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Mitigating Negativity Bias in Media Selection

Gabrielle R. Jarmoszko
University of South Florida

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by

Gabrielle R. Jarmoszko

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University of South Florida

Major Professor: Monica Ancu, Ph.D.
Casey Frechette, Ph.D.
Mark Walters, D.V.M.

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ABSTRACT

A growing body of research explores implicit negativity bias and how it influences news selection processes of media consumers. However, very little, if any, research exists exploring how negativity bias in the news selection process can be mitigated. Informed by experimental designs that have proven effective in mitigating other types of implicit bias, this study aimed to investigate whether having consumers commit themselves to definitions of their preferred type of news before engaging in the selection process alters manifestations of negativity bias in the selection.

This study tested two hypotheses: H1, that non-committed individuals will have a higher selection frequency of negatively phrased news articles, demonstrating implicit negativity bias; and H2, that individuals who pre-commit to defined qualities of their preferred type of news will demonstrate less negativity bias in their media selections. To test these hypotheses, this study surveyed 172 individuals using an online questionnaire that asked participants to choose between a negatively valenced or positive/neutrally valenced headline. Individuals were randomly split into groups, with the variable group being asked to pre-commit to criteria of what type of news they prefer. Data did not support either H1 or H2: participants, regardless of their group, exhibited a selection preference for positive news headlines. Moreover, pre-commitment did not have a measurable impact on what type of headlines participants in Group 2 chose. Possible explanations for these results are explored, and implications for future research on implicit bias mitigation are discussed.

CHAPTER ONE:

INTRODUCTION

Understanding how media consumers process messages is a central part of understanding news and communication systems as a whole (Geiger and Newhagen, 1993; Soroka et al., 2019). Negativity bias is one such facet of individual message processing. This psychological tendency was originally identified by Kanouse and Hanson (1972) as the implicit human preference of negative over positive stimuli; negativity bias is the propensity to assign more weight to negative over positive messages (Fiske, 1980, qtd. in Jang & Oh, 2016; Carretié et al., 2008; Cacioppo et al., 1997). Rozin and Rozyman (2001) specify that negative information dominates the mechanisms of the brain, and Baumeister and colleagues (2001) demonstrate that negative information is processed more thoroughly in areas ranging from memory, to emotion, to impression formation. As an implicit bias, negativity bias exists within the subconscious as "introspectively unidentified thoughts" (Lai & Banaji, 2020, p. 4), or automatic cognitions embedded in the subconscious that manifest without the individual even realizing the bias (Stephens et al., 2020; MIT, 2020).

A growing body of research now explores negativity bias and its effects in relation to the news, where negativity bias manifests as the implicit preference for negative news over positive news. Numerous research studies (i.e., Knobloch-Westerwick et al,. 2020; Muddiman et al., 2020; Van der Meer et al., 2020) have produced evidence showing news consumers are more attracted to negative news than positive news.

Negativity bias exists in news suppliers and consumers alike, appearing in each stage of the communication process from message production to interpretation. However, negativity bias between consumers and producers of news causes a self-perpetuating cycle of media negativity: when consumers unconsciously attend to more negative news, the demand for these negative messages increases, making negativity a more valuable asset in news production, which leads to increased negativity in otherwise neutral framings (Soroka & McAdams, 2015; Van der Meer et al., 2020; Vaettehen & Kleemans, 2017; Knobloch-Westerwick et al., 2020; Sobieraj & Berry, 2011; Zillman et al., 2004; Huff & Kertzer, 2018). Exacerbating this is the fact that the internet enables consumers to selectively craft their own media diet; this selectivity caters to negativity bias, amplifying the cycle and increasing audience polarity (Knoblock-Westerwick et al., 2020; Sobieraj & Berry, 2011). The result is increased negative framing and presentation in the news; indeed, data mining trend analyses have shown an increase in such negativity over time (Huff & Kertzer, 2018; Leetaru, 2012, ref in Pinker, 2018).

The cycle of negativity bias in journalism has external negative effects, permeating public policy and societal impressions of the world (Huff & Kertzer, 2018; Baele et al., 2019; Tierny et al., 2006; Fieck et al., 2020; Soroka et al., 2019). Political polarization, deficient knowledge of current affairs, apathy, disengagement, and even economic issues have all been linked to the negative nature of news coverage (Soroka et al., 2019; Walters et al. 2016).

As such, breaking the cycle of negativity bias is a justified cause for research; if negativity bias can be mitigated, so can, arguably, the negative perpetuations of the cycle that exist in journalistic, political, and societal contexts. Can such a deep-seeded bias be overcome? As Nandigama and Shyamsunder believe, “Moving beyond biased decisions… is not just critical, but also possible” (p. 1). In the communications context, hope lies in the fact that news

consumers actually express a desire for positive news, even when their actions reflect implicit negativity bias (Soroka et al., 2019). Additionally, other implicit biases have been successfully mitigated in past research (i.e., Uhlmann and Cohen, 2005; Devine et al., 2012; Nandigama & Shyamsunder, 2021). In order to break the cycle of negativity bias in journalism, the current thesis aims to test if negativity bias in news selection can be mitigated using strategies that have proven effective in mitigating other implicit biases.

CHAPTER TWO:

LITERATURE REVIEW

Where Does Negativity Bias Come From? Evolutionary Perspectives

Soroka, Fournier & Nir (2019) specify that negativity bias does not necessarily "depend on a conscious desire for negative information so much as an unconscious adaption or learned tendency to prioritize negative information" (p. 2). Several explanations attempt to explain the existence of negativity bias, and scholars (i.e., Rozin & Rozyman, 2001) postulate that the phenomenon is likely due to a combination of factors from throughout the course of human evolution. This idea is supported by the fact that many primate species exhibit the same cognitive implicit biases that humans have (Santos & Rosati, 2015). In fact, negativity bias is present in human beings around the world, not just in the United States (Soroka et al., 2019), indicating that it is not merely a cultural or industrial phenomenon; additionally, negative events also elicit rapid and prominent responses that are deep-rooted in the human brain from cognitive, to emotional, to social systems (Carretié et al., 2008). For purposes of this study, the evolutionary components of negativity bias will be focused on; such components can be broken down into two basic human needs: reproduction and survival.

Human interaction, and therefore reproduction, is dependent on empathic sensitivities (Zillmann et al., 2004). Emotional sensitivity is conducive to group acceptance; if an evolving human could not respond empathetically to the negative experiences of others, the group and social membership of the individual was threatened, which, in turn, threatened the individual's ability to reproduce (Pinker, 1997, ref. in Davis & McLeod, 2003). Additionally, negative

information prompts self-regulation and adaptation to quickly changing circumstances, meaning organisms are more likely to reproduce if they are more flexible and adaptive to their environment (Baumeister et al., 2001). Hence, reproductive needs of evolving ancestors drove the modern preference of negative stimuli over positive stimuli.

Humans also attend more to negative information in the interest of survival. This is because it is the bad experiences that signal the need for an adaptation to avoid a threatening event (Baumeister et al., 2001; Vettehen & Kleemans, 2017; Cacioppo et al., 1997). If an evolving human reacted to negative stimuli with a stronger and more attentive response, they were more likely to avoid or overcome threats (Shoemaker, 1996, ref. in Knobloch-Westerwick et al., 2020; see also, Grabe & Kamhawi, 2006). Specifically, evolutionary success and survival "requires the nervous system to guarantee a rapid and intense reaction even when recognition of danger clues is difficult and does not reach awareness," and, therefore, "bias towards negative stimuli is manifested even when they are unconsciously perceived" (Carretié et al., 2008, p. 57). In other words, negativity is quickly and automatically processed by the human brain as a result of such evolutionary pressure, resulting in gut-level reactions to negative information in today's news readers (Carretié et al., 2008). Moreover, the degree to which the bias appears is positively correlated to the degree that the perceiver rates the information as extreme or urgent --meaning that, the more extreme the negative information is, the more likely negativity bias is to dictate decision making (Fiske, 1980, ref. in Rozin & Rozyman, 2001). All of this together indicates a deep rooted survival instinct underpinning negativity biases.

Today, negative news stories, like negative stimuli and threats, trigger emotional responses in line with evolutionary theories of reproduction and survival. In other words, the persistent preference for negative news traces back to "biological hard wiring" (Grabe &

Kamhawi, 2006, p. 347; Vettehen & Kleemans, 2017). For example, negative news coverage stimulates more physiological and psychophysiological arousal than positive news coverage, demonstrating the innate survival instinct triggered by negative news (Soroka et al., 2019; Soroka & McAdams, 2015). Grabe and Kamhawi (2006) also find that males' reactions to negative news are stronger than females' reactions due to implicit instincts to protect offspring from threats; similarly, younger news consumers have stronger responses to negative news content than middle-aged and older viewers (Kleemans et al., 2011). Additionally, sensational news stories trigger an instinctual response towards reproductive fitness and social acceptance, as sensational, negative news stories elicit social empathy responses (Davis & McLeod, 2003)..

How it Manifests in News and Media Consumption

Several studies have produced evidence of negativity bias in news selection. Two facets of the bias emerge out of the literature: attentive preference towards negative information; and choosing negative information over positive information.

Firstly, negativity bias manifests as paying more attention to negative news. When multitasking between two media outlets --for example, watching television while browsing social media-- the more negative of the stimuli elicits more viewing time and primary attention (Kätsryi et al., 2016). Moreover, negative news is more arousing and attention grabbing, physiologically, and negative news results in a more enduring impact on news consumers than positive news content (Soroka & McAdams, 2015; Rozin & Rozyman, 2001).

Secondly, when given the choice between negative and positive news, media consumers will almost always choose negative news. Jang & Oh (2016) find that consumers select news stories with headlines that contain negative words more often than selecting stories that contain positive words. Meffert and colleagues (2006) demonstrate that news readers prefer negative

political campaign stories to positive ones, and Donsbach (1991) finds that negative campaign news has a farther reach than positive news. This thesis considers conflict to be a subset of negative framing in news; this is relevant because when conflict framing or words such as "accuse," "oppose," and "criticize" are used in headings, news consumers are more likely to select those articles over ones headlined with positive frames or words such as "praise," "hail," and "support" (Jang & Oh, 2016; Meffert et al., 2006; Trussler & Soroka, 2014; Donsbach, 1991, ref. in Meffert et al., 2006). News stories focusing on agony and conflict also draw more selective exposure amongst news consumers over positive content (Zillman et al., 2004). Each of these studies point to a pattern of choosing negative over positive in the media selection context.

There is an important distinction to be made here between content and presentation; prior research on negativity bias has investigated bias towards negative content, versus bias towards negative presentation. Content refers to the positivity or negativity of the actual event being described in the news story; an example would be a consumer reading a story on a natural disaster over a feel-good feature story. On the other hand, presentation refers to the use of negative framing, slants, and word choice over positive framing, slants, and word choice; for example, it is possible to write an article on a negative event with a positive presentation and vice versa. Trussler and Soroka (2014) put it simply: "[T]he important distinction is not between positive and negative news, but between news that is negative, and news that is cynical" (p. 374).

This thesis will focus on negativity bias towards negative presentation over positive presentation in the news. Specifically, this thesis will not compare negativity bias between positive and negative content because negative presentation is more controllable than negative content. When reporting on negative events, media have significant decision power in choosing

what language and labels to use (Huff & Kertzer, 2018; Feick et al., 2020). However, when media choose to use overgeneralizations, sensationalism, and excessively negative terminology --favoring melodrama and improbable forecasts of impending doom over neutral or positive tonalities-- the news is more likely to appeal to implicity negativity biases, even when such negativity may only be a subtle difference (Sobieraj & Berry, 2011; Feick et al., 2020). For example, negative adjectives such as "horrible" and "heinous" communicate negative sentiment and emphasize the negativity of already negative news stories (Feick et al., 2020; Knobloch-Westerwick et al., 2020).

Why does the Cycle of Negativity Bias in News Persist?

The inherent problem is that negativity bias results in a cycle of negative news consumption and production. On the demand side, consumers are unconsciously attracted to negative news: humans are more interested in, reactive to, and attentive to negative information, as negative presentation is considered more entertaining, eye-catching, interesting and understandable than positive presentation (Soroka & McAdams, 2015; Van der Meer et al., 2020; Vettehen & Kleemans, 2017). In the world of the internet where consumers selectively choose their own media diets, consumers attend to negatively phrased stories over positive ones, and the increasing polarity of audiences contributes to the extremism of this selectivity (Knoblock-Westerwick et al., 2020; Sobieraj & Berry, 2011). This cycle is only amplified by consumers' unawareness of their own biases and of how their biases influence journalistic processes (Spinde et al., 2020). In this way, negativity bias directly characterizes consumer demand for news.

On the supply side of the equation, the conventional journalistic wisdom is that "if it bleeds, it leads." The tendency of news production to have a negative focus is both the result of human producers as well as systematic processes. Firstly, the producers of news are human, no

less than consumers of news are-- meaning they are subject to the same implicit biases as consumers; as Soroka and McAdams (2015) note, news that is "created by humans, with the goal of getting attention from other humans, will tend to be biased towards the negative" (p. 4). When given the choice between negative or positive presentation, journalists and editors will be more favorable to the negative (Knoblock-Westerwick et al., 2020; Pinker, 2018; Soroka & McAdams, 2015). Generally, journalists have a core belief that conflict is what should characterize news (Fallows, 1996, ref. in Zillman et al., 2004), and therefore tailor their news coverage towards negativity.

Moreover, framing is a large aspect of negativity bias on the part of news producers. Framing is using a central idea, theme, or pattern to organize the information of a news story (Scheufele, 1999; Vreese et al., 2001; Walters et al., 2016). Media have often been described as the primary mechanism by which narratives are transmitted to the public, with the framing intentions of media determining those narratives (Bhatia, 2005); thus, framing is often referred to as an extension of the agenda setting function of media (McCombs et al., 1997, ref. in Scheufele, 1999). Indeed, journalists are taught to organize news using various frames, and negativity or conflict is one of such options (Neuman et al., 1992, ref. in Vreese et al., 2001; Gitlin, 180, qtd. in Scheufele 1999). Conflict and negativity are the most common frames in news reporting, demonstrating the prevalence of negativity bias in framing choices (Zillman et al., 2004; Vreese et al., 2001; Walters et al., 2016).

News producers are not simply cynical individuals that succumb to negativity bias when choosing what content to present to media consumers, though; the negative content of news from the production standpoint is also, and perhaps more majoritively, attributed to the cyclical nature of supply and demand. The primary objective of a media company is to attract audience attention

in order to earn profit and appease advertisers (Sobieraj & Berry, 2011). Therefore, news is produced in a format that has higher chances of being selected by readers. When negative news is more likely to be read, it makes more financial sense to produce news with negative overtones and frames (Van der Meer et al., 2020). Negativity is also considered to be more valuable in media competition for ratings, as negatively presented stories are not only more likely to capture readers' attention, but maintain attention, as well (Vettehen & Kleemans, 2017; Zillman et al., 2004). This is true for online media run by selection algorithms that prioritize negative over positive content and controversial over less controversial, simply to keep users engaged (Müller & Schwarz, 2018; Taub & Fisher, 2018). Increased competitive pressure in the market compounds the compulsion to produce negative and sensationalist content (Vettehen & Kleemans, 2017). Evidence of this pressure comes in the fact that corporate ownership, market penetration, and geographical distribution are all factors directly associated with negative news presentation in media companies (Dunaway, 2012). Journalists have to write what sells, and what sells is negativity.

The cycle of negativity bias manifests in several ways on the news production side: otherwise ambiguous violent events are more likely to be framed and classified negatively (Huff & Kertzer, 2018); foreign correspondents will sacrifice coverage of crucial trends that underline long-term issues in favor of covering dramatic conflicts or crises more suited towards negative writing (Vanderwicken, 1995); and media outlets use negative language as "eyecatchers" to generate attention and commercial success (Schmid, 1989, qtd. in Feick et al., 2020, p. 4). The *New York Times* serves as a prime example of the negativity bias cycle, as a sentiment mining analysis (Leetaru, 2012, ref. in Pinker, 2018) revealed that the *Times* has become increasingly

negative in content and tone since the 1990s. Media outlets throughout the world have followed the same trend, with the negative progression dating back to as early as the 1960s.

Why is this Important? Effects of the Negativity Bias Cycle

The self-perpetuating cycle of negativity bias has two well-studied harmful effects. Firstly, public policy is influenced by the negative biases of news coverage because such negativity frames the way the public perceives actionable information. Terrorism is a case in point: reporting on terrorism is a key way that everyday citizens understand terrorist organizations and events. However, when negative language is used to describe acts of violence, the public is more likely to classify the event --even if incorrectly-- as terrorism, which in turn triggers harsher solutions and policy decisions (Huff & Kertzer, 2018; Baele et al., 2019). Using negative labels to emphasize the violence and conflict of terrorist coverage may also aid terrorists by spreading fear and intimidation beyond the immediate victims of their attacks (Feick et al., 2020). Disaster response is another case in point; because media tend to use negative and even extreme presentations when framing natural disasters, government and public response to the disasters are often harsher or more strict than truly necessary. For example, following Hurricane Katrina, news stories reported on the aftermath with a negative and sensational presentation that likened recovering areas to pits of out-of-control anarchy, which provided justification for a harsh, militaristic government response strategy (Tierney et al., 2006).

Secondly, the negativity bias cycle alters public perception of threats and urgency. Feick, Donnay and McCabe (2020) find that using specific negative words or phrases in news media coverage alters the degree to which an individual perceives an event as threatening; even though the tone of coverage does not alter the factual information of an event, word choices impact perceptions of urgency and risk significantly. This is especially true when an individual does not

have personal experience to reference when analyzing the coverage (Vanderwicken, 1995). For example, individuals rank tornadoes as a more common cause of death than asthma even though more Americans die from asthma per year because tornado coverage often uses crisis and disaster framing (Pinker, 2018). Or, in terms of specific newsworthy events, Walters, Mair and Lim (2016) note that "the use of shocking headlines as opposed to accurate and balanced descriptions of the event may in turn result in misperceptions of the extent of the disaster" (p. 4). Perpetual emphasis on negativity greatly miscalibrates the public's understanding of risk, making news readers more susceptible to fatalistic perspectives such as doubting the significance of voting or contributing to charitable causes (Pinker, 2018).

On a similar note, negativity in news miscalibrates overall cultural and societal attitudes, causing systemic deficiencies in public knowledge of individuals' government, country, and international neighbors (Soroka et al., 2019; Spinde et al., 2020). Negative framing can cause a distorted understanding of an event, such as the extent of looting, rioting or other civil unrest, and contribute to political polarization (Tierney et al., 2006). Also, negatively charged political campaign coverage facilitates voter cynicism and distrust in the government and political processes, or, alternatively, results in incorrect political knowledge (Cappella & Jamieson, 1997, ref. in Jang & Oh, 2016; Soroka et al., 2019). When overwhelmed by the negativity of news coverage, readers may stop seeking additional information, which contributes to public blindness to systematic issues (Tully et al., 2020; Vanderwicken, 1995). Polarization, inadequate knowledge of political and current affairs, citizen apathy, disengagement, and even economic issues and decreased tourism have all been linked to the negative nature of news coverage (Soroka et al., 2019; Walters et al. 2016).

Breaking the Cycle

Counterintuitively to negativity bias, news consumers actually express dissatisfaction with negative news and even a desire to see more positive news, as affirmed by Soroka, Fournier & Nir (2019), Trussler & Soroka (2014), and Grabe & Kamhawi (2006). This desire for more positivity is consistent with the findings of Muddian, Pond-Cobb and Matson (2020), who found that negative news discouraged engagement and interaction with news; this demonstrates that, while individuals may be implicitly attracted to selecting negative over positive news, the negativity of news does not necessarily equate to increased engagement or interest. Additionally, the human brain does have a set of neural circuits with a propensity towards a 'positivity bias;' however, the negativity bias of the brain dominates when a stimulus signals threat, pain, or other negative content (Carretié et al., 2008).

If individuals exhibit an explicit desire for positive news, then why is negativity bias such a prevalent heuristic? The answer may lie in the supposition that implicit biases influence the brain's decision making processes even when those biases directly contradict what an individual may explicitly think they want (MIT, 2020). For example, an individual may believe they are not racist, but still subconsciously exhibit slight preference for members of their own race over others; likewise, an individual may not be explicitly sexist, but still have slight, unconscious sexist tendencies (Uhlmann and Cohen, 2005). Humans historically have displayed a disconnect between what they say and what they do, and negativity bias is just one manifestation of the human brain's implicit versus explicit desires.

This paradox raises the question of: if positive news is preferred over negative news explicitly, how can the implicit biases that lead to the opposite behavior be overcome? One reaction to this question has been to educate individuals on their personal biases, with the

assumption being that an awareness of a heuristic will change the heuristic. Bargh (1999), Devine (1989), and Gaertner & Dovidio (1986) argue that implicit biases persist because individuals' lack personal awareness of the unconscious bias (ref. in Devine et al., 2012). However, in the context of news selection, forcing an individual to make a decision contrary to their biases only further increases resistance to changing habits (Spinde, 2020). Even when self-awareness does not necessarily result in increased resistance, the awareness does not result in more analytical news choices (Tully et al., 2020).

Implicit bias can certainly be mitigated when given the right inputs (Lai & Banaji, 2020; MIT, 2020). As the evidence suggests, scholars (Devine et al., 2012; Stephens et al., 2020; Santos & Gendler, 2014, ref. in Santos & Rosati, 2015) agree that an awareness-only approach is not enough to alter the behaviors of individuals resulting from implicit biases. Rather, a multilevel approach is necessary that involves a combination of: being aware of the implicit bias, having concern about the effects of the bias; understanding when the biased responses are likely to occur; receiving external input regarding the bias; and intentionally applying strategies to reduce and replace the bias (Devine et al., 2012; MIT, 2020; Nandigama & Shyamsunder, 2021).

The first step to such a multilevel approach in reducing bias is to address individual rather than systematic processes (Stephens et al., 2020). When it comes to news selection and negativity bias, media consumers often do not premeditate on what dictates their news selection habits. It has long been argued that humans seek the shortest route of decision making, seeking rapid heuristic "shortcuts" over slow, deliberate processes (Trussler & Soroka, 2014); therefore, on the individual level, the approach to mitigating implicit bias must appeal to the natural impatience of the human brain. An appropriate solution, therefore, may be pre-commitment in

media selection: having media consumers commit themselves to definitions of the type of news they believe they want –such as a news "rubric"-- before they even begin news selection may change the selection process. The effectiveness of this approach is exemplified by Uhlmann and Cohen (2005), who investigated the effects of implicit gender biases on hiring decisions: in the study, participants were given two applicants for a chief of police position and asked to make a hiring decision. The study showed that the participants tailored their definition of a "qualified applicant" to support their desired gender. However, participants in a second group were first asked what qualifications would be most important for the chief of police position, and then showed the applicants. When participants were pre-committed to their own definitions of a "qualified applicant," they were less likely to exhibit gender bias in their hiring decision. This research will mirror Uhlmann and Cohen's experimental design in a journalistic context to see if pre-commitment has a significant impact on negativity bias in news selection.

Research Questions and Hypotheses

Spurred by the negative effects of negativity bias in consumer news selection, the current study contributes to the body of research on negativity bias in the modern media environment and ways to mitigate implicit biases. While past studies have explored strategies to mitigate implicit biases, and likewise other studies have accumulated evidence of the existence of negativity bias in the consumer news selection process, no research has tested the effectiveness of pre-commitment on negativity bias as illustrated in Ulhmann and Cohen (2005), per se. This research seeks to answer the following question:

> **RQ:** If news consumers pre-commit themselves to the type of news content they think they prefer, will this pre-commitment mitigate the effects of negativity bias on news selection?

In order to answer this question, the current research will compare news selection data between a control group and a variable group, where the variable group will be asked to define criteria of news that they want to read before being exposed to the news. Because of past research (Kätsryi et al., 2016; Rozin & Rozyman, 2001; Soroka & McAdams, 2015; Jang & Oh, 2016; Meffert, 2006; Zillman et al., 2004; Donsbach, 1991, ref. in Meffer et al., 2006) verifying the tendency of consumers to succumb to negativity bias in news selection, and because Uhlmann and Cohen have demonstrated the effectiveness of commitment in reducing implicit bias, this research predicts the following:

> **H1:** Participants in the non-commitment group will have a higher selection frequency of negatively phrased news article titles than neutral or positive ones, demonstrating implicit negativity bias.
>
> **H2:** Participants in the commitment group will select news articles consistent with their criteria of what types of news they explicitly believe they prefer.

CHAPTER THREE:

METHODOLOGY

Data Collection

To collect data, this thesis utilized Qualtrics, a privately-owned research software that offers online survey tools. Recruitment efforts were carried out via email and social media networking.

Study Design

A self-administered online survey with IRB exemption was given to participants via an html link (Appendices A and B). The questionnaire consisted of seven sections. The first section began with the informed consent agreement ensuring privacy and confidentiality to participants, as well as ensuring participation was voluntary with no compensation or benefits, nor penalty for non-participation or partial completion. The second section collected demographic data and screened respondents for their news reading habits.

Measures

The primary measures of the study were in sections three and four of the questionnaire. In section three, Qualtrics randomly split participants into two groups. The stimulus differentiated based on the group the individual was assigned to: the non-commitment group (Group 1) or the commitment group (Group 2). In the non-commitment group, participants were simply shown a message with instructions to continue on with the survey. Participants then proceeded to part four. In Group 2, participants were asked to predefine news selection criteria in order to see if

their pre-commitment would reduce implicit bias permeating decision-making processes. This between-groups approach was used in order to minimize potential experimental bias by guaranteeing the participants were only exposed to each stimulus just once.

The experimental design for Group 2 was created in order to reduce ambiguity of the criteria of judgement for news selection. Ulhmann and Cohen (2005) demonstrate that individuals make decisions tailored to their idiosyncratic, implicit preferences, and argued that heuristics can permeate decision making "when ambiguity exists not in the target of judgement but in the appropriate criteria of judgement" (474). If sorted into the commitment group, participants were asked to define criteria of what qualities are important to them in selecting news articles to read. To minimize experimental bias, Qualtrics did not show any indication that respondents had been sorted into separate groups. Moreover, the order of answer options were randomized per each participant.

Survey Headlines

The next stimulus section was designed to mimic selection of online news articles; this context was chosen because online news articles are easily accessible and familiar to audiences (Walters et al., 2016), and also because the majority of news consumers read news texts rather than watch videos in online news contexts (Muddiman et al., 2020). Studying negativity bias in selective exposure based on headlines is justified due to the fact that news consumers make their news selection choices based on the limited information in the headlines that appear to them when browsing (Zillman et al., 2004). The analysis of headlines is particularly relevant in the context of investigating the mitigation of negativity bias in that headlines are less and less used to summarize the news story and more and more used to attract readers (Bell, 1991, ref. in Walters et al., 2016).

Regardless of which group participants were randomly assigned to, all respondents participated in the same experimental design for parts four, five, six and seven of the survey. Only part three differentiated. In part four, participants were shown a series of pairs of headlines and asked which article they were most inclined to read. Presenting comparable headlines and asking participants to choose what they desire to read has been used in prior research studies (i.e., Van der Meer et al., 2020; Meffert et al., 2006; Grabe and Kamhawi, 2006) and is a tested way to measure negativity bias. As previously noted, the order of the negative versus positively valenced headline options were randomly adjusted by the Qualtrics software.

The pair of headlines asked participants to choose from either a negatively valenced headline or a headline with a neutral or positive valence. The headlines have been used in prior studies measuring negativity bias: namely, Grabe & Kamhawai (2006); Kätsyri and colleagues (2016); Van der Meer and colleagues (2020); and Zillman and colleagues (2004). These headlines were chosen because they: have been previously tested and confirmed to convey the intended bias to participants across conditions; did not differ in terms of perceived arousal, complexity and salience; and were manipulated to convey intentional framing and valances relative to testing negativity bias. Neutral and positive headlines were compared to negatively valenced headlines in order to test if negativity bias permeates over both neutral and positive presentations, as preceding studies have relatively demonstrated. Table 1 displays the headline choices and their valences.

Upon completion of section four, participants moved into section five, where they were shown the same list of headlines and asked to code the headlines' tones. Kätsyri et al. (2016) define positivity versus negativity as the "writer's attitude towards the topic of the news" (p. 5),

Table 1. Headline Choices and Negativity Valences.

#	Negative Valence	Neutral Valence	Positive Valence
1	"Since January, only 500 caches of weapons were confiscated and destroyed" *From Grabe & Kamhawai (2006)*	---	"Since January, as many as 500 caches of weapons were confiscated and destroyed" *From Grabe & Kamhawai (2006)*
2	"Unbelievable. Keep your debts. I'm moving out" *From Kätsyri et al. (2016)*	---	"A debt crisis is an opportunity for something new" *From Kätsyri et al. (2016)*
3	"Neglect of refugees means forcing them to return to war zone" *From Van der Meer et al. (2020)*	---	"Effective ideas for creating a better world for refugees" *From Van der Meer et al. (2020)*
4	"When deportation of refugees is a death sentence" *From Van der Meer et al. (2020)*	---	"Residents raising funds to sponsor refugee family" *From Van der Meer et al. (2020)*
5	"Refugees: the Trojan horse of terrorism" *From Van der Meer et al. (2020)*	---	"Keeping out refugees is the best way to help the most people" *From Van der Meer et al. (2020)*
6	"Refugees are taking the jobs of native US/UK citizens" *From Van der Meer et al. (2020)*	---	"Less support for refugees will strengthen trust in workers' freedom of movement" *From Van der Meer et al. (2020)*
7	"Health care fraud will increase if we do not privatize the system" *From Van der Meer et al. (2020)*	---	"How privatizing social security can improve quality of care" *From Van der Meer et al. (2020)*
8	"A severely traumatized visitor remains in critical condition after a shark attack" *From Zillman et al. (2004)*	"Man severely bitten by a sand shark while swimming at Ramora Beach Resort" *From Zillman et al. (2004)*	---
9	"Drivers being forced, by threat of bodily harm or violent action, to abandon cars" *From Zillman et al. (2004)*	"Drivers are forced to abandon their cars: cars are often badly damaged or wrecked" *From Zillman et al. (2004)*	---
10	"Roller coaster accident claims the lives of a child and her mother after cart derailed" *From Zillman et al. (2004)*	"Wild Pier closed while officials investigate cause of an accident that killed two people and injured two others" *From Zillman et al. (2004)*	---

but Muddiman and colleagues (2020) precautions that "what counts as 'negativity' in studies of negativity bias varies widely" (p. 817). In many previous studies on negativity bias (Meffert et al., 2006; Sobieraj & Berry, 2011; Dunaway, 2012; Soroka & McAdams, 2015; and Khan and Kenney, 2002), the headlines were coded to ensure their intended perception as either positive or negative by readers. For this reason, this thesis, like previous research on negativity bias in news, had the audience itself define negative news.

This experiment allowed participants to define the tone of the headlines in part five of the survey; participants were asked to evaluate the presentation of each message on a scale from 1 to 3 (1= negative tone, 2=neutral tone, 3= positive tone). This design was adapted from Dunaway (2012), which used a similar scale from negative to positive. Moreover, Dunaway notes that asking the participant's opinion of the overall tone of the story allows coding based on the participants' general impression of the news article. Using tone as an operational measure is justified in coding as past research (Dunaway, 2012) has found it more useful than other subjective measures of news bias; moreover, the use of tone to delineate negative from positive news coverage builds upon multiple prior studies (Dunaway, 2012; Druckman & Parkin, 2005, ref. in Dunaway, 2012; and Kahn & Kenney, 2002). The coding questions were presented after the initial headline choices to ensure that questions regarding participant perception of positive, neutral or negative had no effect on their answers to the study's main measures in parts three and four.

All participants then moved on to part 6, which included questions on media trust. These media trust questions were specifically included in order to test for potential interactions, as prior research (Cappella & Jamieson, 1997) has demonstrated that individuals with more media distrust are even more attracted to negative news.

Finally, part seven was the end of the survey, and included an end-of-survey debriefing message that informed participants the purpose of the questionnaire, directed them to the primary investigator should they have questions or concerns, and thanked them for their time.

Research Sample

Non-probability convenience snowball sampling was used. The use of convenience sampling limits the generalizability of study results when compared to studies that utilize perfect random sampling. However, this thesis follows Trussler and Soroka's (2014) reasoning that the study of negativity bias is "not attempting to make a population estimate but rather trying to uncover a cognitive process. As such, the fact that [the] sample is not representative with respect to education, age, and income should be a relatively minor problem" (p. 366). In other words, the generalizability of the study is not so important as its ability to test whether or not negativity bias can be mitigated.

The experiment enrolled 172 participants overall, with an average age of 42.72 years (SD=17.425, ranging from 18 to 83 years old) and 86 participants in each of the two experimental groups. The participants were 32 percent male, 66 percent female, and 1 percent other/rather not say. In terms of education, 8.1 percent had high-school degrees or less, 20.3 percent had some college, 27.3 completed college, 9.3 percent completed some post-graduate work, and 2.3 percent completed their post graduate education. The ethnicity composition of the sample was 73.8 percent Caucasian, 11 percent Hispanic/Latino/Spanish origin, 7.6 percent African American, 4.1 percent Asian, and the remaining 3.5 percent other or multi-race. The respondents were geographically distributed with 14 percent in the Northeast, 4.1 percent from Midwest, 67.4 percent in the South, and 14 percent in the West.

Politically, the sample was composed of 50.6 percent Democrats, 15.7 percent Republicans, 24.4 percent independents, and 8.1 percent other political affiliations. About half (48.9 percent) identified themselves as either liberal or liberal leaning; 28.5 percent said they see themselves in the political center; and the remaining 22.6 percent identified conservative or conservative leaning.

Most participants got their news sources from news websites and apps (39.5 percent), followed by social media (24.4 percent), national television (9.3 percent), local television and radio (6.4 percent each), a combination of sources (5.8 percent), and cable television (5.2 percent). About 60.8 percent of respondents reported reading news daily, 19.3 percent read weekly, and 19.9 percent read the news less than weekly.

Demographics comparisons between the two experimental groups --specifically t-tests for age and chi-squares for categorical variables such as gender, education level, ethnicity, party affiliation and ideology, and news source and news frequency consumption-- were not significant. The two groups are homogenous and comparable from a demographics standpoint.

Data Analysis and Interpretation

The data was collected from the Qualtrics survey. Data from Group 1, the non-commitment group, and Group 2, the commitment group, were compared to see if pre-commitment had a significant impact on the types of news articles selected. SPSS V27 was used for data analysis purposes.

CHAPTER FOUR:

RESULTS

Hypothesis Testing

RQ1 asked if news consumers pre-commit themselves to the type of news content they think they prefer, will this pre-commitment mitigate the effects of negativity bias on news selection? To answer this question, this study asked two groups of participants to choose headlines from pairs of negative/positive and negative/neutral headlines. H1 predicted that participants sorted in the non-commitment group would exhibit a selection negativity bias, and H2 predicted that participants sorted into the commitment group would make selections consistent with their predefined explicit criteria preferences. The resulting data does not support either hypothesis.

Firstly, the data contradicts H1: participants in the non-commitment group did not exhibit a negativity bias in their media selections. In fact, the opposite is true. In the non-commitment group, participants selected positive headlines over negative headlines more than they selected negative headlines over positive headlines (see Table 2). This unexpected result cannot be attributed to misperception of headlines, as, overall, the participants perceived each headline as intended; the majority of respondents rated the negative headlines as negative, and the positive or neutral headlines as positive or neutral respectively. Only the positive/neutral versions of headlines 5, 6, and 9 saw mixed results. For headline 5, 24.4 percent of participants correctly coded the positive version of headline 5 as positive, whereas 34.3 percent said neutral, and 41.3

percent said negative; however, 82.5 percent of participants correctly coded the negative version of headline 5, and, therefore, the participants exhibited a positivity bias over what was the more obviously negative of the two. For headline 6, results were similarly split for the positive version, as 23.5 percent said positive, 41.8 percent said neutral, and 34.7 said negative; however, again, the negative headline was the more obvious negative, with 82.5 percent coding correctly. In headline 9, the neutral version of the headline saw 42.6 percent code as neutral, 5.3 code as positive, and 52.1 percent code as negative; yet, like in the other pairs, the negative version was the more obvious negative at 78.1 percent. Because of the strong majority of participants that correctly recognized the negative of the two pairs, the headlines were majoritively perceived as intended in each pair. This demonstrates that the stimulus worked as intended. It is possible that the positivity bias of the non-commitment group resulted from other factors of the experimental design, such as writing tone or subject preference, which will be discussed more thoroughly in the following chapter.

Interestingly, the preference for positive valence prevailed between both Group 1 and Group 2. Independent sample t-test showed no significant differences between the non-commitment and the pre-commitment group ($t(145)=-.782$, $p>.05$, ns). The majority of respondents between the non-commitment and the pre-commitment groups chose the positive/neutral version of headlines 1 through 8. Only headlines 9 and 10 saw a majoritively negative preference between both groups.

In spite of the fact that respondents in Group 2 exhibited a preference for positive news, the data does not support H2. In the pre-commitment group, participants were asked what criteria they value in a news story before exposure to the headline pairs. The criteria options included: whether the headline has a negative or positive tone; whether the headline is relevant to

Table 2. Headline Choices within Groups.

	Group 1 (non-commitment)		**Group 2 (commitment)**	
Headline	**Negative %**	**Positive %**	**Negative %**	**Positive %**
Headline 1	20.2	79.8	13.1	86.9
Headline 2	15.3	84.7	10.5	89.5
Headline 3	31.8	68.2	36.0	64.0
Headline 4	45.2	54.8	46.4	53.6
Headline 5	60.7	39.3	59.3	40.7
Headline 6	37.0	63.0	47.4	52.6
Headline 7	22.9	77.1	19.0	81.0
Headline 8	37.3	62.7	23.5	76.5
Headline 9	71.8	28.2	63.1	36.9
Headline 10	59.5	40.5	61.6	38.4

Differences not significant according to chi-square tests for each headline.

participants' day-to-day life; whether the story seems interesting; and whether the story is about important current events. Specifically, the criteria of whether the headline is relevant to the participants' day-to-day life, whether the story seemed interesting, and whether the story is about important current events were chosen as control variables: it was expected that participants would mark these categories as important influencing factors of their news selections, as they encompass standard explicit reasons for reading the news (Novendstern, 2011). The criteria of whether a headline has a positive tone or whether a headline has a negative tone were presented to provoke respondents to consider their explicit news preferences.

The control criteria behaved as expected, with respondents indicating almost always that the factors have some or a very important impact on whether they read an article (See Table 3). However, very few respondents (12.8 and 18.6 percent, respectively) indicated that either negative or positive headlines are very important on their media selections.

Table 3. Pre-Commitment Group Criterion Rankings.

Criterion	**Selected "Virtually no effect on if I want to read it or not" %**	**Selected "Sometimes has an effect on if I want to read it or not" %**	**Selected "Very important effect on if I want to read it" %**
The headline has a negative tone	41.9	45.3	12.8
The headline has a positive tone	31.4	50.0	18.6
The headline is relevant to my day-to-day life	9.3	43.0	47.7
The news story seems interesting	1.2	43.0	55.8
The news story is about important current events	0	33.7	66.3

H2 concerns whether individuals would commit to their explicit preferences for news after choosing criteria that are explicitly "very important" to them. Therefore, a frequency analysis was conducted to see how Group 2 respondent selections of headline pairs corresponded to pre-commitment criteria. Out of the 86 individuals in Group 2, 11 individuals indicated that negative valences are very important to their news choices, and 16 individuals indicated that positive valences are very important-- 6 of which indicated that both negative and positive valence had equal importance.

According to frequency analysis, when respondents indicated that negative valences are very important, they exhibited no selection bias towards positive or negative choices; the results were evenly split between positive and negative preferences. Although the majority of these mixed cases could be attributed to the fact that 6 of the 11 respondents marked both negative and positive as very important, even respondents who solely indicated negative valence (and not also positive presentation) is very important, they still exhibited a preference for positive headlines.

On the other side of the coin, a very small number of Group 2 participants (16) indicated that positive presentation is very important: these respondents, regardless of whether they chose both negative and positive as very important or solely positivity, picked positive headlines with a greater frequency than negative headlines. However, it would be amiss, given the positivity preference of those who solely explicitly preferred negative valence, to conclude that the pre-commitment to positivity influenced the respondents' headline selections. Moreover, because these data counts are small, so no statistical significance can be drawn from the data.

To compare the headline selections of the non-commitment with the pre-commitment group, a t-test was conducted comparing headline choices. Participants in the commitment group selected news headlines at the same rate as the non-commitment group ($t(145)=-.782$, $p>.05$, ns), demonstrating a positivity preference across the board. Overall, positivity preference prevailed across all criterion selections; therefore, no conclusions supporting H2 can be drawn.

Other Considerations

No significant differences were found in the data based on participants' demographic variances or media trust and consumption levels. No significant difference in the types of headlines selected between Rep and Democrats ($t(96)=.857$, $p>.05$, ns) was found; nor did the data present a significant difference between Republicans, Democrats, Independents, and Others

in headline selection either (F(3,142)=.275, p>.053, ns). Moreover, no significant difference was found between education levels and news selection (F(4,142)=1.185, p>.05, ns). Gender presented no significant differences (t(144)=1.180, p>.05, ns).

In regards to media trust levels, participants were asked two questions to gauge their media trust; these two measures were recoded into a dummy variable, with participants exhibiting media cynicism coded with 1 and participants with no or low media cynicism as 0. The majority of respondents scored as media cynics (M=69.59, s.dev=.4614). In the non-commitment group, 71.8 percent confessed low confidence in the media; in the pre-commitment group, 67.4 percent confessed low media confidence. However, these between-group differences were not significant (chi-square = .377, df=1, ns) and media trust was not significantly associated with respondents' propensity to select negative or positive headlines (t=.559, df=145, p > .05). In terms of media consumption, 60.8 percent of respondents said they read news daily, 19.3 percent weekly, and 19.9 percent once a week. No significant differences in headline valence choices were found between the daily news consumers and the less frequent news consumers (tested via one-way ANOVA, F=4.984, df=2,144, p>.05).

The demographic comparisons are important because they indicate that education level, gender nor political identification conflated the choices of the participants across any groups. Moreover, the trust analysis shows that media skepticism, or, the opposite, media trust, did not play a role in affecting participant choices; and the consumption analysis shows that participants responded the same way regardless of their media intake, eliminating the possibility of desensitization to headline valence based on over-consumption. Taken together, these comparisons demonstrate that participant demographics or media habits did not necessarily influence their response to the study's stimuli.

CHAPTER FIVE:

DISCUSSION

This study aimed to test if pre-commitment of explicit news reading preferences can mitigate the effect of negativity bias in the news selection process. The results did not provide support of negativity bias in either the pre-commitment or non-commitment group. There was no support for H1, as non-committed respondents did not exhibit a negativity bias in their selection choices. Moreover, the positivity preference prevailed in respondents in the pre-commitment group regardless of their choices of what explicit criteria makes news worth reading. This, as well as the positivity preference of Group 1, renders the data incomparable for purposes of testing H2; the majoritively positive selections of the pre-committed Group 2 cannot be attributed to the variable of pre-commitment.

Positivity Preference

The positivity preference evident in this study's results is shocking because of the steadfast, consistent evidence of negativity bias in news selection in previous research. Although a psychological positivity preference can exist, as noted in the literature review (Carretié et al., 2008), it is unlikely that the positivity bias of the results can only be attributed to this counterintuitive bias. One possible explanation of the positivity preference of this thesis's respondents is the unique timing of the study. Only one study in the literature review was published in 2021; respondents of this study have lived through the unprecedented coronavirus pandemic and have been bombarded with negative news and messaging to the point where

anecdotal evidence and polls blame bad news on anxiety and stress (Berezow, 2021; Reville, 2021). It is quite possible that, after a year of stressful negative news, news readers have become overstimulated by negative information and have developed a more explicit preference for positive news. Future research would be needed to truly test the plausibility of this theory and compare post-2021 news preferences to pre-2021 negativity biases.

It is also possible that the positivity preference of respondents across the study resulted not necessarily from tonal differences in headlines, as tone coding revealed that participants perceived the headline valences as intended; but, rather, as a result of the experimental stimuli design. The headline choices were taken from a collection of prior studies on media selection negativity bias. Namely: one of the ten headlines from Grabe and Kamhawai (2006); one of the ten from Kätsyri et al. (2016); five of the ten from Van der Meer et al. (2020); and three of the ten from Zillman et al. (2004). It is possible that using headlines from separate studies hindered their effectiveness as measures of negativity bias. It is also possible that the experimental design of showing participants only one pair of headlines at a time elicited explicit positivity bias rather than measuring implicit negativity bias.

It is worth, in this context, particularly considering that other studies that have generated evidence of negativity bias have simulated more natural news reading environments. It is possible that experimental bias permeated the methodological design in that modern participants have become hyper sensitive to news and media, given the volatile modern media environment and sensationally negative news trends. This study's design was informed by previous research which made use of online questionnaires/surveys (Van der Meer et al., 2020). Retesting of this study could alter the experimental design to more like that of studies that simulated more natural news reading environments, such as online news websites (i.e., Zillman et al., 2004; Knobloch-

Westerwick et al., 2020; Muddiman, 2020) to see if the change in presentation would be more conducive to measuring implicit bias.

One interesting result is the fact that negativity bias did prevail for headlines 9 and 10. Interestingly, these two headlines were two of three pairs that asked participants to choose between a negative and a neutral rather than a negative and a positive. Moreover, the tone coding for the neutral headlines was split between neutrality or negativity: 42.6 percent coded neutral for the neutral headline 9, but 52.1 percent coded negative; 54.3 percent coded neutral for neutral headline 10, but 37.3 coded negative. It is possible that, when given the choice between what participants perceive as two negative options or a negative and a neutral option, participants will pick the more interesting, or sensational/negative, of the pair. This is worth considering in future research that tests for negativity bias in neutral/negative headline pairings.

Selection Commitments

The positivity preference existed across both Group 1 and Group 2 respondents, including respondents in Group 2 regardless of how they rated their pre-commitment criteria. For example, individuals who indicated negative news is important to their selection of news did not actually commit to selecting negative stories. Therefore, it cannot be said that the pre-commitment stimulus succeeded in committing participants to their explicit news preferences.

Retesting of this study would alter the pre-commitment section to induce stronger commitment. It would be important to ensure that individuals sorted into the pre-commitment group either committed to positive news valences or negative news valences, not both, thus avoiding the cases that occurred in this study where participants indicated both positive and negative are important criteria. Although it is possible that both valences are important to certain

newsreaders, the absence of double commitments would be more conducive to measuring the success of the commitment in mitigating biases.

An additional change to future research would be to alter the pre-commitment questions to be more clear in measuring participant's explicit preferences, not current habits. Specifically, the pre-commitment questions of this thesis were phrased in a way that could have been interpreted by some participants as asking about their current news habits, not necessarily what they desire. Instead of using the tags, "not important," "sometimes important," and "very important," the tags, "don't want to read, "sometimes want to read," and "always want to read" would be better ways of measuring preference.

Finally, in future research, it would be more suited to measuring bias and the mitigation of bias by having two separate experiments: one experiment to measure the negativity bias of participants; and then a follow up experiment with the exact same design, but with the added preface of commitment. Ulhmann and Cohen also followed this two-experiment design, first measuring the implicit gender bias of hiring authorities, then repeating the experiment with the added in pre-commitment section. Using this methodology would ensure that no experimental bias permeates the design, and tests whether a negativity bias does exist to mitigate in the first place amongst the experiment's stimuli. Time restraints limited the design of the present study, but retesting of this study would separate the hypotheses, testing H1 in one experiment, then repeating with the mitigation factor to test H2 in a separate experiment.

Conclusions

Although neither hypothesis was supported, and the results of the survey differ from commonly accepted theory on media selection bias, this study does contribute to the body of news negativity bias. Or, rather, it would be more accurate to say that this study demonstrates

explicit positivity bias: this study demonstrates that a positivity bias does exist for news selection to a certain extent. Whether the positivity bias of this thesis was induced by experimental bias, or existed naturally within the participants over negativity bias, cannot be measured with the existing data. However, the overwhelming majority of participant positivity preference demonstrates the desire for positive news amongst modern news readers. If anything, this study emphasizes the importance of finding ways to mitigate negativity bias so that the cycles of negativity can finally be broken in today's media.

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APPENDIX A:

QUESTIONNAIRE

Questionnaire

Section 1: Informed consent agreement

Informed Consent to Participate in Research Information to Consider Before Taking Part in this Research Study Title: Mitigating Negativity Bias in Media Selection

Study # 002745

Overview: You are being asked to take part in a research study. The information in this document should help you to decide if you would like to participate. The sections in this Overview provide the basic information about the study. More detailed information is provided in the remainder of the document.

Study Staff: This study is being led by Gabrielle Jarmoszko who is a graduate student at the University of South Florida St. Petersburg. This person is called the Principal Investigator. She is being guided in this research by Dr. Monica Ancu, Associate Professor in the Department of Journalism and Digital Communication at the University of South Florida St. Petersburg. Other approved research staff may act on behalf of the Principal Investigator.

Study Details: This study is being conducted online. The purpose of the study is to study how people read news and what news stories they choose to read. During the study, you will be asked to fill out a one-time, 30-minute online questionnaire.

Participants: You are being asked to take part because you are an adult that is exposed to news media.

Voluntary Participation: Your participation is voluntary. You do not have to participate and may stop your participation at any time. There will be no penalties or loss of benefits or opportunities if you do not participate or decide to stop once you start. There are no alternatives to participating. Your decision to participate or not to participate will not affect your job status, employment record, employee evaluations, or advancement opportunities. Your decision to participate or not to participate will not affect your student status, course grade, recommendations, or access to future courses or training opportunities.

Benefits, Compensation, and Risk: We do not know if you will receive any benefit from your participation. There is no cost to participate. You will not be compensated for your participation. This research is considered minimal risk. Minimal risk means that study risks are the same as the risks you face in daily life.

Confidentiality: Even if we publish the findings from this study, we will keep your study information private and confidential. Anyone with the authority to look at your records must keep them confidential.

Why are you being asked to take part?

You are being asked to take part because you are an adult that is exposed to news media. This study seeks to investigate the news selection habits of adult media consumers.

Study Procedures

If you take part in this study, you will be asked to fill out a one time, 30-minute online questionnaire via Qualtrics, an online survey tool. All records and data related to this research will be confidential to the extent provided by Qualtrics, and respondents and their responses will not be identifiable by name.

Alternatives / Voluntary Participation / Withdrawal

You do not have to participate in this research study. There are no alternatives to participating. Your decision to participate or not to participate will not affect your job status, employment record, employee evaluations, or advancement opportunities.

You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study. You are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study. Decision to participate or not to participate will not affect your student status, course grade, or job status.

Benefits and Risks

You will receive no benefit from this study. This research is considered to be minimal risk.

Privacy and Confidentiality

We will do our best to keep your records private and confidential. We cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law. Certain people may need to see your study records. The only people who will be allowed to see these records are: The University of South Florida Institutional Review Board (IRB).

It is possible, although unlikely, that unauthorized individuals could gain access to your responses because you are responding online. Confidentiality will be maintained to the degree permitted by the technology used. No guarantees can be made regarding the interception of data sent via the Internet. However, your participation in this online survey involves risks similar to a person's everyday use of the Internet. If you complete and submit an anonymous survey and later

request your data be withdrawn, this may or may not be possible as the researcher may be unable to extract anonymous data from the database.

Contact Information

If you have any questions, concerns or complaints about this study, call Gabrielle Jarmoszko at 941-359-4463 or email gjarmoszko@usf.edu . If you have questions about your rights, complaints, or issues as a person taking part in this study, call the USF IRB at (813) 974-5638 or contact the IRB by email at RSCH-IRB@usf.edu.

We may publish what we learn from this study. If we do, we will not let anyone know your name. We will not publish anything else that would let people know who you are. You can print a copy of this consent form for your records.

I freely give my consent to take part in this study. I understand that by proceeding with this survey, I am agreeing to take part in research and I am 18 years of age or older.

Section 2: Demographics

Please answer all questions honestly and accurately. Your responses are anonymous and confidential. No identifiable information is being collected, and the answers cannot be traced back to you.

- How old are you, in years? [free entry]
- What is your gender? [male, female, other/prefer not to say]
- Select your education level [High school or less, some college, completed college, some post-graduate education, completed graduate education]
- Select your race/ethnicity [American Indian or Alaska Native, Asian, Black or African American, Hispanic/Latino/Spanish origin, Native Hawaiian or Other Pacific Islander, White/Caucasian, Other/multi-race]
- Select the geographic region of the United States where you are located. [Northeast, Midwest, South, West]

- What is your political party ID [Republican, Democrat, Independent, other]
- On the political spectrum from liberal to conservative, where do you see yourself? [Liberal, liberal leaning, center, conservative leaning, conservative]
- What is the most common way you read news? [Print newspaper or magazines, national network television, local television, cable television, radio, news website or app, social media, other (explain)]
- How frequently do you read news? [Daily; weekly; less than weekly]

Note: Qualtrics will randomly assign survey participants to one of the following Sections (either Section 3a or Section 3b). Afterwards, all participants will move on to Section 4.

Section 3a: Group 1, non-commitment group

Thank you. Please continue on with the survey.

Section 3b: Group 2, commitment group

Directions: How important are the following criteria in helping you decide whether or not to read a news article when given only its headline? (Scale: 1=virtually no effect on if I want to read it or not, 2=sometimes has effect on if I want to read it or not, 3= very important effect on if I want to read it). **Note: Qualtrics will randomize the order that the statements appear per respondent.*

- The headline has a negative tone. [1, 2, 3]
- The headline has a positive tone [1, 2, 3]
- The headline is relevant to my day-to-day life. [1, 2, 3]

- The news story seems interesting. [1, 2, 3]
- The news story is about important current events. [1, 2, 3]

Section 4: Headlines

Directions: Imagine that you are reading the news. In the following section, you will be presented with a different pair of articles on each page. Select the article that you are more likely to read based on the headline. **Note: a) and b) order will be randomized in the online survey by Qualtrics.*

Select the article that you are more likely to read based on the headline.

Question 1)

a) "Since January, only 500 caches of weapons were confiscated and destroyed"
b) "Since January, as many as 500 caches of weapons were confiscated and destroyed"

Question 2)

a) "Unbelievable. Keep your debts. I'm moving out"
b) "A debt crisis is an opportunity for something new"

Question 3)

a) "Neglect of refugees means forcing them to return to war zone"
b) "Effective ideas for creating a better world for refugees"

Question 4)

a) “When deportation of refugees is a death sentence”

b) “Residents raising funds to sponsor refugee family”

Question 5)

a) “Refugees: the Trojan horse of terrorism”

b) “Keeping out refugees is the best way to help the most people”

Question 6)

a) “Refugees are taking the jobs of native US citizens”

b) “Less support for refugees will strengthen trust in workers’ freedom of movement”

Question 7)

a) “Health care fraud will increase if we do not privatize the system”

b) “How privatizing health care can improve quality of care”

Question 8)

a) “A severely traumatized visitor remains in critical condition after a shark attack”

b) “Man severely bitten by a sand shark while swimming at Ramora Beach Resort”

Question 9)

a) “Drivers being forced, by threat of bodily harm or violent action, to abandon cars”

b) “Drivers are forced to abandon their cars: cars are often badly damaged or wrecked”

Question 10)

a) “Roller coaster accident claims the lives of a child and her mother after cart derailed”

b) “Wild Pier closed while officials investigate cause of an accident that killed two people and injured two others”

Section 5: Tone Coding

Directions: For each headline, consider in your opinion: what is the tone of the story, on a scale from 1 to 3 (1= negative tone, 2=neutral tone, 3= positive tone).

1) “Since January, only 500 caches of weapons were confiscated and destroyed”

   Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

2) “Since January, as many as 500 caches of weapons were confiscated and destroyed”

   Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

3) “Unbelievable. Keep your debts. I’m moving out”

   Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

4) “A debt crisis is an opportunity for something new”

   Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

5) “Neglect of refugees means forcing them to return to war zone”

   Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

6) “Effective ideas for creating a better world for refugees”

   Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

7) “When deportation of refugees is a death sentence”

   Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

8) “Residents raising funds to sponsor refugee family”

Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

9) “Refugees: the Trojan horse of terrorism”

Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

10) “Keeping out refugees is the best way to help the most people”

Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

11) “Refugees are taking the jobs of native US/UK citizens”

Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

12) “Less support for refugees will strengthen trust in workers’ freedom of movement”

Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

13) “Health care fraud will increase if we do not privatize the system”

Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

14) “How privatizing social security can improve quality of care”

Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

15) “A severely traumatized visitor remains in critical condition after a shark attack”

Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

16) “Man severely bitten by a sand shark while swimming at Ramora Beach Resort”

Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

17) “Drivers being forced, by threat of bodily harm or violent action, to abandon cars”

Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

18) “Drivers are forced to abandon their cars: cars are often badly damaged or wrecked”

Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

19) "Roller coaster accident claims the lives of a child and her mother after cart derailed"

Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

20) "Wild Pier closed while officials investigate cause of an accident that killed two people and injured two others"

Rating: 1 (Negative) | 2 (Neutral) | 3 (Positive)

Section 6: Media Trust

1) Which of the following two statements about the news media do you agree with more?
    a) The news media help society to solve its problems
    b) The news media get in the way of society solving its problems
    c) Don't know
2) How much of the time do you think you can trust media organizations to report the news fairly?
    a) Just about always
    b) Most of the time
    c) Only some of the time
    d) None of the time

End of Survey Message

Thank you for participating in this research on how people select the news stories they read. The data collected through this survey is being used to study whether people prefer to read

negative or positive news stories, and whether committing to read positive news stories before actually reading the news makes a difference in the type of news stories people select. If you have any questions or concerns about this research, please contact the Principal Investigator at gjarmoszko@usf.edu.

APPENDIX B:

IRB EXEMPTION

UNIVERSITY of SOUTH FLORIDA

EXEMPT DETERMINATION

June 18, 2021

Gabrielle Jarmoszko
4649 Summerwind Drive
Sarasota, FL 34234

Dear Gabrielle Jarmoszko:

On 6/17/2021, the IRB reviewed and approved the following protocol:

Application Type:	Initial Study
IRB ID:	STUDY002745
Review Type:	Exempt 2
Title:	Mitigating Negativity Bias in Media Selection
Funding:	None
Protocol:	• HRP-503a - Social-Behavioral Protocol_Updated1.docx

The IRB determined that this protocol meets the criteria for exemption from IRB review.

In conducting this protocol, you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Please note, as per USF policy, once the exempt determination is made, the application is closed in BullsIRB. This does not limit your ability to conduct the research. Any proposed or anticipated change to the study design that was previously declared exempt from IRB oversight must be submitted to the IRB as a new study prior to initiation of the change. However, administrative changes, including changes in research personnel, do not warrant a modification or new application.

Ongoing IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities impact the exempt determination, please submit a new request to the IRB for a determination.

Sincerely,

Katrina Johnson
IRB Research Compliance Administrator