gear? One possible hypothesis is that throughout their college years, students are introduced to and encouraged to take advantage of free reliable, endorsed resources by professors and/or librarians. As they immerse deeper into the academic environment, students, encouraged

or enforced by their professors through course works, develop a sense of responsibility to collect new knowledge from credible sources. Another hypothesis is that younger adults have not formed a strong enough self-confidence in their own judgment. Hence, they start out rely on their social connections to help guide their perception at the beginning stage, and as they gain more background knowledge and analytical skills, they become more confident to judge the news by themselves directly and eliminate the front-end filter layer. Regardless of which hypothesis is better, the people surrounding young adults play an important role. They either help shape the initial news perception and evaluation or introduce and encourage one to affordable and approachable reliable resources.

The second problem is where the role of engineers becomes clearest. Every year, graduates from top Engineer programs in the whole country race to get an offer letter from big tech like Facebook, Google, Twitter, etc.. As public companies with profits as the number one goal, these companies come up with new products, technologies, and algorithms, sometimes probably unethical, to maximize their revenues. The brains behind their innovations are of course engineers. To claim that engineers violate Code of Ethics or Engineers for writing algorithms that promotes the pervasiveness of fake/false/manipulative news is unfair, because either by doing or not doing so, they have to violate one of the two first fundamental canons:

1. Hold paramount the safety, health, and welfare of the public.
2. Perform services only in the areas of their competence.

By fulfilling the requirement of building an efficient algorithm to prolong the users' attention and following the second canon (specifically, not considering other competence such as sociology), engineers violate the first canon. Yet in order to abide by the first canon, engineers

often have to consider the impacts of their work in fields beyond what they are professionally trained for. The cause of this dilemma, and probably many others in real world, can be caused by the impracticality of the National Society of Professional Engineers' Code of Ethics for Engineers, the blurred line between engineer and ethics, the greed of big tech or, even scarier, because technological evolution has outpaced that of society. Nonetheless, engineers' roles in society are not limited to defining problems, conducting and narrowing research, analyzing criteria, finding and analyzing solutions, and making decisions. We need to keep in mind the safety and well-being of society as consumers of our works. It makes engineering burdensome, yes, but definitely more prestigious.

Future work

One deficiency of individual empirical research is the number of informants. Six is not a statistically enough number to reflect a group of people. To better learn the progression of news evaluation, it is more accurate to study on the same group of participants throughout the scope of the research, which can be too extensive and demanding for an undergraduate senior thesis. In addition, interview results also demonstrate confirmation bias. As mentioned in Discussion, future work on the impact of confirmation bias on news evaluation would be precious to understand how existing background knowledge or connection circles can influence ones' ability to objectively evaluate information.

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