

DISARMING THE HOSTILE MEDIA: AN INTERVENTION TO REDUCE PERCEPTIONS
OF MEDIA BIAS BY REDUCING NAÏVE REALISM

by

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ABSTRACT

When viewers see coverage of an issue on which they are strongly partisan, they tend to perceive even unbiased news coverage as biased against their own position. This “hostile media effect” has important implications for how citizens gather and respond to information. Psychologists studying the hostile media effect have presumed that it is, in part, driven by “naïve realism”, or the layman’s belief that “*I see things as they are.*” This dissertation is the first study to empirically establish this link by demonstrating that high partisans show a reduction in their perception that objectively neutral news coverage is biased against their position (i.e., they are more accurate in their perception) when their naïve realism has been challenged using a previously validated intervention, which incorporates an experiential component along with information about unconscious processes affecting perception. Furthermore, results indicate that high partisans are less defensive and more even-handed in their perception following this intervention and not actively trying to appear more unbiased.

DEDICATION

I would not be here without the love and support of my wife Dr. M.K. Shreves. I do not know what I would be doing without her unwavering support and timely motivation. She has had to endure more from me throughout this dissertation process than any wife should. I love you, and I will make the wait worth it.

LIST OF ABBREVIATIONS AND SYMBOLS

F	Fisher's F ratio: A ratio of two variances
M	Mean: the sum of a set of measurements divided by the number of measurements in the set
p	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
N	Total sample number
n	Subset of total sample
f	Effect size in power analysis
SD	Standard deviation
t	Computed value of t test
η^2	Eta-squared: Estimate of variance explained
η_p^2	Partial Eta-squared: Estimate of variance explained
α	Cronbach's index of internal consistency
$<$	Less than
$>$	Greater than
$=$	Equal to

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CHAPTER 1: INTRODUCTION

“How can you say to your brother, “Brother, let me take the speck out of your eye,” when you yourself fail to see the plank in your own eye? You hypocrite, first take the plank out of your eye, and then you will see clearly to remove the speck from your brother's eye.”

-The Bible, Luke 6:42

On January 27th, 1998 in an interview on *The Today Show*, then-First Lady Hillary Clinton told Matt Lauer she believed there was a “vast right-wing conspiracy” in the media and government. In fact, Bill Clinton had received almost 20% more positive news stories in the network media (e.g., ABC, NBC, CBS) than his opponent Bob Dole (Center for Media and Public Affairs, 1996). Interestingly, Ms. Clinton is not alone in over-perceiving the presence of a ‘hostile media.’ Numerous studies show that strong partisans tend to perceive objectively neutral information presented in the media as being biased against their position (Vallone, Ross, & Lepper, 1985). Why are people prone to misperceive bias against their own side?

Psychologists have assumed that this ‘hostile media effect’ is driven by naïve realism, which is the flawed belief that one sees the world “as it really is” (Ross & Ward, 1996). Presumably, if one believes he or she sees the world objectively and has a strong belief in the correctness of a stance, then he or she also assumes others should share this exact stance. If someone does not share that stance or expresses a milder version of that stance, then *they* must be biased or, worse, potentially lying for some personal gain (Lord, Ross, & Lepper, 1979; Ross, Greene, & House, 1977). Although the relationship between naïve realism and perception of hostile media seems intuitive, to my knowledge there has been no research that has directly examined this link. The goal of this dissertation is to fill this knowledge gap by examining

whether the hostile media effect can be attenuated through challenging participant's sense of naïve realism.

Naïve realism refers to the misleading sense that one's own perception reflects reality (e.g., "I see things as they are."). Because individuals are unaware of much of their own cognitive processing (Bartlett, 1932; Bruner, 1957; Shiffrin & Schneider, 1977; Nisbett & Wilson, 1977), most people falsely believe their personal, subjective experience is an objective experience (Asch, 1952; Gilovich, 1990; Hastorf & Cantril, 1954; Ichheiser, 1943). Although naïve realism has been presumed to underlie many biases in thought (Juslin, Winman, & Olsson, 2000; Robinson, Keltner, Ward, & Ross, 1995; Pronin, Lin, & Ross, 2002), the focus here is on the hostile media effect.

As noted earlier, numerous studies suggest that individuals with a strong partisan stance on an issue tend to perceive rather fair news coverage on that issue as biased against their stance (e.g., Gunther & Liebhart, 2006). In one classic study on this phenomenon (Vallone, Ross & Lepper, 1985), participants who self-identified as highly Pro-Israel or Pro-Arab viewed an American news report on the Sabra and Shatila massacres in Lebanon that were assisted by Israeli military forces. The news reports used in the study were selected for their large amount of video evidence, and detailed reporting of both sides of the issue. Following the report, both sides of the issue interpreted the news reports as having a bias against their stance, and portraying the other side of the issue in a more positive light. The researchers proposed a naïve realism account for their findings. Presumably, each side held such extreme views that even neutral information could not conform to their own world view and thus was interpreted as having an unfair bias. Indeed, other studies attest that extreme views are a necessary precondition for the hostile media

effect (Ariyanto, Hornsey, & Gallois, 2007; Choi, Yang, & Chang, 2009; Christen, Kannaovakun, & Gunther, 2002; Gunther, 1992).

When do individuals perceive neutral information as biased *against* their position instead of biased *for* their position? While the hostile media effect describes an instance where individuals engage in a *contrast* bias to the information, researchers have shown cases where both sides of a partisan issue (e.g., pro vs. anti-death penalty) view neutral information as supporting their own side: an *assimilation* bias (Lord, Ross, & Lepper, 1979). Researchers have found two key factors that lead to high partisans perceiving a hostile media bias: reach and source (Gunther, Miller, & Liebhart, 2009). “Reach” refers to the perceived target audience of a media message. In one study, hostile media perceptions only occurred when participants were lead to believe the information was from a national newspaper (maximum reach). When the same information was presented as a student essay (minimum reach), perceptions of a hostile media bias disappeared (Gunther & Schmitt, 2004; Gunther & Liebhart, 2006). “Source” refers to who is relaying the message. Researchers found that identical information about a hometown sports team was perceived as more negatively biased towards that team when participants believed it had run in the rival school’s paper or even a neutral town’s newspaper as compared to their hometown newspaper (Arpan & Raney, 2003). Taking these two factors into account, it is presumed that only information that high partisans perceive has the ability to influence others is seen as threatening to one’s own position and creates a hostile media effect. To accommodate these factors, the use of a national news broadcast without identifying logos as the stimulus for this project will allow for the perception of maximum reach of the information without any perception of a “friendly” source for one’s own side.

This perception of a biased media can have far-reaching consequences in a democratic society. The media form an intermediary between government and its citizens, providing important information needed for an educated electorate (Warren, 1999). When people begin to distrust the media, this can promote a generalized form of distrust (Manjoo, 2011). Researchers have found that when hostile media perceptions are high in a population, there is a negative correlation to their trust in democracy (Tsfati & Cohen, 2005). As the United States political spectrum is becoming increasingly partisan (Manjoo, 2011; Price, 2014), approaches to reduce the hostile media effect are not only of scientific interest but also of civic importance.

To this point, if naïve realism drives the hostile media effect (Pronin, et.al., 2002), then challenging naïve realism ought to reduce the hostile media effect. Interestingly, some research has shown that it might be possible to produce changes in thought confidence by challenging naïve realism. In one study, participants who read about the unconscious processes that influence judgment were more likely to acknowledge that these social-cognitive biases may be at work in their own judgments as well (Pronin & Kugler, 2007).

Recently, Hart, Tullet, Shreves and Fettesmann (2015) determined that choice confidence could be reduced if naïve realism was challenged, but only if participants experienced the unconscious processes at work in their perception. Participants read an article about unconscious processes and either experienced visual illusions demonstrating that information, or simply read the information with no experiential component. Participants then read several short vignettes describing an actor's ambiguous behaviors and attributed one of two possible traits to the actor (e.g., "assertive" or "hostile", Srull & Wyer, 1979). Participants who experienced visual illusions and the accompanying explanation of unconscious processes were significantly less confident in

their judgments, less confident that others would agree with their judgment, and more open to changing their mind in the future.

Interestingly, participants who simply read about unconscious processes, without an experiential component, scored equally high on knowledge of these unconscious processes as experiential participants, suggesting that the knowledge needs to be backed by direct experience to influence cognition (for other evidence, see Hart & Tullet, 2014). Apparently, having a personal, firsthand experience of an unconscious process altering perception, (i.e., “knowing” what the back of a penny looks like then being shown that the knowledge is inaccurate) makes it difficult to dismiss the possibility that naïve realism may affect other cognitive processes. In sum, there is some research suggesting that challenging naïve realism on experiential grounds can reduce judgmental confidence and promote openness to dissent.

Nevertheless, the mechanism by which the experiential challenge exerts influence remains unclear. Hart et al. (2015) suggested that following the intervention participants are more doubtful of their own perceptual abilities and are thus more open minded to alternate possibilities. Yet, another possibility is that participants’ doubt originates from a process of correction. Specifically, following the intervention participants may be equally confident about their perceptions but adjust their perceptions to be less certain after viewing the intervention (for review on correction processes see: Mueb & Till, 2015). This latter process is more cognitively demanding and suggests that effects of the intervention on cognition require an abundance of resources.

The goal of the present work is to test whether similar experiential challenges to naïve realism can influence perceptions of a hostile media, and explore the role of cognitive capacity in possibly moderating these effects. To address these ideas, participants were surveyed to

determine their level of partisanship on the issue of abortion and then assigned to either an experiential naïve-realism challenge condition or to one of three ‘control’ conditions (as was done in Hart et al., 2015): a non-experiential naïve-realism challenge condition, a “failure” condition, or a “baseline” condition. In the experiential naïve realism challenge condition participants read an article about naïve realism with accompanying illustrative visual illusions. Participants in the non-experiential naïve realism challenge condition read about naïve realism but without any accompanying visual illusions. Participants in the “failure” condition completed difficult GRE level anagrams and then received negative feedback about their performance, regardless of how they actually did. Participants in the baseline condition read an article about the social behavior of chimpanzees that matched the word count of the article used in the two naïve-realism challenge conditions.

Each of the control conditions allows for specific conclusions to be drawn about how and why the experiential condition might work. Comparing the experiential and non-experiential naïve-realism conditions determines how first-hand experiences rather than mere information about naïve realism influences the hostile media bias. Comparing the failure and experiential conditions determines the effect of how experientially learning about naïve realism against a mere ego-deflating experience influences the hostile media bias. Comparing the experiential and baseline conditions determines how experientially learning about naïve realism against a control condition influences the hostile media bias.

Next, participants viewed a ten-minute video clip previously used by Giner-Sorolla and Chaiken (1993) in their study of the hostile media effect, which covers both Pro-Life and Pro-Choice arguments over a United States Supreme Court decision on abortion rights. To better understand the mechanism, some participants viewed this information in a “cognitive load

condition” (Gilbert & Hixon, 1991), and other participants viewed the video free of additional cognitive load. Participants were then presented with questions assessing the perceived bias of the coverage, which I adapted from prior work (Giner-Sorolla & Chaiken, 1993; Vallone, et.al., 1985; see Appendix B).

The hostile media effect encompasses two separate but related perceptions. The first is that the information possesses a negative bias towards one’s own position (e.g., highlighting damaging, undesirable information while downplaying favorable, complimentary information). The second is that the information possesses a positive bias towards the opponent’s position (e.g., highlighting favorable, complimentary information while downplaying damaging, undesirable information). Consequently, opposing partisan groups also have opposing perceptions of positive and negative bias. For parsimony, I will discuss these biases as a single index in terms of relative favoritism towards the Pro-Choice position, or perceiving a greater positive bias towards the Pro-Choice position as well as perceiving a greater negative bias towards the Pro-Life position.

I predict across all three control conditions that Pro-Choice participants will perceive significantly less relative favoritism towards the Pro-Choice position compared to Neutral and Pro-Life participants and Neutral participants will perceive significantly less relative favoritism towards the Pro-Choice position compared to Pro-Life participants. However, in the experiential naïve-realism challenge condition there will be no significant difference in perceived relative favoritism towards the Pro-Choice position between Pro-Choice or Pro-Life participants and Neutral participants. In other words, I am predicting an interaction between naïve realism intervention and partisan group. Furthermore, if the process of correction is at play, then the anticipated interaction should only be present in the no-cognitive load (high resource) condition.

CHAPTER 2: PILOT TEST

An integral part of the hostile media paradigm is being able to accurately identify and compare high partisans on an issue. To ensure that the target item taken from Giner-Sorolla and Chaiken (1993) was an accurate indicator of partisan strength on the issue of abortion I compared answers on the target item to a longer set of more direct, probing questions on the issue of abortion. If the one item measure accurately reflected a wider range of beliefs on abortion, it would be more useful in the current methodology to reduce suspicion that the different parts of the study are related and to allow for a shorter overall experiment time, which is important as this data was collected online.

To demonstrate the accuracy of the target question in assessing participants' views on abortion, two-hundred and ten participants were recruited via MTurk. After completing an unrelated study participants were asked to complete an optional eight item survey. Participants were presented with an information sheet that provided additional instructions that this survey was completely voluntary, had no effect on the compensation promised for the earlier study, would serve as pilot data for a later research project, and were reminded that all of their data was completely anonymous. All two-hundred and ten participants voluntarily completed the pilot survey. Of that sample, twenty one participants were removed for failing manipulation or awareness checks that made their data unreliable during the earlier study, leaving a final sample of $N = 189$.

In addition to the target item from the Partisan Strength Questionnaire (see Appendix A) participants responded to seven questions taken from the Abortion Attitude Scale on a 1

(Strongly Disagree) to 7 (Strongly Agree) scale: “Abortion should be illegal in every case.”, “Abortion is a good way of solving unwanted pregnancies. (reverse coded)”, “Abortion is wrong no matter what the circumstances are.”, “Every conceived child has the right to be born.”, “Abortion should be considered the same as killing another person.”, “A fetus should be considered a person from the moment of conception.”, “Unwanted children should not be brought into the world (reverse coded)” (Berne, 1998). All eight items were submitted to a reliability analysis which showed a strong psychometric relationship between participants’ answers on the target question and the more direct questions concerning attitudes towards abortion ($\alpha = .89$). To ensure the target question’s validity in assessing participants’ partisan views on abortion, I created a new variable by averaging the seven items from the Abortion Attitude Scale into a single score. I then ran a two-tailed Pearson correlation using this new variable and the target item which revealed a large, positive correlation between scores on the target question and the more direct attitude questions $r = .88, n = 189, p < .001$.

As the target item was revealed to accurately capture a wide range of attitudes towards the abortion issue, I felt confident in using the single item to categorize participants as it would reduce suspicion and create a more streamlined methodology for participants to experience.

CHAPTER 3: METHOD

Design

This design was a 4 (Intervention: Experiential naïve-realism challenge vs. Non-experiential naïve-realism challenge vs. Failure experience vs. Baseline) x 3 (Partisan Position: Pro-Choice vs. Pro-Life vs. Neutral) x 2 (Cognitive Load: High vs. Low) factorial. The main dependent variable is perceived favoritism towards the Pro-Choice position as measured by the Hostile Media Questionnaire.

Participants

600 (378 male) participants were recruited via MTurk. Participants were restricted to only users from the United States that had positive reviews on the site. Power calculations showed a required sample size of 561 participants to achieve a power of .80, with an alpha of .05, to detect a small-sized effect ($f = .08$). Participants were compensated with sixty cents. Participants were intentionally over sampled as I anticipated exclusions. I had 33 exclusions, which I will discuss in greater detail below. This left a final sample of $N = 567$ participants. This exceeded the goal by six participants. The sample was 335 males and 232 females, and ranged from 18 to 36 years old ($M = 19.87$, $SD = 1.09$). The majority of participants identified as European-American (88%) with no more than three percent of any another ethnic group. The state participants reported spending the majority of their lives in was broken down by census regions resulting in a nationally representative sample: 31% Northeast, 29% Midwest, 26% South, and 14% West.

Procedure

Participants were recruited through Amazon's Mechanical Turk system through a posting containing the title "Media Perception and Critical Thinking" and a brief explanation that this was a social psychological research project. To limit demand or awareness, participants were told the session involved a series of unrelated tasks and studies packaged together. After reading an information sheet approved by the University of Alabama Institutional Review Board that detailed their rights as a participant, every participant completed an instructional manipulation check (Oppenheimer, Meyvis, & Davidenko, 2009). The purpose of this check was to ensure participants are paying close attention to the materials as they are proceeding through the study and to motivate them to carefully consider what is presented on screen. To accomplish this, participants were presented with the question "What activities do you do daily?" at the top of the computer screen with eleven possible answers reflecting a wide range of activities (e.g., surf the internet, workout, meditate). Importantly, a box titled "Instructions for answering this question." was centered next to the response options. This box began with filler text which described possible reasons this information may be useful then changed midway to thank the participant for reading the instructions carefully and instructed them to select only "Woodworking" from the response options. Participants were given five opportunities to pass this check (i.e., select only "woodworking"), with incorrect responses prompting a message encouraging them to pay closer attention to written instructions. Participants were given five opportunities to pass this check, with incorrect responses prompting a message encouraging them to pay closer attention to written instructions. Eighteen participants were removed as they failed the check all five times and were clearly not taking the study seriously and their data could not be relied upon.

Next, participants were given a short questionnaire assessing their position on abortion alongside distractor questions to determine how partisan they are on the target issue of abortion

(see Appendix A). To create the partisan position variable the target question was scored according to Giner-Sorolla and Chaiken (1993): participants answering 1 or 2 on the target question were coded as “Pro-Choice” ($n = 201$, 80 male), participants answering 3, 4, or 5 on the target question were coded as “Neutral” ($n = 147$, 112 male), and participants answering 6 or 7 on the target question were coded as “Pro-Life” ($n = 219$, 143 male).¹

Participants then began the “first” study when they were randomly assigned to one of the four intervention conditions (see Appendix C). Participants assigned to the experiential naïve-realism, non-experiential naïve-realism, and baseline conditions were told:

“The first study involves reading an article on Psychology and then getting your views on the article (e.g., did it seem insightful?) We actually have several articles that we would like to get people’s opinion on. But, because we realize that your time and energy is limited, the computer will randomly assign you only one of these articles.”

Participants assigned to the failure condition were instead told:

“The first study involves completing a type of intelligence test. We would like to get your opinion of the task so we know whether to use the task in subsequent studies.”

In both of the naïve-realism conditions, participants read an article describing how the brain can often skew cognitions without any conscious feelings which can sometimes produce errors in perception. Within this article, participants in the experiential naïve-realism challenge condition were also shown eight visual illusions matching the text in the article, which illustrates how the brain alters reality and often creates inaccurate interpretations without one’s awareness. Participants in the baseline condition read a psychology article detailing the social behavior of chimpanzees that matched the naïve realism article in length. Instead of reading an article, in the failure condition participants completed ten difficult analogies from the Graduate Record Examination (GRE). After completing the analogies, they were given false feedback indicating

they are in the 21st percentile, and it was additionally explained that this score means 79% of participants in this study have done better than the participant had on that particular task. To stay true to the cover story and mark an end to the “first study,” participants in every condition were asked to indicate on a 1 (*not at all*) to 10 (*extremely*) scale their thoughts about the task they had just completed (i.e., Did you feel the article/the intelligence test was: *worthwhile*, *interesting*, *important*, and *fun*.)

After answering distractor questions about the intervention participants then responded to the Conscious Knowledge of Naïve Realism questions (see Appendix D), which served as a manipulation check to test attention in both naïve realism challenge conditions and to determine the value of how first-hand experiences rather than mere information about naïve realism influences the hostile media effect. The participant was then introduced to the “second” study. As part of this “second” study, participants viewed a ten minute video clip previously used by Giner-Sorolla and Chaiken (1993), on the United States Supreme Court ruling on *Webster v. Reproductive Health Services* that was established to have unbiased coverage of both sides of the abortion debate. This court case upheld the individual state’s rights to limit the use of state funds, personnel, and property in performing or providing information about abortions. While an older case, it serves as a great neutral stimulus on the heated topic of women’s reproductive rights as it primarily deals with a nuanced legal opinion in relation to state’s rights within a federalist system of government, and not directly with the more fundamental questions about abortion rights in such cases as *Roe v. Wade*. Thus, the information contained in the video should be novel as well as neutral to most individuals. Specifically, the video discusses the background of the case, the chief justices’ differing decisions, and the reactions from activists on both sides to the decision. Participants were then presented with questions assessing the bias of the coverage (see

Appendix B). These questions were borrowed from Giner-Sorolla and Chaiken (1993), as well as questions modified from Vallone, et.al. (1985).

Prior to the video, participants in the high cognitive load condition ($n = 300$) were asked to keep an eight-digit number string in their mind while watching the video: an effective method shown to deplete cognitive resources during tasks (Gilbert & Hixon, 1991). Specifically, participants were presented with a random number string and asked to keep that number in mind as they watched the video as they will be asked to recall it at the conclusion of the video. Participants were told the reason they were asked to do this was to mimic real world conditions where people will be on multiple devices at once, such as checking Email on their smartphone while watching the news, and not paying full attention to the TV. Participants were told to take as much time learning the number string as they wanted, and to begin the video when they were ready. After finishing the video and before filling out the Hostile Media Questionnaire these participants were prompted to recall the number string given to them before the video. Fifteen participants were removed for failing to recall the correct number string at the end of the video as it could not be confirmed they were under a cognitive load during the video, nor could it be confirmed they were *not* under a cognitive load during all or part of the video meaning they could be reliably recoded as a no cognitive load participant. Five of the participants who were removed for failing the Instructional Manipulation Check were also in the high cognitive load condition resulting in ($n = 277, 170$ male).

Finally, participants answered a short demographics questionnaire and were probed for suspicion of the study's true purpose (See Appendix D). No participant indicated accurate suspicion. Participants were then given a debrief form that informed them of the true purpose of the study as well as explaining the false feedback in the failure intervention condition. Due to the

use of deception, participants were then provided an opportunity to ask to have their data deleted if they had a problem with the methods used in the study without it affecting their compensation. No participants indicated a desire to have their data removed.

Measures

Hostile Media Questionnaire. The Hostile Media Questionnaire is made up of six questions taken directly from Giner-Sorolla and Chaiken (1993), as well as questions modified from Vallone, et.al. (1985). Participants responded to all questions on appropriately labeled 1 (Highly Disagree [Pro-Life side]) to 7 (Highly Agree [Pro-Choice side]) scales: “Overall, I believe the video I just saw supported:”, “I believe that the producers of this video in their personal lives support:”, “I think the video showed more positive attention to the Pro Life side.”, “I think the video showed more positive attention to the Pro Choice side. ”, “I think the video showed more support to people who are Pro Life ”, and “I think the video showed more support to people who are Pro Choice.” Questions three and five were reverse coded and responses to the six questions were averaged into a single index of relative favoritism toward the Pro-Choice position ($\alpha = 0.80$). Thus, lower scores on the index indicate that people view the media as relatively less favorable toward the Pro-Choice side of the debate.

Four additional questions were included in the experimental design which utilized a slider for participants to indicate what percentage from 0 to 100% of the information presented in the video favored each side and what percentage of neutral viewers would be swayed to each side after watching the video. Due to a technical error these questions did not display and record properly for anyone taking the survey on a screen taller than it was wide (e.g., smartphones or tablet computers). This would have removed eighty-three participants from the sample. Due to

the required sample recommended by the power analysis it was decided to only use the data for the first six items that all participants had been able to respond to.

Conscious Knowledge of Naïve Realism. The conscious knowledge of naïve realism score is made up of four questions taken directly from Hart et.al. (2015). Participants answered “True” or “False” to the following four questions: “Our brains shape our views and perceptions and this process can be hidden from our conscious awareness.”, “There is very little evidence that the brain's hidden processes can shape our views and perceptions.”, “People will very often be aware of times when they have a biased perception.”, and “Because of the way the brain works, people may often feel close minded to other points of view.” Correct responses were then coded as a “1” (1. True, 2. False, 3. False, 4. True) and incorrect responses were coded as a “0”. The four numbers were added together to form a conscious knowledge of naïve realism score. Thus, scores closer to four indicate greater conscious knowledge of naïve realism.

CHAPTER 4: RESULTS

Stimulus Neutrality Check

To confirm that the stimulus video was indeed neutral I computed the overall mean across all conditions on the hostile media index ($N = 567$, $M = 4.78$, $SD = .70$). As this index was on a nine point scale, an overall mean close to 5 indicates that, regardless of partisan position, there was low variability in responses as most participants perceived the neutral information as indeed being neutral. The overall neutral mean further supports the use of a small predicted effect size in the power analysis and thus the large sample collected.

Cognitive Load

The cognitive load factor had no main effect or interaction effects with the other two factors, nor did it affect the pattern of means ($ps > .60$, $F_s < .55$). For parsimony and statistical power, load was dropped from the ANOVA and the analysis was re-run again using a two factor design containing 4 (Intervention: Experiential naïve-realism challenge vs. Non-experiential naïve-realism challenge vs. Failure experience vs. Baseline) x 3 (Partisan Position: Pro-Choice vs. Pro-Life vs. Neutral) cells.

The lack of interaction effects between intervention and cognitive load indicates that any significant interaction found in the two factor design is not necessarily dependent upon mental processes during reception of the video.

Hostile Media Questionnaire

A 4 (Intervention: Experiential naïve-realism challenge vs. Non-experiential naïve-realism challenge vs. Failure experience vs. Baseline) x 3 (Partisan Position: Pro-Choice vs. Pro-

Life vs. Neutral) between subjects ANOVA was run with index of relative favoritism towards the Pro-Choice position as the dependent variable. There was a significant main effect for partisan position $F(2, 555) = 35.67, p < .001, \eta^2 = .20$. Post-hoc testing with a Bonferroni correction revealed that Pro-Choice participants ($M = 4.41, SD = .58$) perceived significantly less relative favoritism towards the Pro-Choice position than Neutral participants ($M = 4.78, SD = .53$) and both Pro-Choice and Neutral participants perceived significantly less relative favoritism towards the Pro-Choice argument than Pro-Life participants ($M = 5.12, SD = .74$) (all $ps < .001$). These results replicate the findings of Giner-Sorolla & Chaiken (1993) showing that both Pro-Choice and Pro-Life partisans perceive identical information as being more antagonistic towards themselves.

However, this main effect was qualified by a significant interaction between intervention and partisan position $F(6, 555) = 2.40, p < .03, \eta^2 = .03$. To probe this interaction simple-effect analyses were performed for partisan position at each level of intervention. As can be seen in Table 1, this interaction effect is driven by changes in the size of the effect of partisan group in experiential naïve-realism challenge condition. In the non-experiential naïve-realism challenge $F(2, 555) = 25.42, p < .001, \eta^2 = .08$, failure experience $F(2, 555) = 22.11, p < .001, \eta^2 = .07$, and baseline $F(2, 555) = 21.95, p < .001, \eta^2 = .07$ control conditions, partisans perceive significantly different levels of bias in the anticipated pattern: Pro-Choice participants perceived significantly less relative favoritism towards the Pro-Choice position than Neutral or Pro-Life participants, and Neutral participants perceived significantly less relative favoritism towards the Pro-Choice position than Pro-Life participants. But, in the experiential condition, this effect of partisan position was weakened. In fact, neither partisan group indicated greater levels of relative favoritism than neutral (dispassionate) evaluators ($ps > .45$).

Table 1

Means, (Standard Deviations) and Group Comparisons on Hostile Media Index by Partisan Position

Intervention	1. Pro-Choice	2. Neutral	3. Pro-Life	Group Differences
Experiential challenge	4.61(.50)*	4.75(.63)	4.94(.65)*	1 < 3
Non-experiential challenge	4.33(.66)**	4.77(.50)**	5.20(.77)**	1 < 2 < 3
Failure (GRE)	4.37(.55)**	4.80(.76)**	5.51(.76)**	1 < 2 < 3
Baseline	4.29(.52)***	4.81(.47)**	5.11(.76)*	1 < 2 < 3

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

To confirm that the effect of partisan position differed in the experiential naïve-realism challenge condition from the other three conditions, I used interaction contrasts. As anticipated, the effect of partisan position in the experiential naïve-realism challenge condition differed from the effect in the non-experiential naïve-realism challenge conditions $F(2, 555) = 4.96, p = .008$, the failure condition $F(2, 555) = 4.37, p < .02$, and the baseline condition $F(2, 555) = 4.70, p < .01$. There were no significant differences in the effect of partisan position between any pairs of the three control condition ($F_s < .22, p_s > .80$).

This pattern of data supports our hypothesis. Participants in the three control conditions displayed greater hostile media effects than participants in the experiential naïve realism challenge condition. In fact, in the experiential naïve realism challenge condition, high partisans perceived the same relative favoritism as neutral, non-partisan participants.²

Conscious Knowledge of Naïve Realism

As participants in the experiential naïve-realism challenge and non-experiential naïve-realism challenge conditions were provided with the same information explaining the role of unconscious processing while participants in the other two conditions were not, it is expected that questions concerning the explicit, conscious knowledge of this process should be higher in

both naïve realism challenge conditions (vs. the other two conditions combined). To check on this assumption, I ran a one-way ANOVA with Intervention (Experiential naïve-realism challenge vs. Non-experiential naïve-realism challenge vs. Failure experience vs. Baseline) as the independent variable and scores on the conscious knowledge of naïve realism as the dependent variable. I found a significant effect, $F(3, 563) = 25.39, p < .001, \eta_p^2 = .12$. Planned contrasts revealed that participants in the experiential ($M = 3.77, SD = .54$) and non-experiential ($M = 3.70, SD = .66$) conditions did not differ, $t(563) = .17, p = .76$, and participants in the failure ($M = 3.03, SD = .77$), and baseline ($M = 3.00, SD = .81$) conditions did not differ, $t(563) = .09, p = .88$. As predicted, participants in the two naïve realism challenge conditions combined did better on the knowledge test than participants in the other two conditions combined, $t(563) = 5.63, p < .001$. These results replicate the findings of Hart et. al. (2015) and suggest that knowledge alone is insufficient to influence or change perceptions.

CHAPTER 5: GENERAL DISCUSSION

Psychologists have long presumed that the hostile media effect, or the tendency for high partisans to perceive objectively neutral information as antagonistic towards their position, was a consequence of an individual's inherent naïve realism: the faulty belief that they see things "as they really are" (Vallone, Ross, and Leper, 1985, Ross & Ward, 1996). Here I performed the first empirical test of this relationship by utilizing a novel, previously validated intervention that reduced choice confidence derived from naïve realism presumably by fueling participants' doubt in their own decision making and leading them to be more open minded (Hart, et.al., 2015).

I found that when high partisans on both sides of the abortion issue were informed about the unconscious processes underlying their thoughts and behaviors while simultaneously having undetectable brain mechanisms demonstrated to them using visual illusions prior to viewing a video on the abortion debate they became more even-handed in their appraisal of the information and were no different than neutral, non-partisan participants in their perception of media bias. This reduction in perceived bias was found to be a significant departure from high partisans that instead simply read about unconscious processes with no experiential component, went through an ego-deflating experience, or read a baseline control, all of whose perception of media bias followed traditional patterns found in hostile media effect research: high partisans on both sides viewed the information as having significantly more negative bias towards their position and significantly more positive bias towards the opponent's position. In addition, while participants in both the experiential and non-experiential naïve-realism challenge conditions both reported more conscious knowledge about naïve realism than participants in the other two control

conditions, it was only in the experiential challenge condition that high partisans did not engage in the hostile media effect and displayed a more even-handed approach towards new information. Additionally, I found that this pattern of results was unaffected by whether or not participants were placed under a cognitive load while viewing the media coverage.

While I hypothesized that this intervention would make individuals more aware of their own biases and thus perceive neutral information in a more even handed manner this is based on the assumption that this intervention creates a mostly self-referential effect. An alternative hypothesis could contend that making individuals aware of the prevalence of biases in perception should make them more aware of *others*' biases as well and would promote them to engage in the hostile media effect to an even greater extent. The current data firmly supports my initial hypothesis and contradicts the latter in two key ways. First, in the experiential naïve-realism challenge condition the high partisans on both sides of the issue shifted closer to the neutral participants and not further away as you would predict if they were primed to perceive greater amounts of bias in others. Secondly, the neutral participants in the target condition performed the same as the neutral participants in the three other control conditions. If the intervention created a greater awareness of biases in others, one would predict that neutral participants should shift as they saw more bias in the stimulus video, or at least become more variable in their responses (e.g., with no stated position they may perceive biases for either other position).

These results provide the first empirical data to support that the hostile media effect is a result of naïve realism, filling a knowledge gap in the literature for one of the fundamental aspects of social cognition. Furthermore, they also provide a conceptual replication of Hart et.al.'s (2015) findings that first hand experiences of how perceptions are affected by unconscious processes appears to be a key component in attenuating consequences of naïve

realism. Additionally, these results extend the knowledge of this novel intervention for reducing naïve realism effects by finding that placing participants under a heavy cognitive load while they evaluated the media message did not result in a return to naïve realistic thinking. Hence, it seems plausible that the intervention causes people to feel vulnerable and does not seem to require thoughtful correction to feel vulnerable. It should be noted that while I have used this manipulation of cognitive load successfully in the past (see: Shreves, et. al., 2014), it was under supervision in a laboratory setting with a population of college undergraduates. It is possible that the MTurk sample used here, where participants are rewarded for participation and are under no supervision, that there is more pressure to be “correct” and opens the possibility that participants wrote down the number string for later reference instead of keeping it in their head. As this alternative explanation cannot be empirically discounted, the interaction of cognitive load with this intervention should be investigated with a more demanding and verifiable measure of cognitive load (i.e., having participants in the high cognitive load condition accurately indicate which number randomly appears on the screen every few seconds while watching the stimulus video (Gilbert, Tafarodi, & Malone, 1993)).

Given the presumed breadth of naïve realism in shaping mental life, these results are of considerable academic significance. Future researchers should be encouraged to not only investigate this intervention’s effect on other pervasive social cognitive phenomenon such as the fundamental attribution error or the false consensus effect which are also believed to be consequences of naïve realism (Gilovich, 1990; Ross, 1977) but to aim higher and larger as well. Considering the majority of social perceptions, up to and including stereotyping, are largely the result of implicit cognitions individuals are unaware of (Greenwald & Banaji, 1995) future studies could include this intervention factor into previously established methodologies to

examine if awareness of unconscious biases spreads to create significant differences in such socially pertinent areas as racial bias in police officer's use of violent force. For instance, Correll et.al.'s (2007) shoot/don't shoot task methods could be replicated with a portion of officers initially taking the experiential naïve-realism challenge and then seeing if they are subsequently less "trigger-happy [*sic*]" when confronting black (vs. white) targets when compared to control officers who have been shown to demonstrate this potentially lethal racial bias.

The current study is not without limitations. Future work should investigate the durability of this intervention in reducing naïve realistic thinking long term. As beliefs brought about through personal experience have been shown to be more accessible as well as more likely to be maintained over time (Fazio & Williams, 1986), it is possible, if not likely, that following this intervention there is an enduring effect on naïve realistic thinking. Currently, challenging naïve realism has resulted in only positive outcomes, such as participants being more open minded to dissent and more even handed in perceiving bias in new information. If the effects of reducing naïve realistic thinking can be found to be maintained over time it would seemingly indicate only positive implications such as promoting people to be more tolerant and open minded in their daily lives.

Future research would be well served to study if the more even handed approach to new information found here after challenging naïve realism may also result in a moderation of the underlying attitudes as well. A major limitation to the current study is that participants' attitudes towards abortion were only collected once prior to the intervention, with no second time point to compare attitudes after naïve realistic thinking was reduced. While the present study presents an exciting first glimpse in reducing partisanship by allowing for more unbiased appraisal of new information, future studies should collect attitude measures both before and after the variable of

interest to determine if challenging naïve realism may actually affect attitudes as well as this would provide evidence for long-term change in opinions and behavior as a result of challenging naïve realism.

The practical implications of this research have the potential to be far reaching. Partisanship is at an all-time high nationally resulting in a multitude of negative outcomes for the country (Manjoo, 2011; Price, 2014). It is clear that tools for reducing bias are in critical need as entrenched partisanship becomes more the norm at the national level. These results indicate that people are unknowingly trapped into naïve realistic thinking as exemplified by the hostile media effect, and do not realize their own biases are at play in the daily perception of information and thus their daily decision making as well. Yet, this study shows that even high partisans, when confronted by first-hand experience with unconscious processes, are willing to approach new information about an issue they are passionate about in an even handed way. If the two sides on an issue cannot even perceive the same piece of information objectively, instead engaging in the hostile media effect and treating neutral information as being unfairly biased, it will be unlikely, if not impossible, to ever discuss that issue rationally and make progress towards a solution.

The eventual, lofty goal would be to see this intervention promote open-minded processing at the national level of politics where issues are often discussed in terms of extreme competing positions such as “blue states vs. red states”, where deeply ingrained cultural differences between conservatives and liberals polarize many issues which in turn promotes greater extremism and a refusal to compromise (Fiorina, Abrams, & Pope, 2005). Yet, most individuals are not polarized to the “left” and “right” as the national political atmosphere would make it appear. High and low partisans alike tend to overestimate the degree of polarization not only between individual Republican and Democratic presidential candidates, but also the degree

of difference between the general platforms of the two parties as well (Westfall, Boven, Chambers, & Juss, 2015). It is unsurprising that the average American perceives a highly polarized political landscape as high partisans actively exaggerate the differences between themselves and their opponents, especially on issues that are close to the individual's core values. For example, participants who identified as Pro-Choice or Pro-Life were asked to indicate their opinions on central issues surrounding the abortion debate (e.g., the importance of women's reproductive rights, the value of a human life) and to also indicate what they believed the average person on the other side of the issue would answer. Both sides significantly overestimated how different the other side's opinions were from their own, with Pro-Life participants exaggerating to even greater degree presumably because "family values" are a core tenant of conservatives (Chambers, Baron, & Inman, 2006). Future research should see if this intervention makes individuals more even handed in appraising other information sources such as those with a known bias (e.g., a un-reputable news source) or information coming from another person and not the media (e.g., a high partisan from the opposing position). While the current results only show a less biased reaction to a neutral informational source, the proclivity of unrecognized biases in perception would indicate that if participants have their naïve realism challenged, and that awareness is self-referential as the current data shows, one would predict more openness to information from even biased sources.

It is no exaggeration that an increase in partisanship and divisiveness is not good for the political climate. The first step in getting policy makers to come together and compromise is to acknowledge their own biases in how they perceive and evaluate information on issues they care about as opposed to the current norm of always perceiving the other side as the hopelessly biased one with no chance of ever seeing "the way things truly are". To paraphrase the biblical adage:

maybe politicians will be better at removing the speck from the eye of the person across the aisle if they have been able to remove the plank from their own first.

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APPENDIX A

Partisan Strength Questionnaire

(Note: Questions were presented in a block-randomized order, where each pair of questions were presented in the same order. Only item 1 is the target questions).

Instructions: Please answer each of the following questions based on the scale provided:

1. When it comes to the issue of abortion I consider myself:
1- Pro Choice 4 - Neutral 7 - Pro Life
2. In your opinion, which side of the abortion debate does the U.S. media support?
1- Strongly Pro-Choice 4-Neutral 7- Strongly Pro-Life
3. When it comes to the issue of gun control I consider myself:
1- Pro-Gun Control 4 - Neutral 7 – Anti-Gun Regulation
4. In your opinion, which side of the gun control debate does the U.S. media support?
1- Strongly Pro-Gun Control 4 - Neutral 7 – Strongly Anti-Gun Control
5. When it comes to the issue of nationalized health care I consider myself:
1- Pro-Nationalized Healthcare 4 - Neutral 7 – Anti-Nationalized Healthcare
6. In your opinion, which side of the health care debate does the U.S. media support?
1- Strongly Pro-Nationalized Healthcare 4 - Neutral 7 - Strongly Anti-Nationalized Healthcare
7. When it comes to the issue of gay marriage I consider myself:
1- Pro Gay Marriage 4 - Neutral 7 – Anti Gay Marriage
8. In your opinion, which side of the gay marriage debate does the U.S. media support?
1- Strongly Pro Gay Marriage 4 - Neutral 7 – Strongly Anti Gay Marriage

APPENDIX B

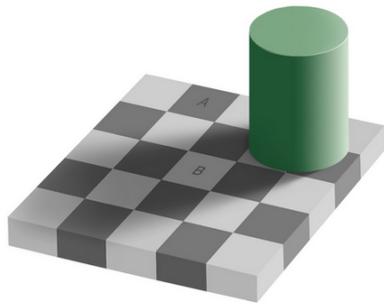
Hostile Media Questionnaire

1. Overall, I believe the video I just saw supported:
1- The Pro-Life side 5 – Neither 9- The Pro-Choice side
2. I believe that the producers of this video in their personal lives support:
1- The Pro-Life side 5 – Neither 9- The Pro-Choice side
3. I think the video showed more positive attention to the Pro Life side
1- Highly Agree 5- Neutral 9- Highly Disagree
4. I think the video showed more positive attention to the Pro Choice side
1- Highly Agree 5- Neutral 9- Highly Disagree
5. I think the video showed more support to people who are Pro Life
1- Highly Agree 5- Neutral 9- Highly Disagree
6. I think the video showed more support to people who are Pro Choice
1- Highly Agree 5- Neutral 9- Highly Disagree

APPENDIX C

Excerpts from Intervention Manipulations

<i>Experiential Naïve Realism Condition</i>	<i>Non-Experiential Naïve Realism Condition</i>	<i>Failure</i>
<p>The first study involves reading an article on Psychology and then getting your views on the article... <i>[Example illusion]</i> Please look at the following image. Which of the two squares, “A” or “B” appears to be darker?</p>	<p>The first study involves reading an article on Psychology and then getting your views on the article... Visual illusions provide a glimpse of how our brain twists reality without our intent or awareness. Under specific circumstances we can misperceive the size of objects, the darkness and lightness of objects, the motion of objects (e.g., seeing a motionless object as moving), and even fail to see certain objects in a scene...</p>	<p>The first study involves completing a type of intelligence test... You are now ready to begin the first task. The task consists of 8 analogies... <i>[Example question]</i> ESSAY :: THESIS a) story : protagonist b) novel : book c) writer : fiction d) article : topic e) law : stricture...</p>



Although you likely decided that square “A” is darker than square “B,” the two squares are actually the exact same shade.

[Table continued on next page]

Visual illusions are often shocking because they show us that we do not simply see “things as they are.”...

Visual illusions are often shocking because they show us that we do not simply see “things as they are.”...

Your score places you in the 21st percentile of all subjects who have performed this task. This means that you did better than 21% of respondents.

In conclusion, it is important to know that we cannot stop our brain from engaging in its secret work ...

In conclusion, it is important to know that we cannot stop our brain from engaging in its secret work ...

But there IS good news.

But there IS good news.

Although we cannot stop our brain from acting like a brain, we CAN do something else. we can come to doubt the false sense of “seeing things as they are.”

Although we cannot stop our brain from acting like a brain, we CAN do something else. we can come to doubt the false sense of “seeing things as they are.”

Baseline

The first study involves reading an article on Psychology and then getting your views on the article...

About ten years ago, Stephen Ross began getting more and more calls from chimpanzee owners who wanted to get rid of their pets. Ross is the director of the Fisher Center for the Study and Conservation of Apes at Lincoln Park Zoo and he administers the Chimpanzee Species Survival Plan (CSSP). The increasing number of calls made him realize that there are a lot of privately owned chimpanzees in the United States....

And it's not just about changing who should own a chimpanzee. "It also has a lot to do with helping zoos and sanctuaries who have taken in ex-pets and ex-performers understand the special needs of these chimpanzees," says Ross. "The more information I give them about what challenges these chimpanzees face, the better they'll be able to set up specific management protocols that can make the transition a bit easier."

APPENDIX D

Demographics

1. What is your age?
2. What is your ethnicity?
3. What is your gender?
4. What is your political ideology?
5. What state have you lived most of your life in?
6. What is the highest level of education you have attained?

Suspicion Probe

1. We're interested in understanding your perception of this study. To begin, what do you think this experiment was testing?
2. Do you think any of the tasks you completed were related?
3. Do you think any earlier task affected your behavior on a later task?
4. Did you notice anything about the experiment that seemed strange?

Conscious Knowledge of Naïve Realism

1. Our brains shape our views and perceptions and this process can be hidden from our conscious awareness.
2. There is very little evidence that the brain's hidden processes can shape our views and perceptions.
3. People will very often be aware of times when they have a biased perception.
4. Because of the way the brain works, people may often feel close minded to other points of view.

APPENDIX E

Due to formatting constraints, the IRB approval begins on the next page.

July 1, 2015

Office for Research

Office of the Director of
Research Compliance

Wyley Shreves
Dept of Psychology
College of Arts & Sciences
Box 870348



Re: IRB # 15-OR-212, "Media Perception and Critical Thinking"

Dear Mr. Shreves:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given expedited approval according to 45 CFR part 46. You have also been granted the requested waiver of informed consent. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your application will expire on June 29, 2016. If your research will continue beyond this date, please complete the relevant portions of the IRB Renewal Application. If you wish to modify the application, please complete the Modification of an Approved Protocol form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the Request for Study Closure form.

Should you need to submit any further correspondence regarding this proposal, please include the above application number.

Good luck with your research.

Sincerely,

A large black rectangular redaction box covering the signature of the sender.

Carpantato T. Myles, MSM, CIM, CIP
Director & Research Compliance Officer
Office for Research Compliance
The University of Alabama



FOOTNOTES

¹ Gender was ran as an additional factor on all analyses reported in the Results section and it did not affect the pattern means of any of the analyses from what is reported. The gender imbalance between partisan conditions made drawing any meaningful conclusions from this result unreliable and thus they are not reported.

² I computed the full ten item version of the Hostile Media Questionnaire, reverse scoring items 8 and 10, for the partial sample able to complete the entire measure ($N = 484$) into the originally proposed relative favoritism towards Pro-Choice position index ($\alpha = .76$). I then ran identical analyses to the ones reported in Experiment 1 to determine if the removal of items affected the results. I found the same pattern of means and significance levels as presented in Experiment 1. To keep as much of the data collected as possible I chose to present the full data set as the main analyses.