Drew University
College of Liberal Arts

<u>Misinformation Across Generations:</u>

<u>Believability and Sharing Habits</u>

A Thesis in Psychology

by

Daniela C. Da Silva

Submitted in Partial Fulfillment

of the Requirements

for the Degree of

Bachelor in Arts

With Specialized Honors in Psychology

Spring 2025

Abstract

Misinformation, defined as false information lacking factual evidence, can cast doubt about information overall. In particular, exposure to misinformation can influence what information people believe and share. Current research shows that people who are exposed to claims that seem blatantly false (i.e. implausible) become more likely to believe slightly more plausible claims in comparison. Furthermore, whether a person shares misinformation online varies by a number of factors, including age. This thesis explored the consequences of encountering implausible misinformation to identify the effects of exposure to misinformation on the believability and intent to share news, and how those effects might vary with age. A pilot study was first conducted to rate the plausibility of 150 recent news headlines. A primary study was then conducted where participants ($N = 189$) were either exposed to a high level of implausible headlines or a low level of implausible headlines. Results showed that exposure to higher rates of implausible information did not impact participants' belief in other unrelated headlines or their intentions to share those headlines, regardless of age. However, sharing intentions differed between older and younger adults, indicating that older adults may be slightly less inclined to share misinformation. This study's sample did not obtain a large number of older adults, limiting these findings. Future research should continue to explore the effects of misinformation, particularly among vulnerable populations, and continue to explore interventions against misinformation online.

Keywords: misinformation, implausibility, age, believability, sharing habits

Misinformation Across Generations:

Believability and Sharing Habits

Misinformation, defined as objectively false or misleading information lacking factual evidence (Jo et al., 2024), complicates how people process information. Human decision-making is already at risk for errors. For example, people tend to more readily trust information that aligns with their pre-existing attitudes (Pennycook et al., 2015). Misinformation further complicates things, especially types of disinformation meant to resemble legitimate news and mislead audiences. Furthermore, misinformation can spread wider and faster than ever before, casting doubts for people as new forms of misinformation are created and spread, evolving with the digital age. All of this has raised questions about who is most vulnerable to misinformation and who is likely to share it. The goal of this thesis will be to seek answers to this question.

The transition from traditional to digital news sources has transformed the spread of misinformation. Digital news platforms, particularly social media, are less regulated and harder to control, contributing to a larger spread of misinformation and allowing it to reach wider audiences faster than ever before. In 2024, for example, misinformation spread as far up as the national stage, during a presidential debate where president-elect Donald Trump repeated false remarks about Haitian immigrants eating pets, reaching an audience of more than 67 million viewers (Hesson et al., 2024). Similarly, during the same debate, Kamala Harris falsely claimed that there is, "not one member of the U.S. military in active-duty in a combat zone - in any war zone around the world - for the first time this century", an outright lie at the time (Dougherty, 2024).

Misinformation is complicated, often structured in a way that makes it difficult to discern truth from falsehoods. Of particular importance, misinformation varies greatly by plausibility –

how likely or believable a claim appears (Murphy, 2023). The plausibility of misinformation has substantial implications for the consequences of encountering false information and fake news. For example, exposure to implausible claims can contribute to worse decision-making (Levari et al., 2024). This is especially concerning as exposure to highly implausible information continues to rise with the use of digital platforms and technologies like generative artificial intelligence (AI).

These concerns illustrate an increasing need to understand how people respond to misinformation and the factors that shape people's tendencies to believe misinformation and share it more widely. One important factor may be related to generational differences. News production, consumption, and the quality of one's news environments varies greatly between age groups (Andersen et al., 2020; Omar et al., 2024). These differences suggest variability in how different age cohorts interact with and process misinformation. For example, older adults are much more likely to encounter and share misinformation than younger generations. Taken together, this raises the question: what effect does prolonged exposure to misinformation have on our attitudes and responses to information and what part does age play in those effects?

The specific goal of this research will be to address the effects of exposure to misinformation on responses to information in general, and will add to existing literature by exploring the variation of these effects among different generations. This thesis will further explore the impact of plausibility by analyzing the differences in generational responses to plausible and implausible misinformation.

Processing (Mis)information

How people process information can determine their susceptibility to misinformation and, by extension, whether or not they share factually incorrect claims. Misinformation is

processed through a series of cognitive stages, influenced by both automatic and effortful

reasoning. This decision-making follows three stages: intuition, metacognition, and reasoning

(Pennycook et al., 2015). However, various factors can introduce errors at any of these stages,

increasing the likelihood of accepting misinformation as true.

In the first stage, people generate intuitive responses (Pennycook et al., 2015). These

responses are automatic and fast, and people often rely first on intuitive responses when they

encounter misinformation. However, these judgements can lead to reasoning errors that can

cause someone to believe a false claim without further deliberation. For example, intuitive

judgments are often biased by pre-existing beliefs, leading to errors in decision making like

motivated reasoning, where an individual filters information through a lens shaped by existing

in-group belief systems. In the second stage, metacognition, a person may detect a conflict or

discrepancy between their initial reasoning and other information in a process called "conflict

detection" (Pennycook et al., 2015). If a conflict is detected, people move to the third stage of

deliberate reasoning. Alternatively, an individual could ignore this conflict or fail to identify

conflict to begin with, sticking to their intuitions. This could result from inattention, especially in

the case of online misinformation, when we are engaging in lazy, automatic thought more often

than not (Pennycook & Rand, 2019). If the person does engage in the final step of deliberative

reasoning, they engage in more effortful thinking. This deliberation can potentially override their

initial bias or, conversely, rationalize their initial intuitions (Pennycook et al., 2015; Pennycook,

2023).

In summary, information processing typically follows intuitive thinking unless a conflict

prompts a shift to analytical thought and deliberation in later stages. This model offers a

framework for understanding how people interpret misinformation. Increased exposure to

misinformation can increase the likelihood of engaging in conflict detection and subsequent analytical thought. When consuming news, especially online, misinformation is not immediately distinguishable from truth. Thus, the likelihood people will identify discrepancies between misleading content and the truth depends on their ability to engage in analytical thought. However, the shift to digital news sources has altered this process. In fact, the transition to digital news sources has led some people to engage in analytical thinking *less*, rather relying on intuition thought as a result of inattention when consuming media online (Pennycook & Rand, 2019). These challenges in discerning misinformation have been amplified by a surge in exposure to misinformation, prompted by a shift to digital news sources.

The Effects of Exposure

The Digital Age and Increased Exposure

The transition from traditional news sources to digital has opened the door to new types of information and has consequently increased exposure to misinformation. This is particularly concerning because, online, false news stories spread faster and wider than true news stories (Pennycook & Rand, 2021), subjecting more people to be exposed to misinformation. Furthermore, misinformation does not need to be created deliberately (Pennycook & Rand, 2021); however, because it is difficult to determine the individual intentions of those who create and spread false information online, misinformation is often used as a broader term including fake news and other types of disinformation. Fake news, defined as fabricated or extremely inaccurate online news that resembles legitimate news (Pennycook & Rand, 2021), is a type of disinformation that purposely mirrors real news in a deliberate attempt to trick people into believing its false claims. These kinds of misinformation exist in mass online and can confuse or deliberately mislead people into believing false claims.

Numerous factors have contributed to the increased spread and complexity of misinformation, particularly on social media, following the transition to digital news. Where news content was once confined to a handful of sources, most people now get their news on digital platforms such as social media (Vosoughi et al., 2018). Just over half of U.S. adults (54%) at least sometimes get their news from social media ("Social Media and News Fact Sheet," 2024). However, social media platforms provide fertile ground for misinformation that can complicate how it's spread and how it is curated. In comparison to traditional news, information travels much quicker on social media sites, creating new, abundant opportunities to access information in general - inadvertently increasing exposure to misinformation. It's especially easy to believe misleading content on these sorts of platforms because content on these sites often combines hard, factual information with softer entertainment features (Andersen et al., 2020). Thus, whether the content is factual or embellished to prompt more engagement is always at question. This consequently opens the door for increased exposure to misleading and biased conversation, further complicating people's ability to distinguish truth from blatant falsehoods and misleading news when processing information.

Furthermore, generative AI threatens to increase the quantity of misinformation overall. AI can be used to generate text and photos, sparking concerns about AI being used to exacerbate the spread of misinformation. For example, AI could theoretically increase the quantity of misinformation by automating the mass production of fake headlines and images. This reality will plausibly lead to an uncontrollable influx of fake news that is uniquely difficult to detect and moderate (Bashardoust et al., 2024).

The changing dynamics of the information landscape makes it more difficult for people to discern the veracity of the news they consume. The veracity of information (i.e. whether a source

is objectively true) is a central part of consuming news, and the ability to discern veracity from misleading or false headlines is impacted by the increased exposure to information, further complicated by the plausibility of the claim.

Implausible vs. Plausible Information

Unlike the veracity of a claim, the plausibility of information is a subjective measure people use to identify misinformation. Plausibility refers to how likely or believable a piece of information seems to be and the relative degree to which it can be judged as reasonably representing some possible truth about the world (Murphy, 2023). Plausibility is often just as critical as the veracity of information when people process and interact with misinformation. However, as a result of possible errors in thinking and judgment, some people come to believe highly implausible information and misleading claims, including conspiracy theories, fake news, and pseudosciences (Martire et al., 2023). When people are surrounded by unbelievable claims, it becomes much easier to believe claims that are slightly more believable in comparison, even when extending to unrelated headlines (Levari et al., 2024; Pennycook et al., 2018). This is especially alarming when claims are implausible *and* clearly fake (i.e. conspiracy theories) - The more people are exposed to these claims, the more likely they are to be misled into believing other implausible, false claims. Furthermore, when the prevalence of stories that seem blatantly false is high, news consumers may adopt a narrower concept of what counts as an "implausible" story (Levari et al., 2018). Following this logic, a wider range of information is perceived as plausible, and people then become more likely to believe false or misleading (yet somewhat more plausible in comparison to blatantly fake news) information.

To summarize, when people are exposed to claims that *seem* blatantly false (i.e. implausible), that prior exposure shifts their conception of what is true, making them more likely

to believe more plausible claims, even if those claims are completely unrelated in content. This effect is robust and has been observed over countless contexts, including for judgments of truth and plausibility, for hypothetical and actual news headlines, for true and false headlines, and for headlines that were actively rated and passively read. It also occurred in environments where plausibility was unrelated to veracity, and ones where plausibility was a useful cue to veracity (Levari et al., 2024). Furthermore, how people assess the veracity of the information they encounter affects their online behavior, including their sharing habits (Piksa et al., 2023). These findings indicate that the plausibility of claims may also be a factor that affects sharing habits.

Sharing Habits

Whether a person shares misinformation online is shaped by a variety of factors, including veracity and plausibility. Although most people like to believe they wouldn't share misinformation intentionally, sharing misinformation on social media diverges from one's judgment on content accuracy. Additionally, plausibility does not impact one's intention to share misinformation online. Meaning, even when information content is not believed, people still tend to share falsehoods. One explanation for this pattern is a failure to engage in reflective, analytical thinking. For example, people have a strong preference to only share accurate content, but the social media context distracts them from this preference (Pennycook & Rand, 2021). Doomscrolling, or the action of mindlessly scrolling, swiping and consuming content on social media and websites without consciously interacting (*Why we can't stop mindlessly scrolling and 7 tips to beat it*, 2024), illustrates this point of how inattention increased failure to engage in analytical thought, thus increasing opportunities to share misinformation without realizing claims are false or misleading. However, this is largely influenced by the news environment people are engaging with to begin with.

Engagement habits determine the kind of information people are exposed to, informing decisions to share. In true application, people may self-select where they get their news, but news consumption via social media is often characterized as exposure to 'incidental news', referring to a contemporary news environment in which people do not look for news but nevertheless, encounter it all the time (Omar et al., 2024). Thus, the amount and quality of information someone is exposed to, which then informs sharing habits, remains in the hands of the individual, opening the door for variations between users.

However, an interesting point is that news environments, and sharing habits by extension, are not the same across generations. In fact, there is a particularly strong effect of age on sharing intentions, where adults over 65 share nearly seven times as many articles from fake news domains as the youngest age group, on average (Guess et al., 2019). In specific, strong political partisans, particularly extreme conservatives (i.e. far-right) and older adults, are far more likely to consume more dubious news (Altay et al., 2024; Pretus et al., 2023), such that their news environments are much more dubious than they are for other generational cohorts. Furthermore, motivations to share information differ across generations. In fact, senior citizens are less motivated to share information online for the purpose of staying connected with the latest happenings, being influential to others, or simply keeping themselves engaged (Jo et al., 2024). On the other hand, young adults are significantly more likely to serve as a proxy for misinformation due to their overall stronger motivations to share information online. For example, when individuals are highly motivated to share information online, they are more likely to also pass along misinformation when they have higher levels of the fear of missing out (FoMO) and lower digital literacy (Jo et al., 2024). This variability suggests further differences

in responses to misinformation, not just in sharing misinformation habits, across generations,

particularly with Generation Z.

Generation Z

Generation Z (Gen Z)'s responses to misinformation, in their information processing and

sharing habits, have varied greatly in comparison to older generations as a result of their news

environments. Gen Z refers to the demographic cohort born from 1997 to 2012, with ages

ranging from 12 to 27 as of 2024 (Dimock, 2019). Unlike past generations, digital technology is

a defining characteristic of this generation, specifically computing technology (i.e. using

primarily social media platforms to communicate). Gen Z grew up alongside the advancements

of computing technology, becoming the first generation to use technology as a core part of

communication and news consumption. As a result, the shift to digital news (and the subsequent

increase of misinformation) has hit Gen Z harder than past generations. Gen Z's online news

environments consist of social media platforms, including TikTok and Instagram as the two

primary sources of news for Gen Z (Anderson et al., 2023). However, these platforms have come

under increasing scrutiny for their role in amplifying misinformation, inciting violence, and

lowering levels of trust in news media (Bradshaw & Howard, 2019). Additionally, these

platforms promote an overconsumption of information at fast-pace, further complicating our

ability, and in specific Gen Z's ability, to accurately process the information they consume.

The overconsumption of information in general, as well as the blurring of truth and

falsehood in misinformation, continues to overwhelm Gen Z disproportionately. Surrounded by a

constant stream of information, online platforms have significantly altered how Gen Z processes

information, in large part because of this increased magnitude in exposure (Otieno, 2019). For a

large proportion of youth, news consumption is best characterized by patterns of avoidance.

These "news avoiders" ignore news content in all of its various locations and modalities—they are not consuming traditional news sources, either online or offline, and they are avoiding news content when it appears through curated online spaces, such as social media platforms (Edgerly et al., 2018). This large amount of information exposure inhibits Gen Z's ability to process information effectively, as it can be difficult to obtain the right high-quality information when it is needed. As a result, Gen Z is more prone to inattention when consuming information online, suggesting they are more prone to intuitive errors in their decision-making in comparison to older generations. In the context of the three-stage model of information processing, this pattern of inattention and poorer digital media literacy suggests an opportunity for Gen Z to make more Stage 2 errors. This inattention makes Gen Z susceptible to misinformation, not because they are biased, but because they engage in lazy, automatic thinking (Pennycook & Rand, 2019) when engaging with misinformation online.

The increased exposure to misinformation brought by digital news also makes it more difficult for people, and Gen Z specifically, to discern news veracity. Users rarely spare the time and energy to fact-check every single piece of news that they encounter in their newsfeed (Andersen et al., 2021; Magnusson, 2023); and Gen Z is no exception. As a result of living in this world of continuous updates, Gen Z has become less focused, processing information faster and having shorter attention spans as a result (Otieno, 2019). It is less likely Gen Z is engaging in effortful, analytical thought when processing information, especially in comparison to previous generations who model different news consumption patterns, making it more difficult for them to discern whether news is true or false. Secondly, Gen Z's role as "prosumers" via these social media platforms continues to blur the lines between truths and falsehoods, decreasing their ability to discern truth from misinformation further. As so-called "prosumers", Gen Z are

consumers of online media that generate their own content (Tirocchi, 2024). This behavior further adds to information overwhelm and contributes to poorer digital media literacy, simply because the quality of information Gen Z consumes and produces is so blurred between entertainment and news.

Taken together, research on generational differences in responses to misinformation suggest that: sharing habits between generations may differ as a result of different motivations, as well as the quality of one's news environments online. Existing research has also shown that, in general, people are prone to making mistakes when processing misinformation through events like motivated reasoning or as a result of inattention (Pennycook et al., 2015; Pennycook & Rand, 2019). However, mistakes in information processing are influenced by factors such as news consumption patterns, including the tendency of news avoidance, which differ across ages. This suggests that differences in responses to misinformation may stem farther than sharing habits and motivations, but also to whether or not people believe implausible claims.

The Current Research

The existing research on misinformation exposure explores how people process misinformation and how exposure has increased in recent years, but there remains significant gaps in the literature. The spread of misinformation has exponentially increased with the transition from traditional news to digital news environments, with palpable negative impacts (Maertens et al., 2023). With most of our news now obtained through social media, fact is often mixed with softer entertainment features (Andersen et al., 2020), making it more difficult to identify when someone has been exposed to misleading or biased news. Generally, misinformation also ranges in believability. Existing research suggests that exposure to implausible claims can shift attitudes and how people interact with subsequent news information,

regardless of whether the information is true or false (Levari et al., 2024). However this research fails to identify an underlying factor in all of these results: generational differences in exposure to misinformation. Clear generational differences in intentions to share misinformation as well as motivations to share misinformation have been illustrated, suggesting a similar effect in the initial response to misinformation, particularly when interacting with implausible claims. The current research investigates the generational differences in responses to misinformation, both in plausibility and whether a claim is believed, as well as sharing intentions.

This study aimed to determine the effects of prior exposure to implausible misinformation on the believability of other ambiguous information and how those effects might differ for Gen Z in comparison to previous generations. This study's first hypothesis predicted that after exposure to a high number of implausible headlines, Gen Z will believe ambiguous, false headlines at higher rates than non-Gen Z. In addition, its second hypothesis predicted that prior exposure to high numbers of implausible headlines will increase intentions to share ambiguous, false claims for both younger (Gen Z) and older (Millennials and Gen X/ Baby Boomers) generations and that this effect will be greater for Gen Z, as a result of the decrease in attention span and quality of social media news environments. Its third hypothesis is a competing hypothesis on sharing intentions. On one hand, I predict the younger generation (Gen Z) may have lower intentions to share false headlines than older generations (Millennials and Gen X/ Baby Boomers) because older generations interact with dubious news sources more often and share that information as a result (Altay et al., 2024; Guess et al., 2019). On the other hand, senior citizens are less motivated to share information online for the purpose of staying connected with the latest happenings, being influential to others, or simply keeping themselves engaged (i.e. sharing habits are not mediated by FoMO as they are for younger generations) (Jo

et al., 2024). Thus, I predict the younger generation (Gen Z) may instead have higher intentions to share false headlines than older generations after exposure to implausible misinformation.

Pilot Study

A pilot study was conducted to establish the plausibility of various news headlines. These plausibility ratings were then used to categorize the implausibility conditions in the primary study.

Methodology

Participants

Eighty participants ($M_{age} = 39.7$, $SD_{age} = 11.9$) were recruited to participate in the pilot study via CloudResearch, an online survey recruiting platform, and were required to be at least 18 years old to participate. Upon completing the survey, participants received $1 as compensation for their participation. Individuals who failed to complete an attention check or indicated random answers or searched for the news headlines during the study were excluded from the data analysis. Thirteen total participants were removed from this initial pool, 11 for incomplete data or failing the attention check, 1 for indicating responding randomly during the survey, and 1 for indicating they searched for headlines during the survey. In total, this left 68 participants in the data analysis.

The final sample's ages ranged from 23 to 70 ($M_{age} = 39.7$, $SD_{age} = 11.9$) and included 9 Gen Zers, 38 Millennials, 15 Gen Xers, and 6 Baby Boomers. Participants consisted of 34 (50%) males, 34 (50%) females, and 0 (0%) participants identifying as an identity other than male or female. Participants reported their race as follows: 42 (61.8%) White or Caucasian, 10 (14.7%) Black or African American, 5 (7.4%) Hispanic/Latino or Chicano, 4 (5.9%) Asian or

Asian American, 5 (7.4%) Biracial or Multiracial, and 2 (2.9%) Other/No response. See Table 1

for an in-depth breakdown of participants' self-reported race.

Procedure

Participants who indicated their interest to participate were redirected from

CloudResearch to Qualtrics, a survey platform. Participants who indicated their consent to

participate proceeded to the survey. See Appendix A for the full text of the consent form. In

accordance with the recommended practice for collecting headlines in misinformation studies

(Pennycook et al., 2021), this study's news headlines were drawn from 128 actual headlines, 53

true and 75 false, based on real news coverage and social media posts that were fact-checked

between June 21, 2017 and November 23, 2024 by Snopes.com, Politifact.com, and AFP Fact

Check, three online fact checking tools. An additional 22 true news headlines, not subjected to

fact-checking, were collected from reliable sources such as The New York Times, CBSNews,

and Reuters. This was done to better represent the larger category of true news, as recommended

for misinformation studies (Pennycook et al., 2021). Potential stimuli included headlines rated as

true, mostly true, false, or mostly false, excluding ratings such as satirical content, scams, mixed

information (i.e. claims are partly true and false), and claims still ongoing research. Headlines

were limited to news headlines and social media posts and did not include fact-checked false

memes, widespread conspiracy theories, or claims from politicians. Because particularly salient

or topical news headlines can quickly become outdated (Pennycook et al., 2021), the content in

this study consisted of headlines that are not time-bound, such that it would make sense for

someone to share even several months after the headline was published. As a result, stimuli did

not include coverage of very significant news events or persons (i.e. major natural disasters/

overt mentions of political leaders) or salient topics. See Appendix B for a full list of the news headlines that were rated in this pilot study.

Participants read each headline and then rated the plausibility of the headline. Each participant viewed a subset of 85 headlines, randomly selected from the 150 news headlines, 75 true (or mostly true) and 75 false (or mostly false). Participants were provided with a definition of plausibility while rating plausibility. After rating the news headlines, participants were asked to complete an attention check to counteract low quality responses. This attention check was taken from a previous pretest ran in the United States on political and COVID-19 news headlines (Pennycook et al., 2021). Finally, participants answered demographic questions, including age, generational cohort, gender, and race. After the demographics, participants were asked whether they answered questions on the survey thoughtlessly or searched for the headlines online while taking the survey. Participants were fully debriefed once they completed the survey. See appendix C for the full text of the pilot study's debriefing form.

Measures

News Headline Plausibility. To measure the plausibility of the news headlines, participants were asked "How plausible is this news headline?", which they responded to on a Likert scale from 1 to 7, (1) *Completely implausible*, (2) *Implausible*, (3) *Somewhat Implausible*, (4) *Either implausible or plausible*, (5) *Somewhat plausible*, (6) *Plausible*, (7) *Completely plausible*. A definition of plausibility, used in previous research (Levari et al., 2024), was provided at the top of the page while participants rate plausibility. Plausibility was defined as follows: "plausible headlines are believable. They describe events that you would have an easy time believing if you read about them in the news. Implausible headlines are the opposite – they

describe events that you would have a hard time believing had happened, even if you read about them in the news."

Attention Check. Participants reported on an attention check, used in a previous study (Pennycook et al., 2021). It was given as follows: "We would like to get a sense of your general preferences. Most modern theories of decision making recognize that decisions do not take place in a vacuum. Individual preferences and knowledge, along with situational variables can greatly impact the decision process. To demonstrate that you've read this much, just go ahead and select both red and green among the alternatives below, no matter what your favorite color is. Yes, ignore the question below and select both of those options. What is your favorite color?" Participants responded (1) *White*, (2) *Black*, (3) *Red*, (4) *Pink*, (5) *Green*, (6) *Blue*. Participants were coded as having given a correct response if they selected red and green, and an incorrect response if they selected any other color or color combination.

Age. Participants reported demographic information by answering five questions. Participants answered the question"What is your age?" by responding with their age in years. Participants reported their generational cohort as follows: "What generation are you a part of?" Participants responded (1) *Gen Z (1997-2012)*, (2) *Millennial (1981-1996)*, (3) *Gen X (1965-1980)*, (4) *Baby Boomer (1946-1964)*, (5) Other, (6) *Prefer not to answer*; "What year were you born in?" Participants responded via an open-ended text box.

Demographics. Participants reported their gender as follows: "How would you describe your gender?" Participants responded (1) *Female*, (2) *Male*, (3) *Non-binary or Gender Non-Conforming*, (4) *Not Listed, please specify: [Text box]*, (7) *Prefer not to answer*. Participants reported their race by answering the question: "How would you describe your race?" with an open-ended response.

Randomness Check. Participants reported if they responded to any questions on the survey randomly, as used in a previous study (Pennycook et al., 2018). The measure is as follows: "Did you respond randomly at any point during the study? Please be honest! You will get your payment regardless of your response." Participants responded (1) *No*, (2) *Yes*.

Search Check. Participants reported if they searched for any of the headlines they were asked to rate, as used in a previous study (Pennycook et al., 2021): "Did you Google or search for headlines you viewed during this survey at any point while completing the survey? Please be honest! You will get your payment regardless of your response." Participants responded (1) *No*, (2) *Yes*.

Analysis

Once the data were collected, a mean plausibility was computed for each news headline. Each news headline received plausibility ratings from a subset of participants, with a minimum of 35 and a maximum of 42 ratings. These ratings were averaged to one mean plausibility for each news headline.

Mean plausibility ratings were then used to categorize the news headline as implausible, ambiguous, or plausible. Following the procedure done in previous work (Levari et al., 2024), news headlines with a mean plausibility score less than or equal to 4 and greater than or equal to 1 were scored as implausible, headlines with a mean plausibility score greater than 4 and less than 5 were scored as ambiguous, and headlines with a mean plausibility score greater than or equal to 5 and less than or equal to 7 were scored as plausible. Of the 150 headlines, 39 were rated as plausible (30 true, 9 false), with a maximum plausibility score of 6.56 and a minimum of 5.00, 49 were rated as ambiguous (30 true, 19 false), with a maximum plausibility score of 4.95 and a minimum of 4.03, and 63 were rated as implausible (15 true, 48 false), with a maximum

plausibility score of 4.00 and a minimum of 1.59. These ratings were used to design the experimental conditions in the primary study.

Primary Study

Following the pilot study, the primary study used plausibility-rated headlines to explore the relationship between exposure to misinformation and people's reactions to implausible information, both in their believability and sharing habits.

Methodology

Participants

Participants (N = 193) were again recruited through CloudResearch. All participants were required to be at least 18 years old and were compensated $1 for their participation. Four total participants were excluded from data analysis, 3 for indicating they answered questions thoughtlessly and 1 for not responding to the study's search check. This left the study with a total of 189 participants.

The final sample's ages ranged from 18 to 76 (M_{age} = 32.98, SD_{age} = 10.41) and included 73 Gen Zers, 83 Millennials, 25 Gen Xers, and 2 Baby Boomers, with 1 participant preferring not to answer. On average, participants were born in 1991, with the oldest born in 1948 and youngest in 2007. Participants consisted of 79 (42.9%) males, 94 (51.1%) females, 7 (3.8%) participants identifying as non-binary or gender non-conforming, and 4 (2.2%) preferring not to answer. See Table 2 for a breakdown of participants' self-reported race.

Design

This study included two independent variables: age and implausibility conditions. Age was treated as a continuous variable. Furthermore, this study split participants into two implausibility conditions: the low implausibility condition, where participants saw a lower

number of implausible headlines, and the high implausibility condition, where participants saw a

higher number of implausible headlines. See Materials for information on how news headlines

were identified.

Materials

Headlines were drawn from the set of 150 tested for plausibility in the pilot study. A

decision rule was determined to decide which headlines to include such that headlines rated

highest in plausibility (scored closest to 7.00), lowest in plausibility (scored closest to 1.00), and

median ambiguity (scored closest to 4.50) would be included. As a result, the 9 most plausible, 9

most implausible, and 5 median ambiguous headlines were selected to be included in one of the

two conditions. The low implausibility condition saw the most plausible headline of the 9

implausible headlines selected. Similarly, the high implausibility condition saw the least

plausible headline of the 9 plausible headlines selected. See Table 3 and Table 4 for a full list of

the headlines used in each condition and their plausibility scores.

As stated previously, all news headlines were tested for a subjective plausibility rating in

the pilot study. After viewing these headlines, all participants viewed the same 3 ambiguous,

false news headlines. These headlines were also selected from headlines in the pilot study that

were rated with an ambiguous mean plausibility. The headlines are as follows: "Rare Pink

Dolphins Spotted in Bohol", "Did Sweden Ban Mandatory Vaccinations for Children?", and

"The NRA Ban Guns at Their Own Leadership Forum".

Procedure

Participants who indicated their interest to participate were redirected from

CloudResearch to Qualtrics survey. Those who indicated their consent to participate, and

confirmed they were over 18 years old, were given access to the survey questions. See appendix

D for the full text of the primary study's consent form. First, participants were randomly

assigned to one of two implausibility conditions, including a low ($n = 92$) and high ($n = 92$)

implausibility group. Participants were told that their task would be to read a series of recent

news headlines describing true and false claims. Headlines appeared one at a time, presented in

random order. Participants read a series of 15 news headlines, including true and false claims.

They were instructed not to search for these claims during the survey. Participants in the low

implausibility condition were exposed to the lowest number of implausible claims, including 1

(8%) implausible headline, 5 (33%) ambiguous headlines, and 9 (58%) plausible headlines.

Participants in the high implausibility condition were exposed to the highest number of

implausible claims, including 9 (58%) implausible headlines, 5 (33%) ambiguous headlines, and

1 (8%) plausible headline. Claims included both true and false headlines to ensure that claim

veracity (i.e. whether the claim is true or not) did not confound with plausibility (i.e. whether the

claim is believable or not) in each condition. Specifically, the low implausible condition included

a total of 4 false headlines and 11 true headlines and the high implausible condition included a

total of 12 false headlines and 3 true headlines.

Headlines were presented in a random order for each participant. Participants were asked

to provide information on the believability of the ambiguous, false claims and their intentions to

share. After providing this information, participants answered a short attention check to ensure

quality responses. This attention check was the same one used in the pilot study (Pennycook et

al., 2021). Participants then answered demographic questions, including their age, generational

cohort (including birth year), gender, and race. Furthermore, participants were asked whether

they answered questions on the survey randomly and/or if they searched for the headlines at any

point during the survey. See appendix E for the full study questionnaire. Participants were fully

debriefed once they completed the study. See appendix F for the full text of the study's

debriefing form.

Measures

   Believability Rating. Participants responded to one item assessing their evaluation of the

ambiguous, false headlines. This item was taken from a prior study on fake news [Study 1]

(Pennycook & Rand, 2019). "To the best of your knowledge, how believable is the claim in the

above headline?" Participants responded on a scale from 1 to 5 (1) *Extremely unbelievable*, (2)

Somewhat unbelievable, (3) *Neither believable or unbelievable*, (4) *Somewhat believable*, (5)

Extremely believable. The overall belief score was calculated by averaging the three belief scores

measured for each ambiguous headline ($M = 2.62$, $SD = 0.84$).

   Sharing Intentions. Participants responded to one item assessing their intentions to share

the 3 ambiguous, false claims.[1] The item was taken from a study on fake news (Pennycook &

Rand, 2019), although the social media platforms listed were updated to reflect new popular

social media platforms and responses were adapted to be on a continuous scale. It was given as

follows: "How likely would you be to share this story online (for example, through Instagram,

Facebook or TikTok)?" Participants responded on a Likert scale from 1 to 5 (1) *Extremely*

Unlikely, (2) *Unlikely*, (3) *Neutral,* (4) *Likely*, (5) *Extremely Likely*. The overall sharing intention

score was calculated by averaging the three sharing intentions scores measured for each

ambiguous headline ($M = 1.77$, $SD = 0.78$).

   Attention Check. The attention check given was measured with the same measures

detailed in the pilot study.

   Age. Participants reported several measures of age. Participants answered the question

"What is your age?" by responding with their age in years. Furthermore, participants reported

---

[1] Sharing motivations were also measured, including why they would share a headline and with who.

their generational cohort as follows: "What generation are you a part of?" Participants responded

(1) *Gen Z (1997-2012)*, (2) *Millennial (1981-1996)*, (3) *Gen X (1965-1980)*, (4) *Baby Boomer*

(1946-1964), (5) Other, (6) *Prefer not to answer*; "What year were you born in?" Participants

responded via an open-ended text box. Participants were also asked to report their year of birth:

"What year were you born in?" Participants responded via an open-ended text box.

   Demographics. Demographics were measured with the same measures detailed in the

pilot study.

   Randomness Check. Participants reported if they responded to any questions on the

survey randomly the same way they did in the pilot study.

   Search Check. Participants reported if they searched for any of the headlines they were

asked to rate the same way they did in the pilot study.

Analysis

   Two moderated linear regressions were conducted to test the impact of age, condition,

and the interaction of both on the two dependent variables. Specifically, age was entered as a

scale variable, and the conditions (low implausibility and high implausibility) were entered as

categorical variables. The first moderated regression was conducted with overall belief score as

the dependent variable, and the second was conducted with an overall sharing intention score as

the dependent variable.

Results

Descriptive Information about Study Variables

   See Table 5 for descriptive information regarding all study variables, including means

and standard deviations. Prior to analysis, the continuous predictor age was centered, resulting in

a revised age with a sample mean of 0 ($M_{age} = 0.00$, $SD_{age} = 10.41$). As a result, age values used

in the analysis have been adjusted to illustrate how far each participant is from the average age of the sample (M_{age} = 32.98, SD_{age} = 10.41). The overall belief score was calculated by averaging the three belief scores measured for each ambiguous headline (M = 2.62, SD = 0.84). On average, participants scored a belief score of 2.62 between the three headlines, suggesting that the headlines were not overly unbelievable or believable. This indicates that, on average, the three implausible headlines selected were interpreted as ambiguous, as the average belief score between the three was almost exactly the mean (3.00) of the scale, where a score of 1 was extremely unbelievable, 5 was extremely believable, and 3 Neither believable or unbelievable (i.e. ambiguous). The overall sharing intention score was calculated by averaging the three sharing intentions scores measured (M = 1.77, SD = 0.78). On average, participants had a sharing intention score of 1.77, suggesting a relatively low level of intention to share the combined three headlines. See Table 6 for the intercorrelations of all study variables. Taking a look at the significant correlations, there is a moderate positive correlation between overall belief scores and overall sharing intention scores

r(182) = .43, p < .001, suggesting that participants with a higher average belief in the three ambiguous headlines had increased intentions to share those headlines. This implies that participants who believed in the headlines at higher rates were more willing to share that information, on average. Furthermore, there is a significant weak negative correlation between overall sharing intention scores and age r(182) = -.16, p = .03. On average, older adults were slightly less likely to share the headlines compared to the younger participants.

Believability

I predicted that after exposure to a higher number of implausible headlines, Gen Z would believe ambiguous, false headlines at higher rates than non-Gen Z. A moderated regression

analysis did not support this prediction. Specifically, age (centered), condition, and the

interaction of age and condition were simultaneously entered in a regression analysis to predict

the overall belief of ambiguous, false headlines. Analyses indicated that none of the three

predicted the overall belief of ambiguous, false headlines: age, $B = -0.004$, $SE = .01$, $t(180) =$

-0.51, $p = .61$, condition, $B = 0.05$, $SE = .12$, $t(180) = 0.40$, $p = .69$, nor the interaction between

age and condition, $B = -0.01$, $SE = .01$, $t(180) = -0.42$, $p = .68$. As such, there are no significant

differences between how participants rated the believability of headlines, on average, and this

holds true regardless of a participant's level of exposure to misinformation (i.e. being in the low

implausibility condition or high implausibility condition).

Sharing Intentions

I predicted that prior exposure to high numbers of implausible headlines would increase

intentions to share ambiguous information across ages. Furthermore, I tested two competing

hypotheses. On one hand, younger generations may have lower intentions to share

misinformation than older generations because of differences in news environments or, on the

other hand, older generations may have lower intentions to share because they have weaker

motivations (i.e. their sharing habits are not mediated by FoMo). Neither of these predictions

were supported by the moderated regression model. Age (centered), condition, and the

interaction of age and condition were simultaneously entered in a regression analysis to predict

the overall intentions to share ambiguous, false headlines. Neither condition, $B = -.12$, $SE = .11$,

$t(180) = -1.02$, $p = .31$, nor the interaction between age and condition, $B = .01$, $SE = .01$, $t(180) =$

0.53, $p = .60$, predicted the overall intentions to share ambiguous, false headlines. Furthermore,

age did not predict overall share intentions, age, $B = -.02$, $SE = .01$, $t(180) = -1.87$, $p = .06$, but

was close enough to warrant a look at the pairwise correlations. Removing the interaction term

between age and condition, the analysis suggests a significant negative correlation between age (centered) and overall intentions to share, $r(182) = -.16$, $p = .03$. On average, people who are older are less likely to intend to share ambiguous, false news headlines.

Discussion

The present research consisted of two studies; the pilot study set out to establish plausibility in a set of headlines and the primary study explored the exposure of misinformation on believability and sharing habits. To start, the pilot identified plausibility ratings among 150 recent news headlines, with 39 rated as plausible, 49 ambiguous, and 63 implausible. These results ensured a set of stimuli for the subsequent study, and established a recent set of stimuli that can be used in upcoming research on misinformation and plausibility. In the primary study, I predicted that (a) exposure to more implausible news would increase belief in ambiguous falsehoods at higher rates among Gen Z, (b) prior exposure would increase intentions to share ambiguous falsehoods across generations, and (c) tested a set of competing hypotheses in which intentions to share ambiguous news would be higher among Gen Z or vice versa. Primary findings revealed that, contrary to my hypothesis, even after exposure to a higher number of implausible headlines, participants did not significantly differ in whether they believed the subsequent ambiguous information. Comparing the implausibility conditions, participants in the low implausible condition scored the ambiguous headlines at a similar score ($M = 2.60$, $SD = 0.78$) as participants in the high implausible condition ($M = 2.64$, $SD = 0.90$). On average, these scores were not meaningfully different, contradicting my initial two hypotheses. However, there was a significant finding in regards to sharing intentions. Results show that a negative, albeit weak, correlation exists between age and sharing intention, suggesting that, on average, older adults are less likely to share ambiguous news than Gen Z, consistent with one version of the

study's competing hypothesis. Interestingly, these results support the previous literature on age

effects in sharing intentions and habits. It's important to note that, while gender was measured in

both studies, it was not included as a covariate. Previous studies have found that men and

women's perceptions of misinformation do not significantly differ when determining

believability (Almenar et al., 2021). Furthermore, gender was not a central matter to these

studies' focus and, therefore, was not included in analysis.

Connections & Implications for the Literature

This research holds numerous implications for the existing literature. Firstly, the rating of

plausibility in this research's pilot study echoes the same conclusions found in the previous

literature on plausibility rating: plausibility is a subjective measure. The present research and

previous literature (Levari et al., 2024) defined plausibility as follows: "plausible headlines are

believable. They describe events that you would have an easy time believing if you read about

them in the news. Implausible headlines are the opposite – they describe events that you would

have a hard time believing had happened, even if you read about them in the news." This

definition allows for the subjectivity of plausibility, and includes the possibility that plausibility

is time-sensitive and can vary greatly with cultural and social contexts. For example, while a

news article about AI replacing humans seemed perhaps very implausible a few decades ago, the

technology has advanced and the plausibility of that claim has shifted as a result. As such, how

someone rates plausibility can change as social and cultural contexts shift, suggesting that

plausibility must be re-measured regularly to remain useful, as was done in the present research's

pilot study.

The primary study's results differed meaningfully from the previous literature. Past

research showed that exposure to implausible information can shift attitudes, like believability,

and interactions with subsequent information, regardless of whether the information is true or not (Levari et al., 2024). The present findings, however, suggest that previous exposure does not affect the believability of subsequent information. One reason for this discrepancy may be that the subjectivity of plausibility plays a role. Online news environments have proven to increase the spread of information, with misinformation readily and rapidly spread on social media (Bashardoust et al., 2024; Friggeri et al., 2014), potentially making people generally more skeptical about the news they consume and, by extension, lowering the overall believability of even the most plausible news. As such, it may be that, regardless of whether people are exposed to more implausible information or not, the threat of a perceived exposure has impacted the overall believability of news and trust in media, accounting for the lack of effects of exposure (i.e. implausibility conditions) in the primary study. On the contrary, the previous research consisted of one set of studies, which may have illustrated a Type 1 error. As such, the previous research could have falsely found that people believe implausible claims after increased exposure to implausible misinformation when there is actually no difference in believability by exposure to implausible claims. Alternatively, these differing results may perhaps mean the relationship between plausibility and vulnerability to misinformation, whether that be believing false claims or sharing them, may be more complicated than previous studies suggest.

Turning to sharing habits, the present research supports some of the existing research on age effects and sharing misinformation. Older individuals were found to be less likely to share news online on average, a result that is consistent with findings on sharing motivations. Older adults are less motivated to share information to stay connected with the latest happenings, being influential to others, or simply keeping themselves engaged (Jo et al., 2024), supporting this study's findings. However, it is important to mention that in previous research older adults share

the greatest amount of misinformation from fake news domains, particularly in a political context. This, in conjunction with the present research's findings, suggests that older adults may be vulnerable to sharing false news, but particularly when they have strong motivations to do so, such as in the case of political news and, more specifically, among extreme conservatives (Altay et al., 2024; Pretus et al., 2023).

Study Limitations

The present research included limitations that may impact how these findings can be generalized. Most concerningly, the study's sample failed to obtain a large number of older adults, with a majority of Gen Zers ($n = 73$) and Millennials ($n = 83$). The primary study's sample also had a low number of participants who identified as Gen Xers ($n = 25$) and Baby Boomers ($n = 2$), for a total of 27 participants. Arguably, this lower number of older participants may have resulted in a comparison of Gen Z to Millennials rather than older age cohorts, limiting the population these results can be generalized to. Specifically, the effects on sharing habits may be less focused on older adults (i.e. Baby Boomers) and more so on the difference in sharing habits between Gen Z and Millennials. As such, it may be that the primary study does not capture any potential generational contrasts in misinformation susceptibility between other generations, which may provide a possible explanation for the discrepancy between the present research and past studies.

This limitation is especially of note because participants were recruited online, suggesting that there may be a self-selection bias. Self-selection bias occurs when people who choose to participate in a study differ from those who do not, meaning the present sample may not be entirely representative of Gen Xers and Baby Boomers. Individuals, for example, who may be less familiar with technology were less likely to participate in this study as a result of the

recruiting method. This is an issue because many older adults may have lower digital literacy or less familiarity with misinformation online, particularly with new forms of misinformation like AI-generated falsehoods. As such, the participants in these age cohorts may have skewed the study's results, such that they engage with misinformation differently than others in their generations, who may engage with misinformation differently. Furthermore, the lack of Gen Xers and Baby Boomers could offer an explanation for the discrepancy between this study's findings and previous literature on sharing habits. Previous literature suggests that older adults, particularly those over 65 years old, share much more misinformation from fake news domains, differing from the present results where older adults intend to share *less* implausible misinformation on average. With only 2 Baby Boomers, the present study cannot comment on these existing findings without a larger sample of older adults. In the future, recruiting participants via a variety of methods, including a combination of in-person interviews, mail-in surveys, and online surveys could result in a larger sample of older adults that better captures the reality of engagement with misinformation amongst older generations.

The definition of plausibility used here is also subjective. It's also important to consider the differences in public perceptions of misinformation across different countries and geographical regions. While misinformation was conceptualized as objectively false or misleading information in this study, it is entirely possible that the concept of misinformation may differ within a different regional context. For example, public perceptions of misinformation in Japan show terms like "fake news" as an American political phenomenon (Owen et al., 2020), whereas the application of misinformation in this study used a much broader conceptualization. Furthermore, conceptualizations may differ across time or within particular groups in the same culture. For example, the definition of misinformation has been challenged in recent times. In a

speech at the Artificial Intelligence Action Summit, current Vice President J.D. Vance spoke on the existence of misinformation in online spaces, critiquing the EU's Digital Services Act for, "policing so-called misinformation", calling into question the very conceptualization of misinformation as *objective* false information (Vance, 2025).

Furthermore, the primary study's sample consisted solely of participants in the United States, thus its results cannot be generalized to other populations. This is especially an issue when studying exposure to misinformation because of the differences in vulnerability to misinformation, particularly among non-English speakers. To illustrate, Spanish speakers are at a much higher risk of falling for misinformation and are more likely to receive, consume, and share "fake news" and misinformation online compared to the general U.S. population (Sanchez & Bennett, 2022). This is especially concerning when taking into account the increased vulnerabilities in specific regions, an effect that this study could not explore because of its sample limitations.

Future Directions

Future research on misinformation and the generational differences in responses to misinformation can take many different avenues, including the study of misinformation effects across different contexts. Misinformation studies should continue not only in the United States, but globally as well. One potential explanation for discrepancies in the believability of misinformation is the accessibility to reliable information across regions and the differences in vulnerability to misinformation among other populations outside of the U.S. In fact, the risk perception of misinformation varies greatly across regions, where concern is highest among Latin American countries and the Caribbean (74.2%) (Knuutila et al., 2022). Future research should continue to explore these discrepancies and any mediators for these differences.

Especially among vulnerable populations, where the effects of exposure to misinformation are further complicated by AI and the production of AI-generated misinformation in languages other than English. For example, the world's leading chatbots generate more false claims in other languages, such as Russian, Chinese, and Spanish, than in English, with over 50% of the Russian and Chinese messages generated containing some kind of false claim or non-response (Sadeghi et al., 2025). Future research should continue to study these disparities in the effects of exposure to misinformation, especially since what is defined as misinformation may vary across different cultural contexts.

Furthermore, it would be interesting to explore the effects of misinformation on other variables other than believability and sharing habits, such as behavior. In fact, brief exposure to misinformation has been shown to impact behavior, in studies where even short (under 5 minute) exposure to fake news was able to significantly modify the unconscious behavior of individuals: A fake news article that associated fast tapping with intelligence increased the speed at which people tapped their fingers, even though they were instructed to tap at their maximum speed during both tests (Bastick, 2021). As such, it would be interesting to see if these effects have a cumulative effect on behavior. Similarly, the length of exposure to misinformation might also have interesting implications in regards to believability and sharing habits. It may be that only brief exposure to misinformation can impact believability, especially if the content aligns with existing beliefs. However, prolonged or repeated exposure could also reinforce false beliefs more deeply, increasing the likelihood that a person will believe that false information or other false information on a related topic. Future research should investigate whether the duration and frequency of exposure can influence susceptibility differently.

In regards to the effects of misinformation on sharing intentions, future research should aim to understand the relationship between sharing intentions and age, particularly how it pertains to media literacy. The current study found that older adults were slightly less likely to share false information, but this trend may not remain true in specific contexts. For example, media literacy may play a large role in one's ability to identify misleading claims and, as such, future studies should try to further our understanding of vulnerability to misinformation as it relates to media literacy, especially among the older population. Other avenues of research could look at how biased news consumption affects a person's rating of plausibility. And, with cognitive illnesses like Alzheimer's on the rise, it may be beneficial to study how cognitive decline might impact the perception of implausible claims in older adults and, by extension, whether traditional interventions to misinformation could still apply among this population.

Real-World Applications

This research contributes to the growing research on misinformation and can be applied when designing interventions to counter the spread of misinformation online. For example, the results of the primary study suggests that the effects of exposure to implausible information does not impact the believability of subsequent misinformation. As such, perhaps interventions would be most effective when debunking false claims as often as possible (i.e. providing fact checks) or providing cues to identify when information may be misleading, not just after exposure to implausible claims. Additionally, this study's findings on the age effects on sharing habits could suggest that younger people are at higher risk of sharing misinformation and should be the main focus of intervention in that regard.

Conclusion

In conclusion, the present study found that exposure to higher rates of implausible information did not impact participants' belief in other unrelated headlines or their intentions to share those headlines, regardless of age. This may have stemmed from the subjective definition of plausibility, the current landscape of online news media and media distrust, or a limitation of the study's U.S. sample. However, sharing intentions differed between older and younger adults, implying that older adults may be slightly less inclined to share misinformation. Future research should continue to explore the effects of misinformation, particularly among vulnerable populations (i.e. non-English speakers), and continue to explore interventions against misinformation online, particularly among the younger generations. Ultimately, as misinformation continues to evolve and spread, understanding its influences on people's beliefs and sharing intentions will remain of utmost importance for researchers, policymakers, and social media platforms alike. By continuing to investigate misinformation's reach and effects, this research will continue to be useful as strategies to mitigate the influence of misinformation continue to develop, fostering a more informed public in the digital age of information.

References

Altay, S., Lyons, B. A., & Modirrousta-Galian, A. (2024). Exposure to higher rates of false news erodes media trust and fuels overconfidence. *Mass Communication and Society*, 1–25. https://doi.org/10.1080/15205436.2024.2382776

Andersen, K., Ohme, J., Bjarnøe, C., Bordacconi, M. J., Albæk, E., & De Vreese, C. (2020). *Generational Gaps in Political Media Use and Civic Engagement: From Baby Boomers to Generation Z* (1st ed.). Routledge. https://doi.org/10.4324/9781003111498

Anderson, M., Faverio, M., & Gottfried, J. (2023, December 11). Teens, Social Media and Technology 2023. *Pew Research Center.* https://www.pewresearch.org/internet/2023/12/11/teens-social-media-and-technology-2023/

Bashardoust, A., Feuerriegel, S., & Shrestha, Y. (2024, May 30). *Comparing the willingness to share for human-generated vs. AI-generated fake news*. CSCW 2024. https://www.researchgate.net/publication/381000404_Comparing_the_willingness_to_share_for_human-generated_vs_AI-generated_fake_news

Bastick, Z. (2021). Would you notice if fake news changed your behavior? An experiment on the unconscious effects of disinformation. *Computers in Human Behavior*, *116*, 106633. https://doi.org/10.1016/j.chb.2020.106633

Bradshaw, S., & Howard, P. N. (2019). *The global disinformation order: 2019 global inventory of organized social media manipulation.* University of Oxford Working Paper 2019.2. https://demtech.oii.ox.ac.uk/wp-content/uploads/sites/93/2019/09/CyberTroop-Report19.pdf

Dimock, M. (2019, January 17). Defining generations: Where Millennials end and Generation Z

begins. *Pew Research Center.*

https://www.pewresearch.org/short-reads/2019/01/17/where-millennials-end-and-generati
on-z-begins/

Dougherty, M. B. (2024, September 11). Kamala Lied about U.S. Personnel in War Zones.

National Review.

https://www.nationalreview.com/corner/kamala-lied-about-u-s-personnel-in-war-zones/

Edgerly, S., Vraga, E. K., Bode, L., Thorson, K., & Thorson, E. (2018). New media, new

relationship to participation? A closer look at youth news repertoires and political

participation. *Journalism & Mass Communication Quarterly*, *95*(1), 192–212.

https://doi.org/10.1177/1077699017706928

Friggeri, A., Adamic, L., Eckles, D., & Cheng, J. (2014). Rumor Cascades. *Proceedings of the*

International AAAI Conference on Web and Social Media, *8*(1), Article 1.

https://doi.org/10.1609/icwsm.v8i1.14559

Guess, A., Nagler, J., & Tucker, J. (2019). Less than you think: Prevalence and predictors of fake

news dissemination on Facebook. *Science Advances*, *5*(1), 1-8.

https://doi.org/10.1126/sciadv.aau4586

Hesson, T., Sullivan, A., & Borter, G. (2024, September 13). *Haitian Americans fear for their*

safety after Trump repeats false claims about immigrants and pets. Reuters.

https://www.reuters.com/world/us/haitian-americans-fear-their-safety-after-trump-repeats
-false-claims-about-2024-09-11/

Jo, H., Yang, F., & Yan, Q. (2024). Spreaders vs victims: The nuanced relationship between age

and misinformation via FoMO and digital literacy in different cultures. *New Media &*

Society, *26*(9), 5169–5194. https://doi.org/10.1177/14614448221130476

Knuutila, A., Neudert, L.-M., & Howard, P. N. (2022). Who is afraid of fake news? Modeling

   risk perceptions of misinformation in 142 countries. *Harvard Kennedy School*

   Misinformation Review. https://doi.org/10.37016/mr-2020-97

Levari, D. E., Gilbert, D. T., Wilson, T. D., Sievers, B., Amodio, D. M., & Wheatley, T. (2018).

   Prevalence-induced concept change in human judgment. *Science*, *360*(6396), 1465–1467.

   https://doi.org/10.1126/science.aap8731

Levari, D. E., Martel, C., Orchinik, R., Bhui, R., Seli, P., Pennycook, G., & Rand, D. G. (2024).

   Blatantly false news increases belief in news that is merely implausible. PsyArXiv.

   https://doi.org/10.31234/osf.io/cz7vy

Maertens, R., Götz, F. M., Golino, H. F., Roozenbeek, J., Schneider, C. R., Kyrychenko, Y., Kerr,

   J. R., Stieger, S., McClanahan, W. P., Drabot, K., He, J., & van der Linden, S. (2023). The

   Misinformation Susceptibility Test (MIST): A psychometrically validated measure of

   news veracity discernment. *Behavior Research Methods*, *56*, 1863–1899.

   https://doi.org/10.3758/s13428-023-02124-2

Magnusson, E. (2023). *Information, news, and politics gathering through social media by*

   Generation Z: A semi-structured interview study (Dissertation). Retrieved from

   https://urn.kb.se/resolve?urn=urn:nbn:se:kau:diva-95395

Martire, K. A., Robson, S. G., Drew, M., Nicholls, K., & Faasse, K. (2023). Thinking false and

   slow: Implausible beliefs and the Cognitive Reflection Test. *Psychonomic Bulletin &*

   Review, *30*, 2387–2396. https://doi.org/10.3758/s13423-023-02321-2

Murphy, K. M. (2023). Fake News and the Web of Plausibility. *Social Media + Society*, *9*(2).

   https://doi.org/10.1177/20563051231170606

Omar, B., Al-Samarraie, H., Alzahrani, A. I., & See Kee, N. (2024). Unlocking young people's

engagement with online news: Affective or cognitive? *Online Information Review*, *48*(5),

944–958. https://doi.org/10.1108/oir-12-2022-0691

Otieno, J. O. (2019). Millennials and Generation Z employees are here: Is your organization

ready? *Journal of Language, Technology & Entrepreneurship in Africa, 10*(2).

https://www.ajol.info/index.php/jolte/article/view/192974

Owen, D., Ogasahara, M., & Kiyohara, S. (2020). *Public Perceptions of "Fake News" in the

United States and Japan*. https://doi.org/10.33774/apsa-2020-sk11m

Pennycook, G. (2023). A framework for understanding reasoning errors: From fake news to

climate change and beyond. *Advances in Experimental Social Psychology, 67*, 131-208.

https://doi.org/10.1016/bs.aesp.2022.11.003

Pennycook, G., Binnendyk, J., Newton, C., & Rand, D. G. (2021). A practical guide to doing

behavioral research on fake news and misinformation. *Collabra: Psychology*, *7*(1).

https://doi.org/10.1525/collabra.25293

Pennycook, G., Cannon, T. D., & Rand, D. G. (2018). Prior exposure increases perceived

accuracy of fake news. *Journal of Experimental Psychology: General*, *147*(12),

1865–1880. https://doi.org/10.1037/xge0000465

Pennycook, G., Fugelsang, J. A., & Koehler, D. J. (2015). What makes us think? A three-stage

dual-process model of analytic engagement. *Cognitive Psychology*, *80*, 34–72.

https://doi.org/10.1016/j.cogpsych.2015.05.001

Pennycook, G., & Rand, D. G. (2019). Lazy, not biased: Susceptibility to partisan fake news is

better explained by lack of reasoning than by motivated reasoning. *Cognition*, *188*,

39–50. https://doi.org/10.1016/j.cognition.2018.06.011

Pennycook, G., & Rand, D. G. (2021). The psychology of fake news. *Trends in Cognitive*

Sciences, *25*(5), 388–402. https://doi.org/10.1016/j.tics.2021.02.007

Piksa, M., Noworyta, K., Gundersen, A. B., Kunst, J., Morzy, M., Piasecki, J., & Rygula, R. (2023). Are we willing to share what we believe is true? Factors influencing susceptibility to fake news. *Frontiers in Psychiatry*, *14*. https://doi.org/10.3389/fpsyt.2023.1165103

Pretus, C., Servin-Barthet, C., Harris, E. A., Brady, W. J., Vilarroya, O., & Van Bavel, J. J. (2023). The role of political devotion in sharing partisan misinformation and resistance to fact-checking. *Journal of Experimental Psychology: General*, *152*(11), 3116–3134. https://doi.org/10.1037/xge0001436

Sadeghi, M., Labbe, C., Padovese, V., Schmid, R., Maitland, E., Wang, M., Vercellone, C., Blachez, I., Lin, C., Wolf, M., Pfaller, L., Badilini, S., & Pozzi, G. (2025). *NewsGuard Monthly AI Misinformation Monitor of Leading AI Chatbots*. NewsGuard. https://www.newsguardtech.com/ai-monitor/january-2025-ai-misinformation-monitor

Sanchez, G. R., & Bennett, C. (2022, November 4). *Why Spanish-language mis- and disinformation is a huge issue in 2022*. Brookings. https://www.brookings.edu/articles/why-spanish-language-mis-and-disinformation-is-a-huge-issue-in-2022/

Social media and news fact sheet. (2024, September 17). *Pew Research Center*. https://www.pewresearch.org/journalism/fact-sheet/social-media-and-news-fact-sheet/

Tirocchi, S. (2024). Generation Z, values, and media: From influencers to BeReal, between visibility and authenticity. *Frontiers in Sociology*, *8,* 1-14. https://doi.org/10.3389/fsoc.2023.1304093

Vance, J. D. (2025, February 11). *Remarks by the Vice President at the Artificial Intelligence*

Action Summit in Paris, France. The American Presidency Project.

https://www.presidency.ucsb.edu/documents/remarks-the-vice-president-the-artificial-inte

lligence-action-summit-paris-france

Vosoughi, S., Roy, D., & Aral, S. (2018). The spread of true and false news online. *Science*,

359(6380), 1146–1151. https://doi.org/10.1126/science.aap9559

Why we can't stop mindlessly scrolling and 7 tips to beat it. (2024, January 23). *Unplugged.*

https://unplugged.rest/blog/why-scrolling-is-so-addictive-7-tips

Table 1

Pilot Study: Frequencies and Percentages of Participants' Self-Reported Race

Race	Frequency	Percentage
White/ Caucasian	42	61.8%
Black/ African American	10	14.7
Hispanic/ Latino or Chicano	5	7.4
Biracial/ Multiracial	5	7.4
Asian/ Asian American	4	5.9
Other/ No Response	2	2.9

Table 2

Primary Study: Frequencies and Percentages of Participants' Self-Reported Race

Race	Frequency	Percentage
Caucasian/ White	101	54.9%
Black/ African American	27	14.7
Asian/ Asian American	26	14.1
Hispanic/ Latino or Chicano	13	7.1
Multiracial	10	5.4
Other/ No Response	7	3.8

Table 3

Primary Study: News Headlines in Low Implausibility Condition

Headline	Mean Rate Plausibility
The U.S. Experience Far More School Shootings Than Any Other Country	6.56
Research Suggests Pets Dying Can Be Just as Hard as Losing Loved Ones	6.46
US Justice Department finds rights violated at Atlanta jail	6.38
Microplastics from Cutting Boards Have Been Found in Food?	6.16
California teenager admits to making hundreds of hoax emergency calls	6.03
Police Officer Found Guilty of Murder in Shooting of a Columbus Man	5.95
California Governor Signs Bill That Adds Protections for Children on Social Media	5.92
Hispanic, LGBTQ communities receive hateful emails after racist text surge	5.81
Facebook and Instagram users in Europe can opt for less personalized ads	5.78
Does BlackRock Own Both Fox News and Dominion Voting Systems?	4.58
3-Bedroom 'Ordinary House in Rural Montana' Listed for $1.1M?	4.55
Have Children Been Fined for Operating Lemonade Stands?	4.55
Ditching Common Core Caused a Florida School's Test Results to Improve	4.53
Canada Has More Lakes Than All Other Countries Combined?	4.51
Did Starbucks Announce Patrons of Color Can Go to the Head of the Line?	2.11

Table 4

Primary Study: News Headlines in Low Implausibility Condition

Headline	Mean Rate Plausibility
Facebook and Instagram users in Europe can opt for less personalized ads	5.78
Does BlackRock Own Both Fox News and Dominion Voting Systems?	4.58
3-Bedroom 'Ordinary House in Rural Montana' Listed for $1.1M?	4.55
Have Children Been Fined for Operating Lemonade Stands?	4.55
Ditching Common Core Caused a Florida School's Test Results to Improve	4.53
Canada Has More Lakes Than All Other Countries Combined?	4.51
Did Starbucks Announce Patrons of Color Can Go to the Head of the Line?	2.11
Are 99% of Rape Allegations Absolutely Fabricated?	2.05
Did NRA Display a Billboard Saying 'F*** Your Kids'?	2.05
Does Legalizing Marijuana Necessitate Euthanizing Pot-Sniffing Dogs?	2.05
Bill Gates Launches "Maggot Milk" to Feed General Public	2.00
Arizona Law Allows Senators with Identical Twin to Be Replaced by Sibling for Rest of Term?	1.97
World Economic Forum Called for Slaughter of Pets to Prevent Global Warming?	1.89
Disney World officially moving to Nashville	1.73
Researchers Uncover Official Photos Taken During the Construction of the Great Pyramids in Egypt, 2600 B.C.	1.59

Table 5

Means and Standard Deviations for Study Variables

	M	*SD*
Age (centered)	0.00	10.41
Belief: NRA	2.94	1.35
Belief: Pink Dolphins	2.58	1.36
Belief: Vaccines in Sweden	2.35	1.15
Overall Belief	2.62	0.84
Sharing Intentions: NRA	1.77	1.07
Sharing Intentions: Pink Dolphins	1.97	1.17
Sharing Intentions: Vaccines in Sweden	1.58	0.89
Overall Sharing Intention	1.77	0.78

Table 6

Correlation Table for Study Variables

	1	2	3	4
1. Overall Belief	1.00			
2. Overall Share	.43**	1.00		
3. Age	-.09	-.16*	1.00	
4. Condition	.03	-.08	.04	1.00

$N = 184.$ * p < .05, ** p < .01

Appendix A

Assessing News Headline Plausibility

Consent Form

1.   SUMMARY and KEY INFORMATION

You are invited to participate in a research study about the plausibility of actual news headlines. The purpose of this study is to determine how plausible news headlines may seem to you. The research (data collection) will last approximately 25-30 minutes.

Your participation in this study is entirely voluntary and your answers are confidential. You must be 18 years or older to participate. If you agree to participate, you will be asked to view a series of 100 actual news headlines and will then answer whether or not you found the headline to be plausible or not. Please do not search for headlines during the study. You will receive $1 for your participation.

The study is being conducted by Daniela Da Silva, an undergraduate Psychology student at Drew University and their faculty sponsor G. Scott Morgan, Ph.D. This research does not involve any risks greater than you might experience in your everyday life while reading, hearing, or talking about news issues or headlines in your everyday life.

We ask that you read this document and ask any questions you may have before agreeing to be in the study.

2.   BACKGROUND

The purpose of this study is to test plausibility in a set of recent news headlines, which can then be used in future studies on misinformation.

3.   DURATION

The length of time you will be involved with this study is estimated around 25-30 minutes.

4.   PROCEDURES

If you agree to be in this study, we will ask you to do the following things:

You will be asked to view a series of 100 actual news headlines. Some of these headlines are true and some of these are false. Each news headline stimuli was selected from either a regular news source (i.e. NYTimes, Reuters, Fox News) or a fact-checking website (i.e. Snopes.com). You will be asked to rate the plausibility of the news headline after viewing each one. A definition of plausibility will be provided in the instructions as you rate plausibility.

At the end of the study, you will be asked to provide some demographic information about yourself, including your gender, race, and age (including generational cohort). At any point in the study, you are allowed to end your participation without consequence or penalty. Also, any question on the survey may be skipped by selecting the "Prefer not to answer" response choice.

5.   RISKS/BENEFITS

This study poses minimal risk. Please be aware that the news headlines you will be asked to read may contain uncomfortable or disturbing claims, similar to that you would see in the actual news. Potential minor risks may include some discomfort reading these misleading or alarming news headlines. This procedure is not expected to pose any risks greater than what you might experience in everyday life while watching the news or consuming news media.

By participating in this study, you will aid in building upon existing research on the effects of misinformation. Additionally, you will be compensated for your time with compensation of $1.

6.   CONFIDENTIALITY

No direct identifying information will be collected. Consequently, the researcher will not be able to link your responses to your identity. Data will be collected through Qualtrics, a web based software that will host the online survey and collect survey responses. The researcher has taken all reasonable measures to protect your identity and responses. For example, the data is SSL encrypted, it is stored on a password protected database, and IP addresses are not collected. However, e-mail and the internet are not 100% secure, so it is also suggested that you clear the computer's cache and browser history to protect your privacy after completing the survey.

7.   VOLUNTARY NATURE OF THE STUDY

Your decision whether or not to participate in this research will not affect your current or future relations with Drew University. If you decide to participate in this study, you are free to withdraw from the study at any time without affecting those relationships and without penalty. In addition, any single question can be skipped while completing the study. You will be offered the choice whether or not to submit your responses at the end of the study. Responses will not be saved to the server if you choose not to submit the survey.

8.   CONTACTS AND QUESTIONS

As a participant, you will be given a debriefing form at the conclusion of this study. This form will summarize the purposes and methods of this study and provide contact information for those who may be interested in accessing the results of this study.

The researcher conducting this study is Daniela Da Silva, an undergraduate student completing an honors thesis at Drew University. This research is being overseen by Dr. G. Scott Morgan. You may ask any questions you have right now by contacting the researcher at ddasilva2@drew.edu or smorgan@drew.edu.

If you have questions or concerns regarding this study and would like to speak with someone other than the researcher, you may contact the Chair of the Drew University IRB, Alex de Voogt at adevoogt@drew.edu.

9.   STATEMENT OF CONSENT

Please verify the following: The procedures of this study have been explained to me and my questions have been addressed. I understand that my participation is voluntary and that I may withdraw at any time without penalty. If I have any concerns about my experience in this study (e.g., that I was treated unfairly or felt unnecessarily threatened), I may contact the Chair of the Drew Institutional Review Board regarding my concerns. Completion and return of the survey indicates consent to participate.

☐ I am at least 18 years old, and I agree to participate.
☐ I am not at least 18 years old and/or I do not agree to participate.

Appendix B

Pilot News Headlines Stimuli

'Nickelodeon' Is Latin for 'I Don't Care About God'?

14 US Cities Say Goodbye to Meat, Dairy, and Private Cars?

3-Bedroom 'Ordinary House in Rural Montana' Listed for $1.1M?

3% of American High Schoolers Identify as Transgender, First National Survey Finds

43 Percent of All Food Stamps Are Given to Illegal Immigrants

65-Foot 'Kodiak Sharks' Have Been Discovered in Lake Michigan

7-foot shark was eaten by even bigger shark, researchers suspect

A Firearms-Trained Teacher Accidentally Discharges a Gun in a Classroom, Injuring a Student

A Texas Teacher Dies Because She Couldn't Afford Flu Medicine

Amazon Is Bankrupting the United States Postal Service

An Elephant Got Stuck in a Tree Even After Waters Receded in Taungoo

AR-15 Style Rifles have been Used in Every Major Mass Shooting in the United States since 2012

Are 99% of Rape Allegations Absolutely Fabricated?

Are California Parents Barred from Withdrawing Their Children from Sex Education?

Are Nestle and Coca-Cola Trying to Privatize a South American Aquifer?

Are the Northern Lights Chemicals Sprayed in the Sky?

Arizona Law Allows Senators with Identical Twin to Be Replaced by Sibling for Rest of Term?

Authentic Photos of Squirrel 'Stopping to Smell Flower'?

Bill Gates Launches "Maggot Milk" to Feed General Public

Black Plastic Cooking Utensils Can Expose You to Toxic Chemicals?

Bluetooth Earbuds Cause Brain Cancer?

BMW Logo Included Swastika When Nazi Party Ruled Germany?

California Governor Signs Bill That Adds Protections for Children on Social Media

California teenager admits to making hundreds of hoax emergency calls

California to remove racist term for Native American Woman from more than 30 places

Can Voters Ask for Provisional Ballots If They Are Turned Away at Polls?

Canada Has More Lakes Than All Other Countries Combined?

CDC says 75 people infected in E. coli outbreak linked to McDonald's

CDC Says Vaccinated Americans Have Higher Risk of Infection than Unvaccinated?

Comet visible from Earth for first time in 80,000 years: 'Most anticipated comet of the year'

Country Music Television (CMT) permanently boycotts Taylor Swift

Did 4 COVID-19 Vaccine Trial Patients Develop Bell's Palsy?

Did a Former Canadian Official Say the Illuminati Are Real And Hiding Alien Stuff?

Did a Gay Man Turn Heterosexual After a Near-Death Experience?

Did a Man Accidentally Burn His Home Down After Lighting Nike Shoes on Fire?

Did a Pennsylvania School District Ban Pride Flags?

Did a Tennessee School District Ban the American Flag?

Did a Virginia School Leave a Transgender Student Unprotected During a Shooting Drill?

Did an Arizona State Senate Candidate Fatally Shoot Their Mother?

Did An Elementary School Principal Forcibly Implement a Halal Menu?

Did an Ohio Police Officer Say Abolishing Slavery Was the Worst Thing Ever Done?

Did BuzzFeed Advocate for Taking Away White People's Guns?

Did Canada Pay Off Entire Federal Debt One Day After Marijuana Legalization?

Did Hundreds of Doctors in Canada Protest Against Their Own Pay Raise?

Did Hundreds of Worshipers Attend an AR-15 Blessing Ceremony at a Church?

Did JP Morgan Orchestrate the Sinking of the Titanic?

Did Nike Offer People of Color a 75 Percent Off Coupon?

Did NRA Display a Billboard Saying 'F*** Your Kids'?

Did Researchers Find a Mummified, Three-Fingered Alien in Nazca, Peru?

Did Starbucks Announce Patrons of Color Can Go to the Head of the Line?

Did Sweden Ban Mandatory Vaccinations for Children?

Did Target Partner with a Designer Whose Work Includes Satanic Imagery?

Did the NRA Support a 1967 Open Carry Ban in California?

Did WEF Call For an AI-Written Bible to Create New Religions?

Did WEF Say 'Humans Will All Wear a Uniform' By 2030?

Disney World officially moving to Nashville

Ditching Common Core Caused a Florida School's Test Results to Improve

Do Rocks Falling Into the Ocean Contribute to Global Sea Level Rise?

Do Some Frogs Have Heart-Shaped Pupils?

Does a New Study Show the Higher a Country's Vaccination Rate, the Higher Its Excess Death Rate?

Does BlackRock Own Both Fox News and Dominion Voting Systems?

Does Delta Airlines Give Planned Parenthood Members Discounted Rates?

Does Legalizing Marijuana Necessitate Euthanizing Pot-Sniffing Dogs?

Does Nike Own Chevrolet?

Encyclopedia Britannica Is Banned in Texas

Facebook and Instagram users in Europe can opt for less personalized ads

Facebook To Charge Users $7.99 Per Month, as 'Channel 13 News' Reported?

GEICO Terminates Truck Owners' Insurance Amid Safety Woes

Giant Axolotl Pulled from Ocean by Papuan Fisherman?

Google's Motto Was 'Don't Be Evil'

Greta Thunberg Was Photographed Holding 'F*** Israel' Sign?

Has Vaccine mRNA Entered the Food Supply via GMO Plants or Vaccinated Livestock?

Have Children Been Fined for Operating Lemonade Stands?

Hilter Was Once Nominated for Nobel Peace Prize

Hispanic, LGBTQ communities receive hateful emails after racist text surge

Human in Bear Suit Was Used to Defraud Insurance Companies, Officials Say

Humans Cannot Fully Sink in Quicksand

Hundreds of People Live in Tunnels Beneath Las Vegas?

Illegal in India to Know a Baby's Sex Before Birth?

In New York, Schools Are Reclaiming Roads for Recess with Open Streets Program

Is 2024 Video of Hundreds Performing Fascist Salute in Rome Real?

Is Gladys Baker Morris the Daughter of JFK and Marilyn Monroe?

Is it Legal for a Migrant Fleeing Violence to Enter the U.S. Without Authorization?

Is Netflix Hiring for Remote Customer-Service Jobs at $22 an Hour?

Is Sonic Drive-In Closing All Restaurant Locations?

Is State Farm Denying Insurance to Gun Owners?

Is the IRS Hiring 'Armed Special Agents Prepared To Use Deadly Force'?

Is the U.S. No Longer One of the Top 20 Most Democratic Countries in the World?

KitKat Selling Chocolate Ramadan Characters This Easter?

Last Blockbuster Video Store in Oregon Set To Close on Halloween 2024

Left and Right Twix Bars Differ from Each Other

Major companies, including Amazon, haven't paid federal income tax in 5 years

Man Missing for Decades Found Dead Using Google Earth?

Map Accurately Compares Size of Texas to Europe.

McDonald's McChicken Sandwiches Now Cost $4.89?

Microplastics from Cutting Boards Have Been Found in Food?

Missouri police officers accused of taking nude photos from women's phones during traffic stops

Mom arrested after son was reported walking alone

Most Chicago street festivals aren't paying police overtime, leaving taxpayers on the hook

Mount Rushmore Was Defaced with Political Graffiti

Nearly 25% of Americans Believe Hitler Was a Good Person?

No Hurricane Has Ever Crossed the Equator

No School Shootings in the United Kingdom Since Handguns Were Banned?

One Group of Undercover Cops Tried to Arrest Other Undercover Cops

Pay first, deliver later: Some women are being asked to prepay for their baby

Photo Shows Astronaut Performing 1st Untethered Spacewalk

Photo Shows Planets Aligned Above Giza Pyramids?

Photos Show 26,000-Year-Old Preserved Lion Cub

Police in Delaware Shoot and Kill a Man in a Wheelchair

Police Officer Found Guilty of Murder in Shooting of a Columbus Man

Polish Chemistry Textbook Features 'Breaking Bad' Characters?

Poltergeist' Featured Real Skeletons as Movie Props

Rare Pink Dolphins Spotted in Bohol

Real NASA Photo of Jupiter

Real Photo of a Fluorescent Marsupial

Real Sign Reading "Women Are Property" at Texas State University Demonstration

Research Suggests Pets Dying Can Be Just as Hard as Losing Loved Ones

Researchers Found Long-Lost 'Flight 2317' Entombed in Arctic Iceberg

Researchers Uncover Official Photos Taken During the Construction of the Great Pyramids in Egypt, 2600 B.C.

San Francisco Erected Street Sign Reading 'Stolen Goods Must Remain Under $950'

Scientists Agree McDonalds is the Worst Fast Food Chain

Sears Catalogs Once Sold Monkeys, Donkeys and Other Animals

South Carolina lab recaptures 5 more escaped monkeys but 13 are still loose

State of Vermont Can Vaccinate Children Without Parental Consent?

Sunken WWII US destroyer, known as 'Dancing Mouse,' discovered 80 years after battle with Japanese

Taylor Swift's Private Jet Spray-Painted Orange by Just Stop Oil?

Tesla 2025 Motorhome' Announced for Under $17K

The Best Way to Naturally Whiten Teeth at Home: Banana Peels, Salt, Lemon, and Toothpaste for Brighter Smiles

The CDC Warns a Third of Adults May Die from Dangerous Bacteria in Ramen Noodles

The NRA Ban Guns at Their Own Leadership Forum

The U.S. Experience Far More School Shootings Than Any Other Country

Therapeutic Food Shortage Puts African Children at Risk of Starvation, U.N. Agency Says

Therapy Cat Believed to Have Predicted Residents' Deaths at Nursing Home

This Tuxedo Cat Is Polish City's Top-Rated Tourist Attraction on Google Maps?

U.S. Citizens Have the Right to Resist Unlawful Arrest

Up to 125 Atlantic white-sided dolphins stranded in Cape Cod waters

US accuses Visa of monopolizing debit card swipes

US Homeland Security Created Database on Journalists & Bloggers

US Justice Department finds rights violated at Atlanta jail

USDA confirms domestic flock infected with bird flu in Hawaii

Video Really Shows Boat Crew Rescuing Polar Bear Cub?

Viral Photos Show a List of Targeted Schools in 'School Shooting List'

Was "America First" a Slogan of the Ku Klux Klan?

Was a Pride Flag Hung Between American Flags at the White House?

Was a Student Suspended for Pretending to be Transgender to Use the Girls Locker Room?

Was a Violently Racist Carnival Game Once Popular in America?

Were Gay Concentration Camp Prisoners Put Back in Prison After World War II?

Were Immigrant Teenagers Strapped to Chairs with Bags Over Their Heads?

Were Two Altar Boys Arrested for Putting Marijuana in a Cathedral's Censer?

World Economic Forum Called for Slaughter of Pets to Prevent Global Warming?

Appendix C

Assessing News Headline Plausibility:

Debriefing Form

1.   **PURPOSE OF THE STUDY**

The study in which you just participated was designed to investigate how news headlines are interpreted as plausible or implausible (regardless of whether they are true or false). Previous research has validated older news headlines to use in studies of information processing and misinformation. Importantly, headlines must remain true/false at the time that new studies are conducted. This study validated a new set of headlines that have recently been fact checked. Verifying this set of headlines will allow studies in the near future to have a set of headlines that are still currently true/false. Plausibility ratings of these news headlines will allow future studies to explore how responses to plausible versus implausible news headlines may differ.

2.   **METHODOLOGY**

In this study, you were asked to report your rating of plausibility of the news headlines that were presented to you. We also measured your attention to the questions being asked with an attentional check question, as well as collected some demographic information.

3.   **ADDITIONAL RESOURCES**

For more information on the topic of this research, you can read the following publications:

Levari, D. E., Martel, C., Orchinik, R., Bhui, R., Seli, P., Pennycook, G., & Rand, D. G. (2024). *Blatantly false news increases belief in news that is merely implausible.* PsyArXiv. https://doi.org/10.31234/osf.io/cz7vy

Pennycook, G., & Rand, D. G. (2021). The psychology of fake news. *Trends in Cognitive Sciences*, *25*(5), 388–402. https://doi.org/10.1016/j.tics.2021.02.007

4.   **CONTACT INFORMATION**

If you are interested in learning more about the research being conducted, or the results of the research of which you were a part, please do not hesitate to contact the faculty supervisor, G. Scott Morgan Ph. D. at smorgan@drew.edu

Thank you for your help and participation in this study.

Appendix D

Responses to Misinformation Shaped by Generational Differences:

Consent Form

1.   **SUMMARY and KEY INFORMATION**

You are invited to participate in a research study about the effects of exposure to misinformation. The purpose of this study is to investigate the effects of exposure to misinformation, specifically focusing on (a) how likely people are to believe false information and (b) how willing people are to share false information following exposure to misinformation. Furthermore, this research will investigate whether these effects vary by age.

The research (data collection) will last approximately 20 minutes.

Your participation in this study is entirely voluntary and your answers are confidential. You must be 18 years or older to participate. If you agree to participate, you will be asked to view a series of 15 real news headlines. You will then be asked to read an additional 3 real news headlines and will be asked to answer several questions about believability, willingness to share, and sharing motivations. Finally, you will be asked some demographic questions.

You will receive $1 for your participation.

The study is being conducted by Daniela Da Silva, an undergraduate Psychology student at Drew University and their faculty sponsor G. Scott Morgan, Ph.D. This research does not involve any risks greater than you might experience in your everyday life while reading, hearing, or talking about news issues or headlines in your everyday life.

We ask that you read this document and ask any questions you may have before agreeing to be in the study.

2.   **BACKGROUND**

The purpose of this study is to research the potential effects of exposure to misinformation on how we interact with other information, focusing on how these effects may vary by age.

3.   **DURATION**

The length of time you will be involved with this study is estimated around 20 minutes.

4.   **PROCEDURES**

If you agree to be in this study, we will ask you to do the following things:

You will be asked to view a series of 15 actual news headlines. Some of these headlines are true and some of these are false. You will then be asked to read an additional 3 news headlines. Each news headline stimuli was selected from either a regular news source (i.e. NYTimes, Reuters, Fox News) or a

fact-checking website (i.e. Snopes.com). Following each news headline, you will be asked to answer a series of questions in regards to how (a) believable the headline is, (b) how willing you would be to share the headline, and (c) who and why you would share the headline.

At the end of the study, you will be asked to provide some demographic information about yourself, including your gender, race, and age (including generational cohort). At any point in the study, you are allowed to end your participation without consequence or penalty. Also, any question on the survey may be skipped by selecting the "Prefer not to answer" response choice.

5.   RISKS/BENEFITS

This study poses some, albeit minimal risk. Please be aware that the news headlines you will be asked to read may contain uncomfortable or disturbing claims, similar to that you would see in the actual news. Potential minor risks may include some discomfort reading these misleading or alarming news headlines. This procedure is not expected to pose any risks greater than what you might experience in everyday life while watching the news or consuming news media.

By participating in this study, you will aid in building upon existing research on the effects of misinformation. Additionally, you will be compensated for your time with compensation of $1.

6.   CONFIDENTIALITY

No direct identifying information will be collected. Consequently, the researcher will not be able to link your responses to your identity. Data will be collected through Qualtrics, a web based software that will host the online survey and collect survey responses. The researcher has taken all reasonable measures to protect your identity and responses. For example, the data is SSL encrypted, it is stored on a password protected database, and IP addresses are not collected. However, e-mail and the internet are not 100% secure, so it is also suggested that you clear the computer's cache and browser history to protect your privacy after completing the survey.

7.   VOLUNTARY NATURE OF THE STUDY

Your decision whether or not to participate in this research will not affect your current or future relations with Drew University. If you decide to participate in this study, you are free to withdraw from the study at any time without affecting those relationships and without penalty. In addition, any single question can be skipped while completing the study. You will be offered the choice whether or not to submit your responses at the end of the study. Responses will not be saved to the server if you choose not to submit the survey.

8.   CONTACTS AND QUESTIONS

As a participant, you will be given a debriefing form at the conclusion of this study. This form will summarize the purposes and methods of this study and provide contact information for those who may be interested in accessing the results of this study.

The researcher conducting this study is Daniela Da Silva, an undergraduate student completing an honors thesis at Drew University. This research is being overseen by Dr. G. Scott Morgan.

You may ask any questions you have right now by contacting the researcher at ddasilva2@drew.edu or smorgan@drew.edu.

If you have questions or concerns regarding this study and would like to speak with someone other than the researcher, you may contact the Chair of the Drew University IRB, Alex de Voogt at adevoogt@drew.edu.

9.   STATEMENT OF CONSENT

Please verify the following: The procedures of this study have been explained to me and my questions have been addressed. I understand that my participation is voluntary and that I may withdraw at any time without penalty. If I have any concerns about my experience in this study (e.g., that I was treated unfairly or felt unnecessarily threatened), I may contact the Chair of the Drew Institutional Review Board regarding my concerns. Completion and return of the survey indicates consent to participate.

☐ I am at least 18 years old, and I agree to participate.
☐ I am not at least 18 years old and/or I do not agree to participate.

Appendix E

Responses to Misinformation Shaped by Generational Differences:

Questionnaire

You will be presented with a series of real news headlines. There are 15 in total. **Do not search for headlines while participating in the study.** Please read through each one and click continue when you are ready.

> **[Headlines were selected from the 150 rated in the pilot study. The full list can be found under Appendix B]**

You will now be presented with 3 actual news headlines. Again, **do not search for headlines.** Please read through each one and answer the following questions.

> **[Headlines were selected from the 150 rated in the pilot study. Again, the full list can be found under Appendix B]**

To the best of your knowledge, how believable is the claim in the above headline?

- Extremely unbelievable
- Somewhat unbelievable
- Neither believable or unbelievable
- Somewhat believable
- Extremely believable

How likely would you be to share this story online (for example, through Instagram, Facebook or TikTok)?

- Extremely Unlikely
- Unlikely
- Neutral
- Likely
- Extremely Likely

If you would share this story online, who would you share it with?

- Friends
- Family
- Coworkers
- Not listed, please specify: [Text box]
- I would not share this story
- Prefer not to answer

If you would share this story online, why would you share it?

- To inform or educate others
- To express agreement or support for the claim
- To spark discussion or debate
- To entertain others or make them laugh
- To connect with others who might relate to the claim
- To highlight something I find surprising, shocking, or upsetting
- To verify the story or get others' opinions
- Other, please specify: [Text box]
- I would not share this story
- Prefer not to answer

We would like to get a sense of your general preferences. Most modern theories of decision making recognize that decisions do not take place in a vacuum. Individual preferences and knowledge, along with situational variables can greatly impact the decision process. To demonstrate that you've read this much, just go ahead and select both red and green among the alternatives below, no matter what your favorite color is. Yes, ignore the question below and select both of those options.

What is your favorite color?

- White
- Black
- Red
- Pink
- Green

  ● Blue

Please provide the following information. Feel free to skip any questions you do not wish to answer.

What is your age?

  [Text box]

What generation are you a part of?

  ● Gen Z (1997 - 2012)

  ● Millennial (1981 - 1996)

  ● Gen X (1965 - 1980)

  ● Baby Boomer (1946 - 1964)

  ● Other

  ● Prefer not to answer

What year were you born in?

  [Text box]

How would you describe your gender?

  ● Female

  ● Male

  ● Non-binary or Gender Non-Conforming

  ● Not Listed, please specify: [Text box]

  ● Prefer not to answer

How would you describe your race?

  [Text box]

Did you respond randomly at any point during the study? Please be honest! You will get your payment regardless of your response.

  ● Yes

● No

Did you Google or search for headlines you viewed during this survey at any point while completing the survey? Please be honest! You will get your payment regardless of your response.

● Yes

● No

Appendix F

Responses to Misinformation Shaped by Generational Differences:

Debriefing Form

1.   **PURPOSE OF THE STUDY**

The study in which you just participated was designed to investigate how prior exposure to misinformation (i.e. false news headlines) can influence whether we believe or want to share unrelated, ambiguous claims. Previous research has shown that prior exposure to implausible information increases our belief in other, unrelated claims that are more ambiguous. This study builds on the existing research by exploring whether these effects vary by age.

2.   **METHODOLOGY**

In this study, you were asked to read a series of 15 news headlines. You were exposed to both true and false news headlines. You were also asked to report your perceptions of the three news headlines presented at the end of the survey. These three headlines were all false claims. You were specifically asked about believability, sharing intentions, and motivations to share. We also measured your attention to the questions being asked with an attentional check question, as well as collected some demographic information.

It is important to note that, although these are all real news headlines

- **Not every claim presented was true**

3.   **ADDITIONAL RESOURCES**

For more information on the topic of this research, you can read the following publications:

Levari, D. E., Martel, C., Orchinik, R., Bhui, R., Seli, P., Pennycook, G., & Rand, D. G. (2024). *Blatantly false news increases belief in news that is merely implausible.* PsyArXiv. https://doi.org/10.31234/osf.io/cz7vy

Pennycook, G., & Rand, D. G. (2021). The psychology of fake news. *Trends in Cognitive Sciences*, *25*(5), 388–402. https://doi.org/10.1016/j.tics.2021.02.007

4.   **CONTACT INFORMATION**

If you are interested in learning more about the research being conducted, or the results of the research of which you were a part, please do not hesitate to contact the faculty supervisor, G. Scott Morgan Ph. D. at smorgan@drew.edu

Thank you for your help and participation in this study.