

Running head: WHITE FRAGILITY AND MINDSET THEORIES OF RACIAL BIAS

“I’m Not Racist!”: White Fragility and Mindset Theories of Racial Bias

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Certificate of Approval

This is to certify that the accompanying thesis by Zach Rahmes and Danica Wilbanks has been accepted in partial fulfillment of the requirements for graduation with Honors in Psychology.

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Abstract

White fragility describes a white person's hypersensitivity to racial stress due to insulation from racial diversity. White fragility elicits displays of defensiveness, avoidance, or guilt in response to racial stress. Dweck (2011)'s mindset theory suggests that individuals' approaches to racial stress vary based on whether they view racial bias as fixed or malleable. We tested the hypothesis that individuals who underwent a malleable mindset intervention of racial bias would display less guilt, defensiveness, and avoidance when confronted with racial stress compared to individuals who underwent a fixed mindset intervention of racial bias. White participants (N = 47) read an ostensibly real article describing either the malleable or fixed nature of racial bias. Participants then self-reported their mindset of racial bias. They then completed three dependent measures. First, they were given hypothetical scenarios designed to elicit racial stress, and their verbal responses were recorded. Second, they read an article designed to trigger white fragility and reported their emotional responses. Third, they were asked to indicate how interested they would be in reading news stories that engage with racial stress, validate fragility reactions, or avoid race entirely. Results show there was no effect of intervention on displays of white fragility, but there were significant relationships between reported mindsets of racial bias and several white fragility variables. Individuals with more malleable mindsets of racial bias displayed less avoidance and defensiveness and more openness than individuals with more fixed mindsets. The findings indicate a relationship between mindset of racial bias and white fragility behaviors.

“I’m Not Racist!”: White Fragility and Mindset Theories of Racial Bias

In the summer of 2017, white supremacists marched the streets of Charlottesville, Virginia during a neo-nazi rally that resulted in several assaults and one murder (Hauslohner, Duggan, Gillum, & Davis, 2017). This event, and others like it --including an incident at American University in which nooses and confederate flags with cotton attached were hung around campus-- reminds us that racism remains a critical issue in the United States (Anderson, 2017). Despite the importance of confronting systemic and cultural racism through discourse and activism, conversations about race are often met with hostility or deflection (Apfelbaum et al., 2008; Bonilla-Silva & Dietrich, 2011; Knowles & Lowery, 2012; Lowery, Knowles & Unzueta, 2007; Mendes, Blascovich, Lickel, & Hunter, 2002). The theory of white fragility explains why white people often react to racial stress with defensiveness, guilt, or avoidance (DiAngelo, 2011). White fragility describes a white person’s strong affective reactions and defensive behaviors resulting from an inability to cope with racial stress. White fragility leads white people to experience negative emotions like anger and guilt, and to engage in defensive behaviors like argumentation or avoidance, when confronted with racial stress (Trawalter, Richeson, & Shelton, 2009). The theory of white fragility (DiAngelo, 2011) is not a psychological theory, but there is substantial evidence in the psychological literature that lends credibility to the construct.

Mindset theory is particularly applicable to the phenomenon of white fragility. Dweck (2002)’s mindset theory suggests that people’s mindsets about a trait being fixed or malleable will influence their likelihood to attempt difficult tasks in which that trait is utilized (e.g., Dweck, 2002). For example, people who believe they can improve their

mathematical abilities are more likely to attempt difficult math problems than people who believe their abilities are fixed. Applying mindset theory to racial stress, individuals' approaches to racial stress have been shown to vary based on whether they view the trait of racial bias as fixed or malleable (Carr, Dweck, & Pauker, 2012; Neel & Shapiro, 2012; Rattan & Dweck, 2010). People with fixed mindsets of racial bias essentially believe that someone is either racist or not racist. People with malleable mindsets of racial bias believe that racism is something that one can actively work to reduce. While other studies have investigated the relationship between mindset and racial stress, ours is the first to examine mindset's effect on white fragility as a comprehensive theory that includes reactions of defensiveness, avoidance, and guilt. In the present study, we investigate the effect of a mindset intervention on racial bias mindset, and the effect of mindset on affective and behavioral white fragility responses to racial stress.

White Fragility

White fragility is a state in which even a small amount of racial stress becomes intolerable for whites, at which point said racial stress elicits a variety of defensive moves (DiAngelo, 2011; Flynn, 2015). White people tend to experience racial stress as a result of insulation from racial diversity and therefore from race-based stress (Apfelbaum et al, 2008; Fine, Weis, Powell, & Wong, 1997). Because white people often grow up in environments in which the majority of their interactions are with other white people (Gallagher, 2003; Emerson, Chai, & Yancey, 2001; Massey & Tannen, 2015), they tend to be shielded from experiencing situations of racial stress. This hypersensitivity to racial stress appears to be much more common among white people than it is among members of other races (Trawalter & Richeson, 2008). DiAngelo (2011) defines racial stress as the

interruption of the racially familiar, and these interruptions can manifest themselves in several ways. If it is suggested that white people's viewpoints comes from a racialized perspective, the theory of white fragility says that this is a challenge to their objectivity (DiAngelo, 2011). If it is suggested that opportunities are not equal between racial groups, then the theory identifies this as a challenge to whites' social identity: being members of a just society where they have earned everything they have received (DiAngelo, 2011; Hall, 2015). Furthermore, if it is suggested that a white person's behavior has had a racist impact, the theory says this is a challenge to that person's self-concept of being non-racist (DiAngelo, 2011).

Whites confronted with racial stress can produce strong outward displays of emotions such as avoidance, defensiveness, and guilt (Trawalter et al., 2009). Mere interactions with members of other races can elicit racial stress in white people (Mendes et al., 2002; Norton, Sommers, Apfelbaum, Pura, & Ariely, 2006; Richeson & Trawalter, 2005; Trawalter & Richeson, 2008; Trawalter et al., 2009). Several researchers have found that white people display more behavioral cues of discomfort like fidgeting, excessive blinking, increasing interpersonal distance, and avoiding eye contact when interacting with someone of a different race than when interacting with someone of the same race (Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997; Fazio, Jackson, Dunton, & Williams, 1995; McConnell & Leibold, 2001; Word, Zanna, & Cooper., 1974). It is not uncommon for whites to claim that they feel threatened when simply talking about race (DiAngelo, 2011). A person with a "colorblind" ideology who denies any claims of racial inequality (e.g., Apfelbaum et al., 2008) or a white person in fear of losing their privilege may respond to a threatening situation with defensiveness or

avoidance (Trawalter et al., 2009). Racial stress may evoke fear in people who acknowledge the existence of privilege but feel discomfort with engaging with it. They may fear saying the wrong thing or being labelled as racist (e.g., Norton et al., 2006; Vorauer, Hunter, Main, & Roy, 2000). White people experience guilt in response to racial stress when they feel shameful for their privilege or for prejudiced behavior (Neel & Shapiro, 2012).

In a white-majority environment, there are limited opportunities for white people to develop the cognitive and affective skills, or “racial stamina,” required for constructive engagement (Diangelo, 2011). Constructive engagement is the act of addressing and processing situations of racial stress without being overwhelmed by strong negative affect or engaging in defensive moves (Diangelo, 2011). A lack of racial stamina makes constructive engagement difficult to achieve, and instead encourages less productive behaviors. Common behaviors that result from white fragility include argumentation, silence, and leaving or avoiding the stress-inducing situation (Trawalter et al., 2009). These responses may be conscious, but they may also be unconscious automatic responses to racial situations (Flynn, 2015; Mendes et al., 2002). Some have argued that displays of white fragility are conscious, performative re-assertions of power (Applebaum, 2017). Regardless of its degree of intentionality, white fragility appears to be a ubiquitous hindrance to productive discourse on racial issues (Jones & Norwood, 2016; Patton & Jordan, 2017). Outward displays can vary from outright denial of privilege to the claim that the white person in question is above the need for engaging with discussions of privilege because they “already learned this” (Corrigan, 2016; DiAngelo, 2011). Whites are not socialized to be able to endure discomfort or doubt

when it threatens their self-concepts of being non-racist, and this makes them resistant to racial dialogue and education – the sort of constructive engagement needed to create allies and fight systemic racial inequality and cultural racism (Yeung, Spanierman, & Landrum-Brown, 2013).

According to the theory of white fragility, the suggestion that opportunities are not equal between racial groups challenges whites' social identities of being members of a just society where they have earned whatever they have received (DiAngelo, 2011). Researchers have explored the ways in which white people respond to being confronted with evidence of racial inequalities and privilege. Research has shown that whites' desire to see themselves as meritorious mediates the relationship between preference for meritocracy and denial of white privilege, and that this meritocracy–privilege relationship is moderated by whites' need to bolster their self-image (Knowles & Lowery, 2012). It has also been found that preference for meritocracy in whites better predicts denial of white privilege than anti-black discrimination (Knowles & Lowery, 2012). In other research, it has been found that whites exposed to evidence of racial privilege claim to have suffered more personal life hardships than whites not exposed to evidence of privilege (Phillips & Lowery, 2015). These findings support DiAngelo (2011)'s prediction that drawing attention to racial inequality creates situations of racial stress for whites and that whites will engage in defensive moves to protect against racial stress.

If it is suggested to a white person that he or she behaved in a racist way or had a racist thought, this is a challenge to his or her self-concept of being non-racist (DiAngelo, 2011). There is some empirical evidence for this claim. One experiment had white participants look at mugshots of criminals, some of whom were black men (Borum,

Gilbert, & Wilson., 2016). Participants were then told that the researchers were studying “whether people are influenced by race when perceiving threat” (Borum et al., 2016). Some participants were then told that the researchers had collected physiological evidence that the participants had experienced racially biased reactions to viewing the images, even though no evidence had actually been collected. The researchers claimed that they had measured participants’ galvanic skin response, which is the increase in perspiration that occurs when a person feels threatened, and found “evidence” that participants were more threatened by black male mugshots. Participants who were told about the “evidence” were less willing to acknowledge their racial bias than participants who were not told about the evidence (Borum et al., 2016). As the theory of white fragility (DiAngelo, 2011) would have predicted, the white participants were more likely to engage in defensive behaviors when confronted with the evidence of their own racial bias.

White fragility can be an enormous obstacle to white allyship and a hindrance to progressive social change (Hall, 2015; Thomas & Luba, 2017). White fragility contributes to a “colorblind” ideology in which white people avoid discussing race at all (Apfelbaum et al., 2008; Jayakumar & Adamian, 2017; Norton et al., 2006; Thomas & Luba, 2017;). Indeed, the harmful effects of white fragility range from white people struggling to feel comfortable in interracial interactions (Dovidio et al., 1997; Fazio et al., 1995; McConnell & Leibold, 2001; Word et al., 1974), to white people failing to work towards eliminating racism on a larger scale. The social repercussions of white fragility demonstrate the importance of research on ways to decrease it.

Applying Mindset Theory to Racial Bias

Mindset theories are an individual's core assumptions about the malleability or fixedness of a personal characteristic (Dweck, 2002). Past research suggests that people's implicit theories about a personal trait being fixed or malleable will determine their motivation to attempt challenging problems and venture for personal growth (Dweck, 2002). Students are more likely to attempt challenging math problems when they believe that mathematical intelligence is malleable (Dweck, 2002). In contrast, students who believe that intelligence is fixed-- that they are relatively powerless to change their predetermined ability in certain skills-- are more likely to avoid difficult problems that promote learning (Mangels et al., 2006; Robins & Pals, 2002). Instead, they prefer to attempt problems of which they feel confident they can solve in order to confirm their ability. People with malleable mindsets see difficult problems as a challenge through which they can grow, while people with fixed mindsets tend to consider their mistakes as signs of incompetence. When an individual holds a growth mindset about intelligence, poor performance indicates a need for increased effort or improved strategy. Because people with malleable mindsets view effort as a means of increasing competency, they are more willing to attempt problems that require effort (Vandewalle, 2012).

Interventions aimed to transition students from fixed mindsets to growth mindsets have successfully changed people's implicit theories of traits related to academic achievement (e.g., Blackwell, Trzesniewski, & Dweck, 2007; Cutts, Cutts, Draper, O'Donnell, & Saffrey, 2010; Yeager et al., 2016). In one study, students in an introductory programming class who received a four-week malleable mindset intervention had final exam scores 22.8% higher than students who received no such intervention (Cutts et al., 2010). Similarly, a mindset intervention study in a seventh

grade math classroom found that twenty-seven percent of students who received a malleable mindset training were spontaneously cited by their teachers as exhibiting increased motivation, compared to only nine percent of students who received no intervention (Blackwell et al., 2007). Students who received the math mindset intervention had a significantly higher grade trajectory in the classroom, while students who did not undergo the intervention saw a decline in grades over time.

The impact of mindset is not limited to academic traits. Mindset theory has also been shown to influence people's behavior when applied to interpersonal character traits (e.g., Chiu, Hong, & Dweck, 1997; Molden & Dweck, 2006; Petrocelli, Clarkson, Tormala, & Hendrix, 2010; Tamir, John, Srivastava, & Gross, 2007). Research shows that being taught that social attributes are developed over time lowers adolescents' aggression and stress in response to peer victimization or exclusion (Yeager & Dweck, 2012). People's views of their interpersonal traits as being fixed or malleable can also determine their behavior in situations in which those traits are expressed (Schumann, Zaki, & Dweck, 2013). One such character trait that has been researched is racial bias (Carr et al., 2012; Neel & Shapiro, 2012; Rattan & Dweck, 2010). People have differing views on the malleability of prejudice (Cottrell & Neuberg, 2005; Devine, 1989). Many white people are socialized to think of people as being either racist or not racist, with no in-between; they have a fixed mindset concerning their own personal racism (Cottrell & Neuberg, 2005; Heinze, 2008). In contrast, a person with a malleable mindset of racial bias believes that racial bias is a character trait that can be changed. They may believe, for example, that racism is embedded in society in such a way that everyone is likely to

commit racist behavior at some point in their lives and racial bias is something that one must actively work to reduce (Cerullo, 2013).

People's implicit theories about racial bias have important effects on their behavior during interracial interactions (Carr et al., 2012; Migacheva & Tropp, 2013; Neel & Shapiro, 2012; Rattan & Dweck, 2010). One important behavior mindset can predict is a person's likelihood to confront racist behavior. Research has examined the relationship between people of colors' mindset theories on personality and their likelihood to confront a person who made a prejudiced statement (Rattan & Dweck, 2010). Participants with a malleable view of personality are more likely to intervene in a situation in which another person expresses racial bias and to critique prejudiced comments than are participants with a more fixed view (Rattan & Dweck, 2010). Rattan and Dweck (2010) demonstrated a relationship between people of colors' mindsets and engagement with racial stress, but they did not examine the effect of mindset theory on white people's likelihood to engage with racially stressful situations.

White people generally feel more anxious and demonstrate more anxious behaviors in interracial interactions than do people of color (Dovidio et al., 1997; Fazio et al., 1995; McConnell & Leibold, 2001; Trawalter & Richeson, 2008; Word, et al., 1974). That being said, white people's anxiety during interracial interactions has been shown to be moderated by mindset (Carr, et al., 2012; Migacheva & Tropp, 2013; Neel & Shapiro, 2012). White people tend to be less interested in engaging in conversation with a person of color and more uncomfortable in interracial situations when they hold a fixed view of racial bias (Carr et al., 2012; Migacheva & Tropp, 2013). In one study, white participants with fixed views of prejudice positioned chairs between themselves and confederate

conversation partners significantly further apart when they were partnered with a black confederate, while participants with a malleable view of prejudice showed no difference in chair positioning between white confederates or black confederates (Carr et al., 2012). In contrast, there was no significant effect of mindset on chair distance when the participants with fixed views of prejudice were partnered with a white confederate. It was also found that participants with a fixed view of racial bias reported wanting to spend less time during the interaction with a black conversation partner, but not with a white partner (Carr et al., 2012). The same relationship between mindset and interracial comfort has been found in middle school students (Migacheva & Tropp, 2013). Students who valued learning over performance generally felt more comfort and were more interested in interracial contact than students who prioritized performance over learning (Migacheva & Tropp, 2013). These results suggest that white people feel less comfortable communicating with people of color when they view prejudice as a racist/non-racist binary. White participants with a fixed view reported being more preoccupied by the threat of revealing racism to themselves and to others than did participants with a malleable view (Carr et al., 2012). It can therefore be inferred that fear of being seen as racist produces more anxiety in participants with a fixed mindset.

While previous research provides key insights into the discomfort white people with fixed mindsets of racial bias experience during interracial interactions, the measures used do not sufficiently encompass the range of white fragility reactions. Dependent variables in previous research include avoidance and fear in response to racial stress, but do not measure defensiveness or guilt. In the present study, we used measures that account for the complexity of white fragility, in which white people may experience a

multitude of negative reactions. Although defensiveness has not been studied in mindset research on racial bias, other mindset research has demonstrated a connection between mindset and defensiveness (Nussbaum & Dweck, 2008). People with fixed mindsets have been shown to exhibit defensiveness to preserve self-esteem (Nussbaum & Dweck, 2008). These results provide evidence that defensiveness may be a likely reaction from people with fixed mindsets of racial bias in response to racial stress.

Not only does mindset predict people's comfort and interest in interracial interactions, but also, it influences their behavior when confronted with the topic of racism directly (Carr et al., 2012; Neel & Shapiro, 2012). Whites with a fixed view of prejudice were found to be less interested in a lower-your-privilege tutorial than participants with a malleable view, indicating that white people with a fixed view of racial prejudice show less interest in contemplating the idea of white privilege (Carr et al., 2012). Similarly, white people who believe that racial bias is malleable are more likely to use a learning strategy when discussing topics like affirmative action with a black confederate partner (Neel & Shapiro, 2012). These strategies include asking questions to learn more about their partner's perspective. White participants with a malleable view of racial bias are also more likely to seek feedback about their racial bias (Neel & Shapiro, 2012). While Neel and Shapiro (2012)'s research demonstrates the importance of mindset theory on white people's reactions to racial stress, it had the limitation of being completely reliant on self-reports to measure participant performance strategies for dealing with racial stress. In the present study, we measure white fragility through analysis of participants' extemporaneous verbal responses to racially stressful situations.

The Present Study

The current study aims to investigate whether or not white individuals' mindsets of racial bias can be changed, and to investigate the relationship between white people's mindsets of racial bias and the frequency of their white fragility behaviors.

We propose that when people see racial bias as a dichotomy-- racist or not racist-- they will be focused on being perceived as not racist. When the only alternative to being completely free of racial prejudice is to label oneself permanently as a racist, a white person must reject all suggestions that they are not completely free of bias in order to preserve self-esteem (Richeson & Shelton, 2007). As a result, they may be more likely to express symptoms of white fragility including guilt, defensiveness, and avoidance when confronted with racial stress in an attempt to avoid harming their status.

We predict that the study's racial bias mindset intervention condition, aimed at guiding participants to adopt either a fixed or malleable view of racial bias, will lead to different mindsets which, in turn, will influence the amount of white fragility symptoms (i.e., feelings of guilt, defensiveness, and avoidance) that participants express in response to racial stress. Based on previous literature, we predict that individuals with a malleable mindset of racial bias will display less white fragility behaviors than individuals with a fixed mindset of racial bias. Specifically, we hypothesize that 1) there will be a significant effect of mindset condition on reported mindset of racial bias whereby white participants in the malleable condition will report more malleable mindsets of racial bias than will white participants in the fixed condition. 2) there will be a significant effect of mindset condition on avoidance whereby white participants in the malleable condition will display less avoidance in their verbal responses to racially stressful situations than

will white participants in the fixed condition. 3) there will be a significant effect of mindset condition on defensiveness whereby white participants in the malleable condition will display less defensiveness in their extemporaneous verbal responses to racially stressful situations than will white participants in the fixed condition. 4) there will be a significant effect of mindset condition on guilt whereby white participants in the malleable condition will display less guilt in their verbal responses to racially stressful situations than will white participants in the fixed condition. 5) there will be a significant effect of mindset condition on openness whereby white participants in the malleable condition will display more openness in their verbal responses to racially stressful situations than will white participants in the fixed condition. We also predict that 6) there will be a significant effect of mindset condition on reported feelings of avoidance in response to racial stress whereby participants in the malleable condition report lower levels of avoidance compared to participants in the fixed condition. 7) there will be a significant effect of mindset condition on reported feelings of defensiveness in response to racial stress whereby participants in the malleable condition report lower levels of defensiveness compared to participants in the fixed condition. 8) there will be a significant effect of mindset condition on reported feelings of guilt in response to racial stress whereby participants in the malleable condition report lower levels of guilt compared to participants in the fixed condition. And we predict that 9) there will be a significant effect of mindset condition on article category choice whereby participants in the malleable condition will be more likely to choose articles that constructively engage with issues of race over articles that are defensive against claims of racial issues or articles that do not discuss racial issues than participants in the fixed condition.

Methods

Participants

Sixty-nine people in the Walla Walla Valley agreed to participate in the study in exchange for five dollars or class credit. Of the sixty-nine, forty-seven (30 cisgender women, 16 cisgender men, 1 transgender man) identified as white, and therefore met the criteria for data analysis. The average age of the white participants was 21.18. The participants were recruited from the Whitman Intro to Psychology online pool, a local grocery store, Walla Walla Community College, and via email.

Procedure

The participants reported to the laboratory where they completed the study in a private room on a computer. They first read and signed an informed consent form. Next, the participants filled out basic demographic information and were randomly assigned to either the malleable mindset intervention group or the fixed mindset intervention group. Participants in the malleable group read an article that provided ostensibly real scientific evidence that racial bias is malleable and that people can work to change their racial bias. Participants in the fixed group read an article that provided ostensibly real scientific evidence that racial bias is fixed and unchangeable. After reading their assigned articles, the participants were instructed to write a paragraph about their impressions of the articles' content. As a manipulation check, the participants then answered a set of three questions to determine whether or not the intervention had an effect on participants' mindsets.

White participants were then asked if they would be willing to let their verbal responses to three scenarios be recorded. We decided that only white participants should

take part in the scenario exercise, because we judged that having participants of color participate would be racially insensitive. At this time, the researcher present also gave a verbal reminder that participation was completely voluntary and that participants could withdraw from the study or skip specific parts of the study if they so desired. The participants who identified as white then read hypothetical scenarios designed to elicit racial stress. The participants were instructed to give verbal responses after reading each scenario as if they were actually in the situation described.

The next portion of the study was designed to measure affective responses to racial stress. Participants were given an article to read that was intended to trigger feelings of white fragility. Next, we assessed participants' avoidance, defensiveness and guilt in response to the article. Only white participants were given a set of questions to measure guilt, as the questions were specific to white guilt. All participants were given avoidance and defensiveness measures.

To measure behavioral responses to racial stress, participants were then told that they would read one more short article. We presented participants with a selection of article titles, and instructed them to pick which one they wished to read. The titles were designed to reflect articles that would either constructively engage with racial stress, support white fragility responses of avoidance, or support white fragility responses of defensiveness such as argumentation. After participants selected the title of the article they would like to read, the participants were informed that the study was complete and that they did not need to read the article.

Materials and Measures

Intervention articles. We utilized two articles created by Neel and Shapiro (2012) designed to look like articles from the popular magazine *Psychology Today*. These articles were modeled directly from intervention articles created by Nussbaum and Dweck (2008) to manipulate growth mindsets of intelligence. Neel and Shapiro (2012) modified them to discuss the malleability or lack thereof of racial bias.

Malleable mindset article. The malleable group was given an article that provided ostensibly real scientific evidence that racial bias is malleable and that people can work to change their personal racial bias. In order to encourage participants to engage with any personal biases they may have held, we added a few lines to the malleable group article to emphasize that some level of racial bias is inevitable: “Racism is often discussed in the misleading terms of racist people and non-racist people...”, “Most people naturally develop racial biases...”, “It is practically impossible for a person to be truly “colorblind” or unbiased...”, “people will be challenged at times when confronted with their own flaws.” Article appears in Appendix A.

Fixed mindset article. Participants in the fixed mindset condition received an article that provided ostensible scientific evidence that racial bias is fixed: “Several large longitudinal studies show that people’s racial biases can change somewhat, but rarely changes substantially,” “By the age of ten, the foundation of our racial bias has set like plaster...” Article appears in Appendix A.

Mindset of racial bias. As a manipulation check, the participants took a mindset theory of racial bias test. The test was created by Neel and Shapiro (2012), who modeled it directly after a mindset theory of intelligence measure used by Dweck (1999), replacing the word “intelligent” with words like “racial bias” or “morality”. An example item is

“People have a certain amount of racial bias and they really can’t do much to change it.” Participants responded to three items ($\alpha = .81$) using a 7-point Likert-type scale anchored at 1 (*strongly disagree*) and 7 (*strongly agree*). Higher scores indicate a stronger growth mindset and lower scores indicate a higher fixed mindset. Items appear in Appendix B.

Racial stress scenarios. The scenarios were designed to simulate situations of racial stress and provide us the opportunity to measure behavioral intent. We coded participant responses, looking for signs of white fragility such as avoidance or argumentation. Interrater reliability was moderate, with a Cohen’s kappa of .67. The three scenarios were the following:

1. Your friend approaches you on the sidewalk. Next to them is a person you’re pretty sure you met at a party the other night. “Hey, Daniel! Good to see you again,” you say. The person next to your friend frowns. “I’m not Daniel. I’m Henry. Daniel was the other Asian at the party.”

Please say your response to this hypothetical situation aloud in approximately five sentences or less. When you are done, press “next.”

2. You’re sitting with a coworker planning your next team meeting. “Val brought up having an anti-racism training at our next meeting and I think that would be a good idea. What do you think?” she asks. “I know we had a diversity training last month but we’re still noticing some issues in the office.”

Please say your response to this hypothetical situation aloud in approximately five sentences or less. When you are done, press “next.”

3. You are walking with a friend down the sidewalk, and a black man passes you. Without thinking or at all consciously deciding to, you clutch your backpack and

angle it to the other side of your body away from the man. After the man passes, your friend chides you, “you know, just because he’s black doesn’t mean he’s gonna take your bag”. You respond “huh? What are you talking about?”. Your friend replies, “you grabbed your bag tightly and angled it away from that guy when he walked by, like you were afraid he was going to steal it. Did you not realize you did that?”.

Please say your response to this hypothetical situation aloud in approximately five sentences or less. When you are done, press “next.”

We coded participants’ responses for avoidance when they did not acknowledge any issues to do with race or racial stress, including any microaggression that just occurred. An example would be responding to the first scenario with “oh... uh... hi” or “ha ha, okay.” We coded participant responses for signs of defensiveness like argumentation or denial. For example, responding to having been called out for committing a microaggression by saying “I would never do that” or “I think it’s rude that someone would suggest I did something wrong.” We coded participant responses for their level of openness on a scale from zero to three. Open responses included behaviors like asking open questions and paraphrasing the other person’s perspective. Less open responses included behaviors like directly denying the perspective of the other person or not acknowledging his or her concerns.

Fragility trigger article. Participants in both groups were instructed to read an article from *Fader Magazine* about Munroe Bergdorf, a black trans model who was fired from L’Oréal for speaking out against white supremacy (Meyers, 2017). The article conveyed Bergdorf’s assertion that white people need to take responsibility for racism:

“Because most of ya’ll don’t even realise or refuse to acknowledge that your existence, privilege and success as a race is built on the backs, blood and death of people of colour.”

We have chosen this article to trigger potential white fragility responses as it pertains to several of the situations DiAngelo identifies as racial stress triggers: “Suggesting that a white person’s viewpoint comes from a racialized frame of reference (challenge to objectivity),” “People of color talking directly about their racial perspectives (challenge to white racial codes),” “People of color choosing not to protect the racial feelings of white people in regards to race (challenge to white racial expectations and need/entitlement to racial comfort),” “Suggesting that group membership is significant (challenge to individualism),” and “An acknowledgment that access is unequal between racial groups (challenge to meritocracy)” (DiAngelo, 2011, p. 57). Article appears in Appendix C.

Avoidance. To assess participants’ avoidance response to the fragility trigger article, we created a six-item questionnaire ($\alpha = .86$) in which participants gave a score ranging from 1 (*not at all*) to 6 (*a great deal*) on how much they identified with feelings of wanting to disengage with the article. Items appear in Appendix D.

Defensiveness. To assess participants’ defensiveness in response to the fragility trigger article, we created a six-item questionnaire ($\alpha = .78$) in which participants gave a score ranging from 1 (*not at all*) to 6 (*a great deal*) on how much they identified with feelings of being attacked or discriminated against. Items appear in Appendix D.

Guilt. To assess participant’s guilt response to the fragility trigger article, we used seven items ($\alpha = .87$) from Swim’s (1999) white guilt measure. Participants rated how much they identified with feelings of guilt in relation to racial inequality on a scale of 1

(*not at all*) to 6 (*a great deal*). Items appear in Appendix D. Because this measure was specific to white participants, only gave the guilt items to participants who identified as white when filling out the demographics information.

Article selection. The participants were given a list of twelve different article titles and were instructed to choose one of the articles to read. The titles of the articles were written to reflect three different categories with four articles per category. The constructive engagement category articles presented the threat of racial stress, and choosing to read it reflected a willingness on the part of the participant to engage with racial stress. The avoidance category article had nothing to do with any racial issues, and choosing it reflected the white fragility response of avoidance. The defensiveness category article was designed to encourage defensive and argumentative white fragility viewpoints, and choosing it reflected the white fragility responses of defensiveness, such as argumentation. Article titles appear in Appendix E.

Results

We hypothesized that the mindset condition would lead white participants to adopt different mindsets of racial bias, which would influence their responses to racial stress whereby white participants in the malleable condition would demonstrate less avoidance, defensiveness, and guilt, and more openness, than white participants in the fixed condition. To test these hypotheses, we analyzed white participant responses to the racial stress scenarios, fragility trigger article, and article category choice.

Mindset of Racial Bias

Overall, after participating in the intervention, the manipulation check revealed that the white participants had a relatively malleable view of racial bias ($M= 5.27$, $SD=$

1.15). To test our hypothesis that there would be differences in responses based on condition, we ran an independent samples *t*-test. Consistent with our hypothesis, there was a marginally significant main effect of condition, $t(45) = 1.96, p = .06$. Individuals in the malleable condition, on average, held a more malleable view of racial bias ($M = 5.59, SD = 1.18$) than did participants in the fixed condition ($M = 4.96, SD = 1.06$).

Racial Stress Scenarios

We categorized white participants into two groups for each response measure (avoidance and defensiveness) based on whether they did or did not show either of the behaviors in any of the three scenarios. Unfortunately, there was not enough variation among the number of times participants exhibited each behavior to examine the measures in greater depth. Further, only one person clearly expressed guilt during the three scenarios, so we were unable to perform statistical analysis on this variable. Overall, 20% of white participants responded with avoidance in at least one scenario, 35% responded with defensiveness, and 2.5% responded with guilt.

To examine whether the tendency to respond to racial stress in the response measures was influenced by the participants' mindset condition, we ran two Chi-squared tests. Looking across the two Chi-squared tests, condition was not related to either variable of interest. There was not a significant relationship between condition and avoidance, $\chi^2(1, N = 40) = .40, p = .52$ or condition and defensiveness, $\chi^2(1, N = 40) = .05, p = .82$.

We were also interested in testing for a relationship between the white participants' reported mindset and the two white fragility responses to the racial stress scenarios. A one-way ANOVA indicated that there was a strong relation between the

tendency to respond with avoidance and reported mindset, $F(1, 38) = 8.46, p = .006$.

Participants who responded with avoidance in any of the three scenarios held more fixed mindsets than participants who did not express avoidance in any of the three racial stress scenarios ($M = 4.17, SD = 1.11$ and $M = 5.39, SD = 1.05$, respectively).

We ran a one-way ANOVA of Average Defensiveness and Reported Mindset which indicated that there was no significant relationship between the two, $F(1, 38) = .22, p = .64$. Participants who responded with defensiveness in any of the three scenarios did not show significantly different mindsets than participants who did not express defensiveness in any of the three racial stress scenarios ($M = 5.14, SD = 1.50$ and $M = 5.21, SD = .95$, respectively).

We coded participant responses for their level of openness on a scale from zero to three. Overall, participants responded with relatively high levels of openness ($M = 2.29, SD = .74$). To test our hypothesis that there would be differences in openness responses based on condition, we ran an independent samples *t*-test. Contrary to our hypothesis, there was no main effect of condition, $t(38) = -.21, p = .98$. We ran a correlation between reported mindset and average openness. There was a significant positive relationship whereby the participants with more malleable mindsets of racial bias demonstrated higher average openness, $r(38) = .33, p = .04$.

Fragility Trigger Article

We measured participants' responses of avoidance, defensiveness, and guilt after reading an article designed to trigger white fragility. Scores on these three measures all correlated strongly with each other (see Table 1). Overall, after reading the white fragility trigger article, white participants reported a mild sense of guilt ($M = 3.56, SD = 1.30$), on

a scale that ranged from 1 to 6) low levels of defensiveness ($M = 2.86$, $SD = 1.19$) and low levels of avoidance ($M = 2.81$, $SD = 1.03$).

To test for the effect of condition on responses, we ran a series of independent samples t -tests. Contrary to our hypothesis, there was not a significant effect of mindset condition on avoidance, $t(45) = 0.82$, $p = .42$. White individuals in the malleable condition ($M = 2.41$, $SD = 1.17$) did not differ from white participants in the fixed condition ($M = 2.67$, $SD = 1.06$) in terms of avoidance. Results also showed that there was not a significant effect of mindset condition on defensiveness, $t(45) = .22$, $p = .82$. White individuals in the malleable condition ($M = 1.18$, $SD = .28$) did not differ from white participants in the fixed condition ($M = 1.13$, $SD = .20$) in terms of defensiveness. Further, there was not an effect of condition on guilt, $t(45) = .81$, $p = .42$. White individuals in the malleable condition ($M = 3.72$, $SD = 1.25$) did not differ from white participants in the fixed condition ($M = 3.41$, $SD = 1.36$) in terms of guilt. Next, to examine the relations between reported mindset and responses, we ran a series of correlations. There was a significant negative relation between reported mindset and avoidance, whereby white participants with more malleable mindsets expressed less avoidance $r(45) = -.34$, $p = .02$. Further, there was a significant negative relation between reported mindset and defensiveness, whereby white participants with more malleable mindsets expressed less defensiveness, $r(45) = -.34$, $p = .02$. Finally, there was a marginally significant positive relation between reported mindset and guilt, whereby white participants with more malleable mindsets also expressed marginally greater guilt, $r(45) = .28$, $p = .06$.

Article Choice

To test for the effect of condition, we ran a Chi-squared test of Mindset Condition with Article Choice Group and found no significant relationship, $\chi^2(2, N = 46) = 3.76$ $p = .15$. We then ran a one-way ANOVA to test for a relationship between Reported Mindset and the type of article the participants chose to read. There was no significant relationship between the two, $F(2, 43) = .46$, $p = .63$ (see Table 2).

Discussion

In the current study, we measured white fragility behaviors among white participants given a fixed or a malleable mindset intervention of racial bias. The first aim of our research was to investigate whether or not white individuals' mindsets of racial bias can be changed. Further, we aimed to determine whether or not a relationship exists between white people's mindsets of racial bias and their frequencies of displays of white fragility. To answer our research question, we gave one group of white participants an article to read that argued for racial bias's malleability, and we gave the other group of white participants an article to read that claimed that racial bias is a fixed trait. Based on previous research on racial bias mindset and behavior in interracial situations (Carr et al., 2012; Neel & Shapiro, 2012; Rattan & Dweck, 2010), we hypothesized that white participants in the malleable condition would show less guilt, avoidance, and defensiveness, and more openness, than white participants in the fixed condition.

Intervention Outcome

In partial support of our predictions, the mindset intervention had a marginally significant effect on whites' reported mindsets of racial bias. However, contrary to our hypotheses, mindset condition did not have an effect on any displays of white fragility in the racial stress scenarios, responses to the white fragility article, or the article choice.

Our results indicate that a five-minute intervention is not sufficient to shift people's mindsets of racial prejudice enough to change their displays of white fragility. The possibility exists that short psychological interventions are unlikely to undo the extensive socialization that has led individuals to adopt certain fixed or malleable mindsets. Our mindset intervention was unsuccessful despite being modeled from similar interventions in which the results indicated significant changes in participant mindsets of racial bias (Neel & Shapiro, 2012; Rattan & Dweck, 2010). There is evidence that mindset interventions can be temporary, and that the effects can be undone when the targets of the intervention return to the context of their pre-intervention states (Orosz, Péter-Szarka, Bóthe, Tóth-Király & Berger, 2017). Additionally, a recent meta-analysis of the effect of mindset interventions on academic achievement found that overall effects were weak (Sisk, Burgoyne, Sun, Butler & Macnamara, 2018). This suggests that mindset interventions are not as likely to work as some previous intervention successes have indicated. While our study saw no significant effect of condition on any measures of white fragility, the marginally significant effect that condition had on participants' reported mindsets suggest that more powerful interventions could be worth investigating. We suggest examining the effects of longer interventions, lasting weeks or months, which include activities through which the participants can engage with the learned material. For example, long-term interventions could include group reflection talks, reading assignments with comprehension checks, writing assignments, and practice scenarios.

Relations Between Mindset and White Fragility

Participants self-reported their mindsets of racial bias. This measure was originally intended to be a manipulation check. However, the participants' score on this

measure can also be interpreted as a measure of their mindset of racial bias. While we did not find any significant relationships between mindset condition and displays of white fragility, our findings revealed several relationships between *reported* mindset and certain white fragility behaviors.

DiAngelo's theory of white fragility (2011) outlines avoidance as a major tactic that white people use to deal with racial stress. Avoidance behaviors can include avoiding discussing racial issues, leaving racial stress-inducing situations, or proactively attempting to avoid such situations in the first place (DiAngelo, 2011). Our study found that the more participants viewed racial bias as malleable, the less avoidance they demonstrated, both in their verbal responses to the racial stress scenarios *and* in their responses to the white fragility article. The participants with more fixed mindsets of racial bias showed more avoidance in their responses to the white fragility article through affirming statements like "I wanted to stop reading the article" and negating statements like "I would be willing to have a conversation with someone who agrees with this article." In the racial stress scenarios, the participants with more fixed views of racial bias were more likely to ignore the concerns of their hypothetical conversation partner when they provoked racial stress, and to completely avoid acknowledging racialized issues at all. For example, in response to the third scenario in which the participants pass a black man and a friend alerts them that they clutched their bag, the participants with more fixed views of racial bias were more likely to make statements like, "Huh, that's weird," and say nothing more.

Our results are consistent with previous research that demonstrates a link between mindset and avoidance behaviors in response to racial stress (Carr et al., 2012;

Migacheva & Tropp, 2013). When people believe that racial bias is something they can work to reduce, they are more open to critiques of racist behavior (Neel & Shapiro, 2012), and less likely to try to avoid discussing issues of race (Carr et al., 2012). Those with malleable mindsets of racial bias consequently have less of an incentive to avoid racial stress, because they are not risking their self-images as good people when confronting racial stressors (Richeson & Shelton, 2007). The present findings build upon evidence that people with fixed mindsets tend to reject situational factors that enhance racial stress (i.e., interracial interactions, pamphlets about white privilege; Carr et al., 2012; Neel & Shapiro, 2012), and demonstrate that they also are more likely to avoid conversation topics that elicit racial stress when they are directly confronted with them. Put in other words, the results show that people with fixed mindsets will actively avoid racial stress in extemporaneous speech, even at the cost of their conversation partner's comfort. To our knowledge, the present study is the first study to analyze the effect of mindset on white fragility behaviors in extemporaneous speech.

DiAngelo's theory of white fragility (DiAngelo, 2011) identifies defensive behaviors like argumentation and expressions of being unjustly attacked as another major tactic that whites use to cope with racial stress. There was some support for the hypothesis that mindset is related to defensiveness. There was not a significant relationship between displays of defensiveness in the racial stress scenarios and reported mindset of racial bias. In response to the fragility trigger article, however, defensiveness and reported mindset were moderately correlated, whereby white participants with more malleable mindsets expressed less defensiveness. Participants with more fixed mindsets were more likely to affirm statements like, "I felt attacked when reading Bergdorf's

comments” and to negate statements like, “Bergdorf’s comments constitute a reasonable grievance.” Furthermore, our findings are consistent with past research that has shown that people with fixed mindsets have been shown to exhibit defensiveness to preserve self-esteem (Nussbaum & Dweck, 2008). To our knowledge, no previous research has investigated the relationship between mindset and defensiveness in the context of racial prejudice. Our present findings provide some evidence that whites with malleable mindsets of racial bias are less inclined to respond to racial stress with defensiveness compared to whites with fixed mindsets, but, due to the conflicting results between our measures, more research into this relationship is needed.

Another white fragility behavior that we analyzed is guilt (DiAngelo, 2011). Guilt, in the context of white fragility, describes an apologetic display that refocuses attention on the white person and puts pressure on others to forgive them (DiAngelo, 2011). In this sense, guilt as a white fragility behavior is highly performative. The present findings regarding guilt were inconsistent with our hypotheses. Contrary to our expectation, people with more malleable mindsets actually tended to show more guilt in response to the white fragility trigger article. One reason for this finding may be that our measure of guilt does not correspond with the performative guilt DiAngelo (2011) describes. Perhaps there is a distinction between the guilt described by DiAngelo (2011) and an internal guilt that could motivate non-fragility behaviors in response to racial stress.

In the results for the racial stress scenarios, only one participant response was coded as demonstrating the performative guilt described in the theory of white fragility. One possible explanation for this is that expressing guilt may be closer to admitting

personal racial prejudice than behaviors like avoidance or defensiveness, so it is a riskier method of dealing with racial stress for whites with a fixed mindset of racial bias. It may also be the case that performative displays of guilt, compared to displays of avoidance or defensiveness, are less likely to emerge in hypothetical racial stress scenarios in which no people of color are actually present. Future research into performative white fragility guilt should consider utilizing confederates of color to create more authentic interracial interactions, or at least consider having a researcher of color present when administering any similar hypothetical scenarios.

Although DiAngelo (2011) does not describe openness as a dimension of white fragility, it can arguably be seen as the inverse of white fragility. Openness describes a person's willingness to consider another's point of view and to engage in a conversation. Thus, we examined the relationship between mindset and openness. Participants who held a more malleable view of racial bias, on average, responded to the racial stress scenarios with higher levels of openness than did participants with a more fixed view of racial bias. This finding confirmed our hypothesis that people with more malleable views of racial bias demonstrate more openness in situations of racial stress. Participants who responded with openness demonstrated behaviors like asking open questions, paraphrasing their conversation partner's point of view, and apologizing without making excuses. The relationship between mindset and openness supports the idea that people with more malleable mindsets of racial bias are more willing to engage with situations that elicit racial stress. Previous literature suggests that people with more malleable mindsets of racial bias will adopt learning strategies, whose behaviors are analogous our operationalization of openness (Carr et al., 2012; Neel & Shapiro, 2012). A malleable mindset

can therefore be a predictor of positive interactions when racial stress is elicited. The current findings suggest that malleable mindsets foster productive dialogue and a willingness to learn and adapt. Given the ubiquitous tension that prevents white people from engaging with issues of racial stress (see Apfelbaum et al., 2008; Knowles & Lowery, 2012; Lowery, et al., 2007; Bonilla-Silva & Dietrich, 2011; Mendes et al., 2002), the findings on openness present a potential alleviator of white fragility.

For our final measure, we instructed participants to choose an article to read from a selection of twelve articles. Their articles of choice indicated either a desire to engage with potentially racially-stressful topics, a desire to validate defensive reactions to racial stress, or a desire to avoid topics of race entirely. We expected that white participants in the malleable mindset condition would be more likely to choose an article in the constructive engagement category and that white participants in the fixed mindset condition would be more likely to choose articles in the defensive or avoidance categories. Contrary to our hypothesis, there was no significant relationship between mindset condition and article choice category. We also found that there was no significant relationship between reported mindset and article choice category. It is possible that putting this measure at the end of the study made it vulnerable to something called white fatigue. White fatigue is a construct that is distinct from white fragility; it describes a phenomenon in which white individuals understand the moral imperative of antiracism, but nonetheless become “fatigued” by the process (Flynn, 2015). White fatigue could have caused white participants who would have otherwise chosen to engage with racial stress in their article selection to choose instead to avoid it, as they had already been exposed to substantial racial stress previously.

Relations Among White Fragility Reactions

We were interested in analyzing the relationships between different white fragility feelings (i.e. whether or not someone who reports a desire for avoidance is also likely to report feelings of guilt, etc.) with regard to the white fragility article responses. We found a strong negative relationship between avoidance and guilt whereby participants who reported a desire to avoid the article's contents were much less likely to report feelings of guilt than participants who did not. We also found a strong negative relationship between defensiveness and guilt whereby participants who reported feelings of defensiveness were much less likely to report feelings of guilt than participants who did not. Additionally, we found a strong positive relationship between defensiveness and avoidance whereby participants who demonstrated avoidance also tended to demonstrate defensiveness. These findings highlight that guilt may be a distinct strategy from avoidance and defensiveness, and that people tend to experience feelings of avoidance and defensiveness simultaneously. DiAngelo (2011) describes white fragility reactions, but does not predict whether or not some expressions of white fragility will relate positively or negatively with others, or what would cause such relations. To our knowledge, our study is the first to analyze the relationships between distinct white fragility behaviors. One potential explanation for these relationships could be that acknowledgement of racism as a prevalent social problem predicts white fragility reactions, such that people who believe that society is "guilty" of racism tend to respond to racial stress with guilt--believing that they personally could be guilty (or viewed as guilty) of racism in racially stressful situations. In contrast, it may be the case that people who believe that racism is largely "solved," tend to respond to racial stress with defensiveness and avoidance, two

reactions that reject culpability, or even the very potential for culpability. Future research should investigate the question of whether or not belief in racism as a widespread social issue predicts specific white fragility behaviors.

Unique Consistency of Avoidance

Avoidance was consistently related to mindset, while other measures (i.e., defensiveness and guilt) were not. Our findings showed that participants with malleable mindsets were less likely to avoid racial stress, but not any less likely to show guilt, and only less likely to display defensiveness in one measure. DiAngelo (2011) predicts that merely discussing issues of race is a violation of white racial norms and that whites try to avoid it. Research shows that white fragility contributes to a “colorblind” ideology in which white people avoid discussing race at all (Apfelbaum et al., 2008; Jayakumar & Adamian, 2017; Norton et al., 2006; Thomas & Luba, 2017). One possible explanation for our findings on avoidance is that white norms prohibiting discussion of race are so powerful that they skew the frequencies of white fragility behaviors such that avoidance is more common than defensiveness or guilt.

Limitations and Future Directions

The current study provides some key insights on the relationship between racial bias mindset and certain displays of white fragility. There were some noteworthy limitations, and there are future directions that would be beneficial. One limitation was the potential influence of social desirability bias on the participants. Because there is so much social pressure against acting racist, social desirability bias could lead the participants to try to seem as non-racist as possible in their responses. Similarly, demand characteristics could have had an influence on participant responses. The participants

may have believed that the researchers were expecting non-racist answers, which could have influenced their responses. However, we partially counteracted the influences of social desirability bias and demand characteristics by including the racial stress scenario measure, in which participants needed to respond extemporaneously, giving them less time to plan their responses.

The main strength of the racial stress scenario measure was the fact that it allowed the participants to respond freely rather than restricting them to a set of pre-written responses. However, the hypothetical nature of the scenarios limited external validity. It is likely that people respond differently to hypothetical situations than they would if they were in a realistic situation in which they were experiencing racial stress (i.e., a situation in which they believed they actually committed a microaggression). In the racial stress scenario measure, participants had a few seconds to craft their response, whereas in real life, they would need to respond immediately. Indeed, many participants paused longer than would have been appropriate in actual conversation before responding to the situations. It is probable that this pause may have filtered out white fragility behaviors that may have taken place in actual interactions. It is also likely that the intensity of racial stress would be much stronger in a real situation. Future research could address this limitation by using confederates to create ostensibly real racial stress-inducing situations.

An additional limitation is the fact that the racial stress scenarios were coded for white fragility behaviors by two white researchers. It is possible that as people who are not subjected to structural racism, we may have coded the responses with less accuracy than would a person of color. It is even possible that our own white fragility may have compromised our accuracy in coding responses. For this reason, we recommend that a

team of diverse coders rate white people's extemporaneous responses to racial stress in future research.

The finding that people with more malleable mindsets tend to experience more guilt in response to racial stress calls for further research investigating the relationship between mindset and guilt. Internal guilt, as opposed to the performative guilt described by the theory of white fragility, may be a positive reaction if it manifests itself as motivation to engage openly in situations that evoke racial stress. Further research should explore whether or not general sensations of guilt and performances of "white fragility guilt" are correlated. Based on the finding on guilt and mindset, it may also be possible that having a malleable mindset increases one's propensity to show excessive performative guilt. If this is the case, mindset interventions on racial bias should teach strategies to manage one's guilt in ways that do not focalize attention onto oneself in a manner that disrupts necessary dialogue.

We also recommend continued research on the relationship between mindset and white fragility in longer term studies. The present results indicate that a comprehensive mindset intervention is likely to be effective at increasing people's comfort with engaging with racial stress. However, we suggest that the mindset training occur in conjunction with a training on racism that teaches ways to respond to racial stress without white fragility behaviors. Training on white fragility displays is particularly necessary to addressing symptoms like guilt and defensiveness, which were not found to be related to mindset, and inconsistently related to mindset, respectively. Just like mindset trainings supplement actual math classes, mindset trainings should be used to enhance racism trainings. Especially given the strong relationship between mindset and avoidance, the

findings indicate that mindset trainings could be a highly beneficial addition to racism trainings.

Conclusion

The continuation of racist incidents in the United States underlines a need to confront systematic racism (Anderson, 2017; Hauslohner et al., 2017). Research suggests that the relationship between mindset and white fragility emerges early in life, highlighting the need to intervene early in schools (Migacheva & Tropp, 2013). We believe that the present study provides additional evidence that mindset theory trainings may be effective components of race workshops (Carr et al., 2012). With longer, more engaging interventions, people may be encouraged to adopt malleable mindsets of racial bias. The present findings indicate that people who hold malleable mindsets of racial bias will show greater openness in situations related to racial stress, lesser inclinations to avoid racially stressful situations, and potentially lower motivation to respond defensively. These qualities are critical to productive dialogue (Yeung et al., 2013). White fragility behaviors hinder progress related to issues of race by curtailing conversation and, in some cases, denying the existence of inequity. Reducing the prevalence of white fragility is critical to combating racial power structures and oppression. Of course, mindset changes alone cannot accomplish all of this work. We suggest, however, that transitioning from a fixed to a malleable mindset of racial bias can aid in reducing white fragility. Our findings indicate that mindset has the power to foster more open dialogue surrounding issues related to race and to facilitate important social change.

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Appendix A

Intervention Articles

Malleable Mindset Article

Flash Report

Psychology Today

The Origins of Bias:

Is the Nature-Nurture Controversy Resolved?

Psychologists have long been interested in how prejudice develops over a lifetime, and whether a person's early exposure to stereotypes can be overridden later in life. Racial attitudes, in particular, used to be thought of as a set-in-stone aspect of personality that remained stable over a lifetime. Now, the emerging scientific consensus shows that early social experiences can have little relation to our adult attitudes, and that it is possible to change or override the imprint left in childhood. In his keynote address at the Association for Psychological Science's annual convention held in May, Dr. George Medin (Princeton University) stated that 'in most of us, our racial bias changes as we develop, meet new people, and are exposed to new ways of thinking. People may be born with a given level of racial bias, but research suggests that this changes with different life experiences and effort.' He pointed to studies of "hidden" bias that show that even people's nonconscious attitudes can be changed through effort and experience. He also reported several large longitudinal studies that show that people can change their racial bias, and shared research findings showing that people's racial bias can be

changed even in their late forties. Racism is often discussed in the misleading terms of racist people and non-racist people with nothing in-between. However, most people naturally develop racial biases. Due to natural human psychology, it is practically impossible for a person to be truly “colorblind” or unbiased and they will be challenged at times when confronted with their own flaws. One can therefore conclude that contemplating and confronting one's own biases is the most beneficial approach.

Daniel Berglund is a science writer from Los Angeles. He is a frequent contributor to Psychology Today.

Fixed Mindset Article

Flash Report

Psychology Today

The Origins of Bias:

Is the Nature-Nurture Controversy Resolved?

Psychologists have long been interested in how prejudice develops over a lifetime, and whether a person’s early exposure to stereotypes can be overridden later in life. Racial attitudes, in particular, used to be thought of as a malleable aspect of personality that continued to change over a lifetime. Now, the emerging scientific consensus shows that early social experiences set a course that shapes our adult attitudes, and that the imprint left in childhood is very hard to change or override. In his keynote address at the Association for Psychological Science's

annual convention held in May, Dr. George Medin (Princeton University) stated that 'in most of us, by the age of ten, the foundation of our racial bias has set like plaster and will rarely ever soften again.' He pointed to studies of "hidden" bias that show that while people may try to change their outward prejudice, they rarely change their nonconscious attitudes. He reported numerous large longitudinal studies which show that people 'age and develop, but they do so on the foundation of enduring attitudes.' He also reported several large longitudinal studies that show that people's racial bias can change somewhat, but rarely changes substantially, and shared research findings showing that people's racial bias very rarely changes after their late forties.

Daniel Berglund is a science writer from Los Angeles. He is a frequent contributor to Psychology Today.

Appendix B

Reported Mindset Manipulation Check

Items

1. “People have a certain amount of racial bias and they really can’t do much to change it,”
2. “A person’s racial bias is something very basic about them and it can’t be changed very much,”
3. “There is not much that can be done to change a person’s racial bias.”

Appendix C

Fragility Trigger Article

[STYLE / BEAUTY](#)

It's Unacceptable That L'Oréal Fired A Black Model For Speaking Out Against White Supremacy

The cosmetics giant dismissed Munroe Bergdorf over a Facebook post about structural racism.

By [OWEN MYERS](#)



Just a few days after announcing the British DJ and activist [Munroe Bergdorf](#) as one of the faces of a new campaign championing diversity, today, September 1, [L'Oréal have ended their partnership with her](#). The announcement follows the U.K. right-wing media's unearthing of a social media post from Bergdorf in which she called out racism and white supremacy.

L'Oréal's campaign launched on August 27, when the beauty corporation uploaded [a glossy YouTube video advertisement](#) for True Match, a range of foundation that promises to match 98% of U.K. skin tones. True Match is the conglomerate's marquee fall campaign in Britain, and the

brand recruited “23 inspirational individuals” as spokesmodels to promote the makeup range. An inclusive range of British personalities were featured, from radio DJ Clara Amfo and pop singer Cheryl Cole, to British Indian model Neelam Gill, and beauty YouTuber Amena Khan.

As well as the main campaign video, L’Oréal also produced short individual clips for each person featured. In Bergdorf’s — which was removed from YouTube on the morning of September 1 — she appeared dressed in a simple T-shirt and jeans, which accentuated her creamy skin tone and long blonde braids. Over a tinkling piano soundtrack, she said: “It’s great that L’Oréal are doing this now, because diversity is hugely important to me. I mean, it’s why I continue to...do my bit to break down barriers.” In [an Instagram teaser](#), L’Oréal appeared to encourage this kind of self-expression, with a slogan that read: “28 shades, 28 stories. Write yours.”

After the campaign’s launch, the U.K. right-wing tabloid *Daily Mail*— which regularly gives platform to racist hate-speech — did some digging on Bergdorf. With barely contained glee, the newspaper published an article on August 31 (which we won’t link to here), detailing a Facebook post that Bergdorf made in the wake of the Charlottesville white supremacist rally this August. Bergdorf since deleted the post, but it’s been [widely circulated on Twitter](#), and is quoted below in full:

"Honestly I don't have energy to talk about the racial violence of white people any more. Yes ALL white people.

Because most of ya'll don't even realise or refuse to acknowledge that your existence, privilege and success as a race is built on the backs, blood and death of people of colour. Your entire existence is drenched in racism. From micro-aggressions to terrorism, you guys built the blueprint for this s***. Come see me when you realise that racism isn't learned, it's inherited and consciously or unconsciously passed down through privilege.

Once white people begin to admit that their race is the most violent and oppressive force of nature on Earth... then we can talk. Until then stay acting shocked about how the world continues to stay f***** at the hands of your ancestors and your heads that remain buried in the sand with hands over your ears."

Bergdorf delivered some home truths that some may have found hard to hear. But her statement was right on the money. Regardless, in the wake of the *Daily Mail* article — which ran with their headline “L’Oréal model says all white people are racist” — the brand took swift action and terminated their partnership with Bergdorf. On the morning of September 1, the brand [tweeted](#): “L’Oréal champions diversity. Comments by Munroe Bergdorf are at odds with our values and so we have decided to end our partnership with her.”

Appendix D

Fragility Trigger Article Response Measures

Avoidance Items

- (A1) “To what extent do you want to consider Bergdorf’s perspective?”
- (A2) “To what extent do you think you can learn from Bergdorf’s perspective?”
- (A3) “To what extent did you wish to stop reading the article?”
- (A4) “To what extent would you like to hear more of Bergdorf’s perspective at a conference or in a private conversation?”
- (A5) “To what extent would you be willing to listen to a person who agreed with the article?”
- (A6) “To what extent do you feel motivated by Bergdorf’s narrative to consider your own behavior and ideas?”

Defensiveness Items

- (D1) “to what extent do you feel attacked by Bergdorf’s narrative?”
- (D2) “to what extent do you feel Bergdorf is guilty of racism against whites?”
- (D3) “to what extent do you feel unfairly condemned by Bergdorf’s comments?”
- (D4) “to what extent do you feel Bergdorf’s comments are a reasonable complaint?”
- (D5) “to what extent do you feel empathetic of Bergdorf’s narrative?”
- (D6) “To what extent do you feel angry about Bergdorf’s comments?”

Guilt Items

(G1) “To what extent do you feel *guilty* about the benefits and privileges that you receive as a White American after reading this article?”

(G2) “To what extent do you feel *upset* about the benefits and privileges that you receive as a White American?”

(G3) “To what extent do you feel *a sense of injustice* about the benefits and privileges that you receive as a White American after reading this article?”

(G4) “To what extent do you feel guilt due to your association with the White race after reading this article?”

(G5) “To what extent do you feel *guilty* about the past and present social inequality of other racial/ethnic groups in the United States after reading this article?”

(G6) “To what extent do you feel *a sense of injustice* about the past and present social inequality of other racial/ethnic groups in the United States after reading this article?”

(G7) “To what extent do you agree with Bergdorf’s assertion that social inequality exists between White and Black Americans?”

Appendix E

Article Titles

Constructive Engagement

1. “U.S. owes black people reparations for a history of ‘racial terrorism,’ says U.N. panel. Here’s why they’re right.”
2. “Police Brutality in America: 14 Recent Cases That Show How Often Cops Aren’t Held Accountable”
3. “7 Reasons why Claiming to not see Race Contributes to Racism Instead of Solves It.”
4. “Oh no, did I really just say that?!”: What to do when you accidentally commit a microaggression”

Avoidance

1. “The Fastest-Growing Cities in the US: The Latest Numbers”
2. “Mila Kunis and Ashton Kutcher won’t be giving their children Christmas presents this year. Are most parents doing Christmas wrong?”
3. “‘Star Wars: The Last Jedi’: Movie’s Own Director says Don’t Watch New Trailer Because of Spoilers”
4. “The Octopus: Squishy Blob of Tentacles or Genius Mastermind?”

Defensiveness

1. “Colin Kaepernick protest disrespects American flag”
2. “7 Reasons Why Focusing on Race Divides People Rather than Unites Them”

3. “Anti-Police Protest Looting Causes Thousands of Dollars of Damage in Chicago”
4. “Affirmative Action: New-age racism?”

Tables

Table 1

Correlations Among Types of White Fragility Responses to Fragility Trigger Article
Among Whites

	1	2	3
1. Average Guilt	-		
2. Average Defensiveness	-.55***	-	
3. Average Avoidance	-.55***	.67***	-

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 2

Means and Standard Deviations for Reported Mindset by Article Choice Group among
Whites

Article Group	<i>M</i>	<i>SD</i>
Constructive	5.39	1.12
Engagement		
Avoidance	5.01	1.22
Defensiveness	5.00	1.22