

Misperceived Norms About Diversity and Inclusion

By

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A dissertation submitted in partial fulfillment of
the requirements for the degree of

Doctor of Philosophy

(Psychology)

at the

UNIVERSITY OF WISCONSIN-MADISON

2023

Date of final oral examination: 6/7/2023

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Acknowledgements

My dissertation, and more generally, my journey as a graduate student, could not have been possible without the help from numerous individuals. First, I would like to thank my graduate advisor, Dr. Markus Brauer, who, starting in my first year of graduate school, set me off on a path of examining how social norms messaging influences perceptions of and engagement in inclusive intergroup behavior. This program of research led me to study pluralistic ignorance as it relates to diversity, equity, and inclusion (DEI). The research conducted for my dissertation was done in collaboration with Dr. Brauer and he provided invaluable guidance during the preparation of this dissertation. I also give him credit for opening my eyes to the reality that improving DEI in society is not only done by reducing negative intergroup attitudes and behavior, but that being proactive in engaging in inclusive behavior is also key player that is not emphasized enough. I also want to thank the other members of my committee, Drs. Kristin Shutts, Kate Walsh, and Marie-Louise Mares, for their guidance and support of my dissertation and professional development. Additionally, I want to thank previous members of my committee who helped shape my research earlier on in graduate school, Drs. Yuri Miyamoto and María Triana.

My research was also largely shaped and supported by the faculty, post-docs, graduate students, and lab managers in the social area of the Department of Psychology. I thank them for all the feedback and encouragement they have provided throughout the years. My research could also not have been possible without the help from numerous administrative staff in the Department. Without them, problems would not have been solved and my research would not have gotten done.

I would also like to thank the current and past graduate student members of my advisor's lab, Sophia Winkler-Schor, Ben Douglas, Kendall Holley, and Drs. Mitchell Campbell and Sarah Gavac, as well as the current and past lab managers, Kevin Kennedy, Kira Means, Gil Moreu, and Jordan Schwakopf, who I have had the blessing of working alongside with throughout my years as a graduate student. They have been an amazing source of support for me personally and professionally, and I am happy to call them friends. I have also been fortunate to have worked with many awesome undergraduate research assistants (too many to name here) who have not only contributed to the progress of my research but helped me realize my passion for mentorship.

Next, I want to extend my appreciation to Dr. Morton Ann Gernsbacher who I was a teaching assistant for earlier on in graduate school. I could always rely on Dr. Gernsbacher's continued support and encouragement throughout graduate school even when I was no longer her teaching assistant. Dr. Catherine Marler was also a great source of support and encouragement starting from the time I worked with her on the Department's Climate and Diversity Committee. Her leadership of the committee and allowance of the graduate student members of the committee to pursue initiatives helped me realize my passion for service in the realm of DEI which ultimately led me to pursue a career in DEI consulting.

I further want to thank my undergraduate research advisors, Drs. Thomas Carpenter and Mícheál Roe, for helping me develop my interests in research and pursue graduate school. I could not be where I am without their guidance and encouragement.

I could not have dreamed of attending graduate school and obtaining a Ph.D. without my friends and family. My parents, Kyu-mi and Michael Isenberg, sacrificed so much for my education, ensured that all my needs were met, gave me a safe space to learn and grow, and continually prayed for my well-being. They are my greatest source of motivation and I hope I

can now help provide for them a life they could only have dreamed of. My sister, Ruth Isenberg, is another source of motivation and deserves so much credit. I always wanted to be as cool and smart as her when we were kids, which eventually led me to discover my own passion for learning and my own path to graduate school. Living with her as we both navigated through graduate school together at the University of Wisconsin-Madison was the optimal environment for me to pursue my degree and I look forward to witnessing her continued growth as a scientist and educator. My brother, Toby Peintok, is another important source of support and encouragement and I am deeply grateful for his presence in my life.

Lastly, I want to thank God for calling to DEI work and guiding me in ways I probably do not even know. My faith has been a major factor in everything I have pursued in my life. In moments where I found myself lost, frustrated, confused, and about to give up, I always ended up having my prayers answered and with newfound passion. I feel called to utilize my knowledge and expertise in research related to DEI to help fight social injustices and make society better for those belonging to marginalized groups. I used to think it was unrealistic to have a job that I am passionate about, but here I am finding that it is possible.

Abstract

Normative attitudes about diversity and inclusion that individuals perceive from their peers are highly consequential for how one interacts with outgroup members. Norms signal what behavior is appropriate in a given situation. Therefore, it is important that these norms represent support for diversity and inclusion. But what is the general public's attitude about diversity and inclusion, and do individuals form accurate perceptions of their peers' attitudes? When people form inaccurate perceptions of their peers' attitudes, this is known as pluralistic ignorance. In five studies, I found that Americans tend to misperceive their peers' attitudes about diversity and inclusion, specifically underestimating how many Americans support diversity and inclusion. I also identify potential causes of this pluralistic ignorance (i.e., demographic characteristics and media use, habits, and beliefs), what the potential consequences are for intergroup behavior that result from this pluralistic ignorance (i.e., self-silencing and intentions to engage in inclusion), and whether correcting this pluralistic ignorance by presenting individuals with accurate information about Americans' support for diversity and inclusion results in greater support for diversity and inclusive behavior. I further provide evidence to rule out a potential alternative explanation for the pluralistic ignorance observed in the pilot study, which is that Americans tend to estimate high support for any position presented to them about their fellow Americans. The results from these five studies contribute to the field's understanding of how prejudice and discrimination persist in society and provide a new direction for the study of how to improve intergroup relations.

Keywords. pluralistic ignorance, social norms, intergroup attitudes, intergroup behavior, diversity, and inclusion

Misperceived Norms About Diversity and Inclusion

Indirect forms of prejudice (e.g., aversive racism) are more commonplace than explicit forms of prejudice (Dovidio & Gaertner, 2004). Given the more indirect nature of prejudice, it is difficult for the average person to form an accurate perception of their peers' opinions on issues related to diversity and inclusion. People draw conclusions about their peers by inferring their attitudes from sources such as their peers' public behavior, statements their peers make, and the media (Prentice & Miller, 1993). But what happens if these sources poorly reflect the population's true attitudes about diversity and inclusion? The phenomenon of misperceiving one's peers' attitudes has been termed pluralistic ignorance, which can have serious consequences for individual behavior (Sargent & Newman, 2021).

Individuals often use cues from their environment and social contexts to determine how to behave in various situations. One of these cues is their peers' behavior (Cialdini & Goldstein, 2004). Thus, it matters greatly what behavioral information individuals draw from their environment and social contexts. Regarding intergroup behavior, if the salient cues are ones of exclusion, avoidance, and indifference toward individuals belonging to marginalized groups, these behaviors will likely be perpetuated by the individuals perceiving them.

An important question to explore is: Are the perceptions that people have about their peers' support for diversity and inclusion accurate? Having inaccurate perceptions would mean that US adults are pluralistically ignorant about their peers' views on topics related to diversity and inclusion. Another important question to ask is whether individuals tend to overestimate or underestimate their peers' support for diversity and inclusion. If US adults tend to overestimate their peers' support, we expect that individuals are already engaging in frequent inclusive intergroup behaviors. However, if US adults underestimate their peers' support for diversity and

inclusion, then we would expect individuals to be engaging infrequently in inclusive intergroup behaviors—although people’s pro-diversity attitudes would normally cause them to behave inclusively, they do not because they incorrectly think that their peers are not supportive of diversity. If the latter is true, it is important to correct this misperception for the future improvement of intergroup relations. Other important questions related to pluralistic ignorance about support for diversity and inclusion include: What are the potential factors that cause pluralistic ignorance to develop? How does pluralistic ignorance influence intergroup attitudes and behavior? And can we correct pluralistic ignorance as a means to influence intergroup behavior? In this work, I explore all these questions.

Pluralistic Ignorance

Pluralistic ignorance has been observed in social psychological research for almost a century. In 1931, Katz and Allport found that despite most members of college fraternities privately supporting the admission of Black students into their fraternities, Black students were denied admission because fraternity members incorrectly perceived that a majority of their peers did not want to include the Black students. They called this phenomenon “pluralistic ignorance”—occurrences when most people in a group secretly do not support a perceived norm but believe others endorse it (Miller & McFarland, 1987).

Since the term was coined, pluralistic ignorance has been re-defined in a variety of ways. Miller and McFarland (1987) defined pluralistic ignorance as the perception that similar behavior of oneself and one’s peers is caused by different internal states or motivations. Similar to the fundamental attribution error (Ross, 1977), individuals tend to believe that others’ behavior reflects personal dispositions, whereas their reason for performing the same behavior is due to their social context rather than their personal attitudes. O’Gorman (1986) considered pluralistic

ignorance to be caused by incorrect beliefs about the attitudes and behavior of others shared by multiple individuals. Geiger and Swim (2016) defined pluralistic ignorance as the tendency for individuals in a group to misperceive their fellow group members' opinions and believe that fewer members share the same opinion as them than is true. Sargent and Newman (2021) described pluralistic ignorance as most people in a group perceiving that their own attitudes and opinions are systematically different from those of their peers, resulting in either an underestimation or overestimation of the commonality of their peers' attitudes and opinions.

What the various definitions of pluralistic ignorance have in common is that they describe the phenomenon as simply a misperception of one's peers' opinions, which is consistent with Prentice and Miller's definition (1993). Because norms are inferred largely from others' public behavior, and because behavior is weakly reflective of an individual's true attitudes (Kollmus & Agyeman, 2002), discrepancies develop between people's perceived level of agreement with an attitude concerning a topic and the actual level of agreement people have with that attitude.

Predictors and Potential Causes of Pluralistic Ignorance

Little is known about the factors that cause pluralistic ignorance as there is scarce experimental research on this subject (Sargent & Newman, 2021). Fortunately, research on information availability, social comparison, and cognitive biases provide insights into potential causes for the development of pluralistic ignorance.

Information Sources and Availability

One potential cause of pluralistic ignorance is the effect of vocal minorities on the perceptions of an entire group (Mendes et al., 2017). Schanck (1932) described how members of a group who are vocal about their minority opinions can bias perceptions of attitudes among the

group, resulting in people considering the minority opinion more common than it really is. Additionally, if an influential member of a group voices a minority opinion, then it can lead to the development of pluralistic ignorance due to members of the group viewing the influential member's opinion as representative of their group (Kjeldahl & Hendricks, 2018). So, if individuals who are not very supportive of diversity and inclusion are (A) a numerical minority and (B) very vocal about their bigoted opinions, it could be that people underestimate the general public's support for diversity and inclusion.

The influence of media on public opinion is another potential cause of pluralistic ignorance that has frequently been discussed in the literature. Leviston and colleagues (2012) describe how systematic biases in media reporting of issues can lead to individuals misperceiving the popularity of certain opinions. For example, regarding attitudes toward climate change, partisan polarization of climate change represented in media (namely that conservative-leaning media is dismissive of climate change being human-induced and liberal-leaning media frames climate change as threatening) shapes how individuals view climate change and often influences individual behavior to be consistent with perceptions of public attitudes as a result (Bolsen & Shapiro, 2018). An example of media coverage related to the domain of diversity and inclusion is the coverage of the Black Lives Matter (BLM) movement. Media in general has a history of siding with the status quo, portraying protesters in unrelatable ways, over sensationalizing events, and not communicating the purpose or motivators of the protests, which is consistent with media's portrayal of BLM protests (Umamaheswar, 2020).

It is unclear whether liberal- and conservative-leaning media portray events related to diversity and inclusion in different ways such as with climate change. However, if media in general frequently report on acts of discrimination but rarely report on the widespread support

for diversity and inclusion efforts, consistent with how media was reported on the BLM movement (Umamaheswar, 2020), then consumers of these media are likely to develop the incorrect perception that most Americans do not care about diversity and inclusion. If there are differences in reporting of events related to diversity and inclusion based on the political leanings of the media source, then it may be that pluralistic ignorance differs depending on the source of media being consumed. Alternatively, individuals consuming liberal- or conservative-leaning media may still be similarly pluralistically ignorant about support for diversity and inclusion but due to individual differences in beliefs about how others react to media and perceptions of biases in media.

The perception that others are more susceptible to media influence than oneself (i.e., third person perceptions of media influence) has previously been linked to pluralistic ignorance (Perse, 2001). Park and colleagues (2007) predicted that this perception is a cause of pluralistic ignorance due to individual perceptions that others are more affected by attitudes represented in media, resulting in an overestimation of how popular a particular attitude is in the real population. In the authors' study about the role of mass media on preferences for thin female body types, they found that both men and women overestimated people's preference for a thin female body type—a perfect example of pluralistic ignorance. Moreover, those who believed they were less influenced by the media than others displayed stronger pluralistic ignorance. About diversity and inclusion, frequent coverage of discrimination in media may lead individuals to think that fewer people support diversity and inclusion than is the reality. Especially those who believe others are influenced more strongly by media than oneself may underestimate support for diversity and inclusion to a greater extent.

In addition to perceiving that others are more influenced by media than oneself, the perception that media is hostile, or unfavorable, toward one's attitudes and positions on personally important matters affects how people perceive their peers (i.e., hostile media bias; Tsfaty & Cohen, 2012). Gunther and Chia (2001) found that for individuals on polarized sides of a controversial topic (using primates in laboratory research), both sides tended to believe that media was unfavorable toward their attitudes, which predicted greater misperceptions of public attitudes on the topic. Thus, it would be important to examine whether individuals perceive media to be biased in favor of or against their own attitudes about diversity and inclusion (and potentially political positions, too, given that they may be closely tied to attitudes about diversity and inclusion like climate change is) and how this may influence pluralistic support for diversity and inclusion in the population.

Furthermore, lack of conversation about particular issues is considered a potential cause of pluralistic ignorance (and a potential consequence, as discussed later; Leiserowitz et al., 2015; Noelle-Neumann, 1974). If individuals refrain from talking with others about an issue, they may develop misperceptions of public attitudes and thus become pluralistically ignorant. This ignorance may then cause these individuals to talk even less to others about their attitudes on the topic. Noelle-Neumann (1993) coined the term "spiral of silence" to describe peoples' tendency to self-silence because they think that their peers have different attitudes. Self-silencing is also thought to be motivated by impression management because individuals want to be evaluated positively, and speaking out about a potentially unpopular opinion may result in one being viewed negatively (Norgaard, 2011). Fear of being seen as incompetent about a subject has also been shown to motivate self-silencing (Geiger & Swim, 2016). If conversations about diversity

and inclusion are not commonplace within a community, the perception that others do not care about the topic is likely to develop, leading to the spiral of silence.

The sources of information from which individuals derive their peers' thoughts about diversity and inclusion will determine whether these individuals are pluralistically ignorant about these issues. In particular, vocal minorities, media, and conversations (or rather lack of) are key components to explore when examining how pluralistic ignorance forms when it comes to diversity and inclusion. These components may also provide insight into what diversity and inclusion interventions should target to improve intergroup attitudes and behavior.

Social Comparison and Cognitive Biases

Pluralistic ignorance has connections to social identity theory and social comparison (Festinger, 1954; Tajfel & Turner, 1982). Individuals are driven to maintain identification with their ingroup, which motivates conformity to group norms regardless of private acceptance of the norm (Halbesleben et al., 2007). Pluralistic ignorance can thus be considered an error in social comparison because individuals have incorrect norm information to which they are comparing their own attitudes and behavior.

Related errors include the so-called "false consensus bias"—the belief that more people share one's own attitude about a topic than the opposite attitude (Gunther & Chia, 2001)—and the "false uniqueness bias"—the belief that fewer people share one's own attitude about a topic than the opposite attitude (Mendes et al., 2017). It is debatable if false consensus and false uniqueness biases are potential causes of pluralistic ignorance. The argument for why they should cause pluralistic ignorance is that they are individual-level cognitive biases in how individuals process information. Since individuals are motivated by the need to make positive social comparisons, these biases lead people to misinterpret others' attitudes and behaviors

(Miller & McFarland, 1987). Thus, in aggregate, people develop pluralistic ignorance about the attitudes that most of their peers have.

However, several studies suggest that pluralistic ignorance and the false consensus and/or false uniqueness biases are distinct constructs that can occur simultaneously and independently of each other. Thus, these biases are likely not causing pluralistic ignorance but instead simply coexist. In one study about climate change, Leviston, Walker, and Morwinski (2012) found that participants tended to overestimate the number of people who doubted the existence of climate change (pluralistic ignorance). They also found that individuals tended to estimate that their own opinion about climate change was more common than how other people estimated the popularity of said opinion (false consensus). Furthermore, they found that that the stronger one's false consensus bias was, the less likely they were to change their opinions about climate change.

The tendency for individuals to show false uniqueness and false consensus biases also differs for individuals with liberal versus conservative views. In a study where participants indicated their agreement with 41 statements and estimated the percentage of those with similar political beliefs whom they thought would agree with them, liberal participants underestimated their similarity to other liberals (false uniqueness) and conservatives overestimated their similarity with other conservatives (false consensus; Stern et al., 2014). These findings were also explained by a fundamental difference in how much liberals and conservatives wished to feel unique. Pluralistic ignorance occurs for both liberals and conservatives on opinions deemed more progressive (e.g., climate change, LGBTQ rights), but the ignorance is likely motivated by the different uniqueness needs, with liberals wanting to be more unique. For example, a study about support for same-sex female parenting revealed that both liberal and conservative participants demonstrated pluralistic ignorance, but that liberal participants were more likely to show the

false uniqueness bias and conservative participants were more likely to show the false consensus bias (Eisner et al., 2020).

Although pluralistic ignorance has been studied in numerous other domains, few studies have examined it in the context of diversity and inclusion. It is unknown whether individuals have formed accurate perceptions of how much their peers support diversity and inclusion. Given past research on pluralistic ignorance and its potential predictors, particularly with regard to what is considered liberal views, I predict that there is pluralistic ignorance about diversity and inclusion in the US, specifically that individuals underestimate their fellow Americans' support. I expect that pluralistic ignorance is greater for people belonging to certain demographic groups versus others. This is because group membership and identification influence the social interactions that individuals have (an important source of information for peer attitudes) and individuals who do not identify as members of historically marginalized groups (i.e., White adults) are less likely to have conversations about inequality (Barroso, 2019). Additionally, I predict that both Democrats and Republicans demonstrate this pluralistic ignorance based on prior research showing that these groups tend to be similarly pluralistically ignorant but for different reasons (Eisner et al., 2020; Stern et al., 2014). I also expect that information individuals are exposed to regarding intergroup relations in the media and how individuals interact with media predict (and potentially cause) pluralistic ignorance about support for diversity and inclusion. I also hypothesize that the more one believes others are influenced by media compared to oneself, the more they will demonstrate pluralistic ignorance. Lastly, differences in information about intergroup relations between conservative and liberal media sources should predict pluralistic ignorance differentially for conservatives and liberals.

Pluralistic Ignorance: Consequences

Most research has only speculated the consequences of pluralistic ignorance, again due to the lack of experimental research done on the phenomenon. However, there are a few important consequences to consider that are highlighted in the literature. One potential consequence that has been theorized is that pluralistic ignorance causes people to adjust their attitudes toward what is perceived as the normative attitude among their peers because they experience cognitive dissonance and/or they believe the majority attitude is likely the correct attitude to have, resulting in reduced pluralistic ignorance (Prentice & Miller, 1993). However, this effect is not likely true due to the existence of pluralistic ignorance itself—if everyone adjusted their attitudes to perceived norms, pluralistic ignorance would not be observed.

Another consequence is behavioral conformity to the perceived normative behavior of one's peers without changing one's attitudes (Geiger & Swim, 2016; Kjeldahl & Hendricks, 2018). The most typical example of behavioral conformity due to pluralistic ignorance is the spiral of silence, which was discussed above as a predictor of pluralistic ignorance. Pluralistic ignorance causes the spiral of silence in addition to potentially being a result of silence (Taylor, 1982). The spiral of silence is a recursive process that coincides with pluralistic ignorance since self-silencing causes others to misperceive the attitudes and opinions of others (Geiger & Swim, 2016). Geiger and Swim (2016) found that those who underestimated others' concern over climate change were less likely to talk to others about the subject and that correcting this pluralistic ignorance led to increased willingness to discuss the subject. In a study on pluralistic ignorance about hook-up behavior among college students, Lambert and colleagues (2003) found that male and female students perceived their peers to be more comfortable with hook-up behaviors than they were themselves, potentially leading students to feel pressure to engage in

hook-ups, not resist unwanted sexual advances, and/or abstain from speaking up about unwanted sexual encounters.

Furthermore, pluralistic ignorance poses a threat to engagement in collective action when faced with a crisis. Because individuals rely on cues from others and their environments on how to behave in response to problems, inaction from others in the presence of a problem will signal to others that there is not a legitimate problem or that action does not need to be taken (Latané & Darley, 1970). The threat pluralistic ignorance poses to collective action has been proposed as an explanation for why the US government has not enacted major policies to combat climate change—despite majority support for climate action, discussions about climate change (or the lack of) reflect a perspective that climate change is not a serious concern for most (Sparkman et al., 2021).

Given that lack of inclusion continues to be a pervasive problem in the US, it is important that we examine the role of pluralistic ignorance in the perpetuation of and solution for this issue. If through the proposed research I find that pluralistic ignorance exists about support for diversity and inclusion and is motivating individuals to not discuss the topic, not address discrimination after witnessing it, and not engage in inclusive behavior, then theory and practice around improving intergroup relations should shift focus to examining, preventing, and correcting these detrimental misperceptions.

Social Norms

Information about what most people in a group do and/or believe is appropriate are considered social norms (Miller & Prentice, 2016). As briefly mentioned above, social norms have a large impact on individual behavior. The Focus Theory of Normative Conduct posits that social norms, when made salient in one's environment, result in norm-conforming behavior

change (Cialdini et al., 1990). This conformity is due to an inherent need to belong—people tend to behave similarly to those around them in order to “fit in” or avoid social rejection (Baumeister & Leary, 1995). Social norms are typically defined by the most common behavior among people in a group (Prentice & Miller, 1993). Factors that increase conformity to social norms include fear of social isolation, feelings of guilt or shame after being compared to others, being in a highly cohesive group, being in a group that values high agreement with authorities, and resource availability (Miller & Prentice, 2016). There are a variety of social norm types, the two most prominent types in the literature being descriptive (i.e., what most people do) and injunctive (i.e., what people ought to or ought not to do; McDonald & Crandall, 2015).

Social norms messaging is an intervention strategy used to make certain norms salient in an individual’s environment with the goal of influencing that individual’s behavior to be consistent with the norm (Rhodes et al., 2020). Social norms messaging has been applied in a wide variety of areas to change behaviors such as drinking and driving, college binge drinking, and environmental sustainability (e.g., Goldstein et al., 2008; Perkins et al., 2010; Schultz et al., 2007). This body of literature has supported social norms messaging to be an effective means of influencing behavior.

The adoption and development of prejudiced attitudes is highly influenced by one’s need to conform to their peers’ attitudes and behavior (McDonald & Crandall, 2015). If a person grew up in a community where it was common to have negative perceptions of outgroups and behave in discriminatory ways, they are likely to adopt the same attitudes and behaviors. However, if these people transition to an environment where the norms are more accepting of outgroups, prejudice is considered unacceptable, and they are motivated to suppress their own prejudices, they are likely to adapt to the new norms (Crandall et al., 2002). If positive intergroup attitudes

and behaviors are communicated as the norm in any given environment, individuals would conform to those positive norms. There is some research to support that this conformity occurs. In a randomized control trial conducted in college classrooms, messages about students valuing diversity and inclusion resulted in more positive classroom climates, improved intergroup attitudes, increased sense of belonging for students from marginalized groups, and a reduction in the achievement gap between students from marginalized and non-marginalized groups (Murrar et al., 2020).

Social norms messaging has also been used to correct pluralistic ignorance. By providing individuals with accurate information about how most of their peers think and behave, their previously inaccurate perceptions of their peers should be corrected and the negative consequences of pluralistic ignorance, such as the spiral of silence, should be mitigated (Geiger & Swim, 2016; Rios & Chen, 2014). I propose that social norms messaging can also be applied to pluralistic ignorance about support for diversity and inclusion as a means to correct the misperceived norm, reduce self-silencing intentions, and increase engagement in inclusive behavior.

Present Research

For the present research, I was interested in whether Americans are generally pluralistically ignorant regarding the population's support for a wide array of diversity- and inclusion-related opinions and whether the direction of this pluralistic ignorance, if it exists, is an under- or over-estimation of support. I was additionally interested in the following research questions provided that pluralistic ignorance among Americans is confirmed in the pilot study: What predicts and are the potential causes of pluralistic ignorance about diversity and inclusion? What are the consequences of pluralistic ignorance about diversity and inclusion—does it predict

non-inclusive intergroup behavioral intentions? Will pluralistic ignorance about support for diversity and inclusion be demonstrated when individuals are asked about their agreement with statements that are critical of diversity initiatives and that are more agreeable to conservatives? This question additionally aims to address any potential concerns over the tendency for individuals to assume high support among one's peers for any position presented to them. Lastly, is it possible to use social norms messaging to correct pluralistic ignorance and potentially reduce self-silencing, lead to conformity with the corrected norm perceptions, and increase inclusive behavior as a result?

The present paper describes five studies to answer the above questions. Here, I will give a brief overview and then describe each study in detail. In a Pilot Study, I examined the presence and direction of pluralistic ignorance about diversity and inclusion among Americans. In Study 1, I examined predictors of pluralistic ignorance about diversity and inclusion based on review of the literature (i.e., media use, habits, beliefs, and misrepresentations) and examined their relationship with misperceptions participants have about their peers' support for diversity and inclusion. I also measured several demographic characteristics (e.g., race, gender, political affiliation, and state of residence) to examine which groups of people in the US display the greatest and least level of pluralistic ignorance about diversity and inclusion. Lastly, I measured potential outcomes of pluralistic ignorance specific to diversity and inclusion that one would expect if individuals self-silence about the topic such as likelihood of confronting discrimination and intentions to behave inclusively.

Another goal of the present research was to exclude a concern with asking individuals for their perceptions of population agreement with various positions: namely that individuals perceive agreement in the population with whatever statement they are presented with. To

address this concern, Study 2a included statements that are not supportive of and reflect opposition to diversity and inclusion efforts to measure pluralistic ignorance. Additionally, Study 2b required individuals to estimate the agreement of others who voted the same as or different from themselves in the 2020 Presidential Election with statements that both support and do not support diversity and inclusion to further examine how well individuals estimate the attitudes of their peers who behave (i.e., vote) similarly and dissimilarly to themselves.

Study 3 was an experiment where I manipulated social norm information about diversity and inclusion in the US. The goal was to observe whether providing accurate information about Americans' attitudes and behaviors regarding diversity and inclusion result in decreased pluralistic ignorance, and therefore a reduction in self-silencing-related intentions, conformity to corrected norm perceptions, and an improvement in inclusive intergroup behavior.

In Studies 1, 2a, and 3, I additionally examined whether the degree and direction (i.e., over- vs. underestimation) of pluralistic ignorance demonstrated in the pilot study replicate. These five studies advance the field's understanding of pluralistic ignorance as it relates to intergroup phenomena, its causes, its consequences, and how to correct for it as a means of influencing intergroup outcomes.

Pilot Study

The extent and direction of which individuals misperceive the norms about diversity and inclusion in the US has not been studied. Therefore, the purpose of this Pilot Study is to examine this pluralistic ignorance and is thus exploratory. I did not have any prior hypothesis about whether Americans would be pluralistically ignorant with regards to public opinion on diversity and inclusion; even further, I had no expectations for whether Americans would underestimate or overestimate support for diversity and inclusion in the population. However, previous research

on misperceptions of support for similarly politically polarizing subjects (e.g., climate change) might suggest that support for diversity and inclusion is underestimated among Americans.

Methods

Participants. This study consisted of a sample of the US recruited on Prolific ($N = 1,001$). See Table 1 for a demographic breakdown of the sample.

Measures. Participants were asked to indicate their agreement (“Yes, I agree” or “No, I disagree”) with 16 statements related to diversity and inclusion in the US. Sample statements are “I support the Black Lives Matter Movement” and “It is important that employers ensure their company/organization fosters an inclusive workplace climate” (see Table 2 for the full list). They also indicated the percent of Americans they thought agree with the same statements. They were then asked how diverse and how liberal or conservative they perceived their community to be. Lastly, they completed several demographic items (e.g., age, gender, race, political affiliation). I calculated an overall pluralistic ignorance score for each individual (see below) by subtracting the percent of perceived US agreement for each statement from the percent of participants who agreed with the respective statement (a constant value across participants), and then averaging these difference scores across all statements.

$$\text{pluralistic ignorance}_{n_statement} = (\% \text{ who agree}_{n_statement} - \text{estimated } \% \text{ of US who agree}_{n_statement})$$

$$\text{pluralistic ignorance}_{\text{overall}} = \text{sum}(\text{pluralistic ignorance}_{n_statement}) / \text{total } n_statements$$

Results and Discussion

Participants strongly underestimated the degree to which Americans agreed with the 16 statements (see Table 2). Pluralistic ignorance was present with every item and varied between 19% and 34%. This result indicates that pluralistic ignorance does indeed exist when it comes to

views about diversity and inclusion in the US. It also indicates that supporting diversity and inclusion in the US is more of a norm than people are aware of. If people were aware of the accurate norms about diversity and inclusion, they likely would behave more inclusively, and they should be more likely to converse about the importance of diversity and inclusion with others.

Table 1*Demographic Breakdown for Each Study*

Demographic Category and Group	Pilot	Study 1	Study 2a	Study 2b	Study 3
Total Sample Size (N)	1,001	2,010	500	944	839
Average age (in years)	45.32	48.32	35.64	39.92	40.46
Gender					
Men	48.45%	46.57%	50.00%	48.83%	49.46%
Women	50.03%	52.39%	48.40%	49.05%	47.68%
Non-Binary & Other	1.20%	1.04%	1.40%%	2.12%	2.86%
Race & Ethnicity					
Asian / Asian American	6.40%	7.51%	10.60%	6.89%	NA
American Indian Alaska Native	0.07%	1.49%	0.40%	0.32%	NA
Black / African American	13.19%	9.90%	7.00%	4.13%	NA
Hispanic / Latino/a/x	NA	11.59%	7.60%	4.24%	NA
Middle Eastern / North African / Arab	0.03%	0.00%	0.40%	0.42%	NA
Native Hawaiian / Other Pacific Islander	0.00%	0.20%	0.00%	0.21%	NA
White	73.93%	60.85%	62.20%%	76.48%	100%
Multiple Races/Ethnicities	3.60%	7.91%	11.00%	6.78%	NA
Other	1.90%	5.47%	0.80%	0.53%	NA
Political Affiliation - Simplified					
Democrat	50.35%	33.58%	73.20%	50.74%	56.02%
Independent	31.87%	32.84%	11.60%	7.94%	32.06%
Republican	17.48%	30.55%	15.20%	41.31%	11.92%
Vote in 2020 Presidential Election					
Joe Biden	62.24%	40.35%	64.00%	51.80%	63.53%
Donald Trump	20.18%	35.82%	13.40%	48.20%	13.11%
Howie Hawkins	0.60%	0.50%	0.80%	NA	0.48%
Jo Jorgenson	2.30%	1.14%	1.40%	NA	2.86%
Other	1.20%	1.09%	1.60%	NA	1.79%
Did not vote	13.29%	18.51%	18.80%	NA	18.12%
Prefer not to answer	NA	2.54%	NA	NA	0.12%

Note. “NA” indicates that this group was not measured in the study. Political Affiliation is the simplified version of the 7 total categories of political affiliation that was measured. Independents and those who identify as “other” who were Democratic-leaning are categorized as Democrats, and Independents and those who identify as “Other” who are Republican-leaning are categorized as Republicans. Independents and those who identify as “Other” who do not lean Democratic or Republican are categorized as Independents. Study 3 is an all-White sample (intentionally).

Table 2*Degree of Pluralistic Ignorance for 16 Diversity- and Inclusion-Related Statements in the Pilot*

Statement	% Actual Agreement	% Perceived Agreement	Difference
1. I support affirmative action.	68%	49%	19%
2. I support the Black Lives Matter movement.	68%	46%	22%
3. It is important to develop affordable housing options in affluent neighborhoods to promote racial integration.	67%	44%	23%
4. I frequently try to create a welcoming environment for individuals from other racial or ethnic groups in my community.	86%	61%	25%
5. Discrimination against minority groups is still a serious problem in the US.	84%	58%	26%
6. We should make major efforts to reduce the White-Black wealth gap in half by 2035.	74%	48%	26%
7. It is important to promote diversity and inclusion in the workplace.	89%	62%	27%
8. I make an effort to behave in an inclusive and respectful way when I interact with individuals belonging to a minority group.	95%	67%	28%
9. I am in favor of policies that protect members of minority groups from discrimination.	94%	65%	29%
10. Racial diversity benefits the country.	90%	61%	29%
11. It is important that employers ensure their company/organization fosters an inclusive workplace climate.	92%	63%	29%
12. I am not bothered by the fact that White people will eventually be a numerical minority in the US.	79%	49%	30%
13. It is okay with me if my state taxes are used for college scholarships for students from minority groups so that	78%	48%	30%

they can attend the state's public university.

14. It is important to support businesses owned by Black people and other non-White people.	85%	54%	31%
15. I support my employer's pro-diversity initiatives. (N = 64 for self-agreement)	90%	59%	31%
16. It is okay with me if my local taxes are used for programs that help students from minority groups succeed in school.	85%	51%	34%
Average	82%	55%	27%

Note. Percentages in the "Difference" column represent the degree of average pluralistic ignorance demonstrated for each statement. Positive percentages indicate underestimation of the population.

Study 1

Study 1 had several aims. One aim of Study 1 was to examine predictors of pluralistic ignorance that have been suggested in the literature and to better understand what may be causing underestimation of population support for diversity and inclusion to occur. The second aim was to identify the demographic characteristics of individuals who display this pluralistic ignorance. The third aim was to examine whether pluralistic ignorance about diversity and inclusion predicts certain intergroup-related behavioral intentions, specifically speaking out against discriminatory behavior and engaging in inclusion. Since this study was correlational, I was not able to draw causal conclusions. However, the study provides insight into the role media plays in misperceiving one's peers' attitudes and behaviors, who is most likely to demonstrate pluralistic ignorance about diversity and inclusion, and the potential intergroup consequences of this pluralistic ignorance.

For this study, I hypothesized (H1) that on average, individuals will underestimate the extent to which Americans support diversity and inclusion, thus demonstrating pluralistic ignorance and replicating the results from the Pilot Study. I was also interested in exploring the demographic characteristics that are associated with pluralistic ignorance about support for diversity and inclusion. Therefore, I recorded demographic information including participants' age, race, gender, and political affiliation. These analyses were largely exploratory given the lack of research specifically on pluralistic ignorance related to diversity and inclusion, but based on broader pluralistic ignorance research, I hypothesized (H2) that White US adults in general will hold greater pluralistic ignorance compared to individuals of other racial groups as race-related issues are less frequently a topic of conversation for White adults compared to people of color (Barroso, 2019) which likely affects how well they know their peers' attitudes about the topic. I

also predicted (H3) that both Republicans and Democrats will underestimate support for diversity and inclusion among Americans, but that this underestimation will be greatest for Republicans compared to Democrats.

The specific predictors I measured in this study fall under the categories of media use, habits, and misrepresentations. Given that there tends to be partisan differences in how progressive issues (e.g., climate change, diversity and inclusion) are discussed in media (Bail et al., 2018), I had four hypotheses about media-related variables that predict underestimation of support for diversity and inclusion among Americans: Underestimation of support for diversity and inclusion among Americans will be predicted by greater use of conservative media sources compared to liberal media sources (H4), less trust in media to provide accurate information (H5), greater perceptions of media in general to be biased in against liberal ideas and values (H6), and stronger belief that others are influenced by media compared to oneself (H7).

Because pluralistic ignorance causes self-silencing (Geiger & Swim, 2016), and perceptions of social norms results in norm-conforming behavior (Miller & Prentice, 2016), individuals who perceive that most of their peers do not support diversity and inclusion should also be less likely to confront perpetrators of discrimination when they witness it and have fewer intentions to engage in inclusive behavior. I measured the likelihood one would confront discrimination in a public setting given three different vignettes, and intentions to behave inclusively toward outgroup members. Thus, I hypothesized that the more individuals underestimate support for diversity and inclusion in the population, the less likely they will confront discrimination and the less they intend to behave in inclusive ways (H8).

I was also interested in exploring the relationship between pluralistic ignorance about diversity and inclusion and aversive forms of prejudiced beliefs (i.e., modern racism and

sexism). Aversive forms of prejudice such as modern racism and sexism consist of the belief that discrimination is no longer a problem as it was in the past and that efforts to reduce it are unnecessary (Morrison & Kiss, 2017; Swim & Cohen, 1997). I was curious about whether these beliefs predict greater or less underestimation of support for diversity and inclusion in the population because those who perceive discrimination to not be a problem may underestimate the importance of the issue to others.

Methods

Participants were recruited using an online Qualtrics panel ($N = 2,010$), which was a sample of the US. A break-down of the demographic distribution of this study's sample—and all the studies' samples—can be found in Table 1. Participants were provided a link to a Qualtrics survey containing the following measures of our variables.

Materials. The following were used to measure pluralistic ignorance, its predictors, and its potential outcomes (full descriptions of materials and scales are provided in Appendix A):

1. *Actual agreement and perceived agreement with statements about diversity and inclusion.* Participants were asked to indicate their level of agreement using a 5-point Likert scale (“Strongly Disagree,” “Somewhat Disagree,” “Neither Agree nor Disagree,” “Somewhat Agree,” and “Strongly Agree”) with six diversity- and inclusion-related statements (e.g., “I am not bothered by the fact that White people will eventually be a numerical minority in the US”). The statements are a subset of the 16 statements shown in Table 2. The statements were chosen because participants in the Pilot demonstrated high levels of pluralistic ignorance about them and they varied in terms of what aspect of diversity and inclusion they were supportive of. For each of the statements, participants were also asked to assign a percent of the US population to each of the five levels of

agreement such that the five percentages add up to 100%. The order of these two tasks were counterbalanced across participants and the presentation order of the statements within each task was randomized for each participant. The degree of pluralistic ignorance for each statement and each participant were determined by computing the difference between the percent of participants in the sample who agree with a statement (those who “Somewhat Agree” and “Strongly Agree”) and the percentage of Americans a participant perceived to agree with that statement (sum of percentages provided for “Somewhat Agree” and “Strongly Agree”). A positive value on this difference score means that the participant underestimated Americans’ agreement with this item, whereas a negative score signifies overestimation.¹ I averaged pluralistic ignorance scores across the six statements to create an overall pluralistic ignorance about support for diversity and inclusion score for each participant ($\alpha = .85$).

2. *Confronting discrimination.* Participants read three vignettes that depict them witnessing discrimination toward a person belonging to a marginalized racial group (see Appendix A). The settings were public places where there are other bystanders. Participants were then asked to rate how likely they would be to confront the perpetrator of discrimination for each vignette on a 5-point Likert scale from “Not likely at all” to “Extremely likely” ($\alpha = .84$).

¹A numerical example of the pluralistic ignorance calculation: Imagine that 70 % of the respondents agree with a given statement (either “Somewhat Agree” and “Strongly Agree”). Let’s further imagine that participant A estimates 25% of Americans agree with that statement, whereas participant B guesses 75% of Americans agree with that statement (either “Somewhat Agree” and “Strongly Agree”). By subtracting the perceived agreement from the actual agreement, one obtains a pluralistic ignorance score of +45% for participant A and -5% for participant B.

3. *Intentions to behave inclusively.* Intentions to behave inclusively were measured using a 10-item scale (e.g., “Spend leisure time with someone from a different social group than you”). Participants rated the likelihood that they would engage in a variety of inclusive behaviors within the next month on a 5-point Likert scale from “Not likely at all” to “Extremely likely” ($\alpha = .93$).
4. *Conservative and Liberal Media Use.* Participants were asked how often from “Never” to “Everyday” they get news in general from a variety of sources (e.g., conservative newspapers and magazines, liberal news sites such as the Huffington Post or Slate). Ratings for use of conservative sources were combined into one Conservative Media Use variable ($\alpha = .84$), and ratings for use of liberal sources were combined into one Liberal Media Use variable ($\alpha = .83$).
5. *Media Exposure to Content Related to Diversity and Inclusion.* Participants were asked how often they unintentionally come across news and information about stories and/or posts related to diversity and inclusion on a 5-point Likert scale ranging from “Never” to “Every day.”
6. *Portrayal of Discrimination as a Serious Issue in Media.* Participants were asked to list their five most frequently used media sources that they get their news and current events information from (e.g., Twitter, CNN, NPR). For each source, participants indicated the degree to which these sources portray discrimination against minority groups to be an important problem in US society on a 5-point Likert scale from “Not a problem at all” to “A major problem” ($\alpha = .88$).
7. *Trust in Media.* Participants were also asked how much they trust their frequently used media sources and other media sources to provide them with accurate information on a 5-

point Likert scale ranging from “Do not trust at all” to “Trust completely.” Additionally, participants were asked about how much they trust three types of media (e.g., social media) to provide accurate information about social issues in the US. The five items were averaged together to create one “Trust in Media” score ($\alpha = .83$).

8. *Media Biases*. Participants rated whether news media appears to be in favor of, neutral to, or against the advancement of diversity and inclusion in the US, as well as the extent to which media is biased in favor of or against liberal ideas and values on 5-point Likert scale from “Extremely biased in favor of” to “Extremely biased against.”
9. *Belief that Others are More Easily Influenced by Media*. Participants rated how much they believe they are influenced by media and how much they believe others are influenced by media on a 5-point Likert scale from “No influence at all” to “a great deal of influence.” I computed a difference score by subtracting the former from the latter. Positive scores indicate a stronger belief that others are more influenced by media than oneself.
10. *Modern Racism*. I used the Modern Racism Scale by McConahay (1986) to measure the extent to which participants perceived racism to no longer be an issue in society. The scale includes six items (e.g., “Discrimination against Black people is no longer a problem in the United States”) rated with a 5-point Likert scale of agreement ranging from “Strongly Disagree” to “Strongly Agree” ($\alpha = .84$). There is an additional item that I decided to exclude due to the language being outdated and no longer relevant.
11. *Modern Sexism*. I used Swim and colleagues’ (1995) Modern Sexism Scale to measure the extent to which participants perceived sexism to no longer be an issue in society. The scale consists of eight items (e.g., “It is rare to see women treated in a sexist manner on

television”) rated with a 5-point Likert scale of agreement ranging from “Strongly Disagree” to “Strongly Agree” ($\alpha = .82$).

12. *Demographics*. Participants were asked to report their age, gender, race, and political affiliation. Political affiliation was measured using the seven categories employed by the American National Election Studies (<https://electionstudies.org/>): strong Democrat, not very strong Democrat, Democratic-leaning Independent, non-leaning Independent, Republican-leaning Independent, not very strong Republican, and strong Republican. The seven categories were collapsed into three broad categories of Democrat, Independent, and Republican for data analysis.

Results and Discussion

As hypothesized, and consistent with the findings from the Pilot Study, participants tended to underestimate how many Americans agreed with the six statements supporting diversity and inclusion. The average overall pluralistic ignorance score reveals underestimation of agreement in the population by almost 13%. Thus, it is evident that Americans generally underestimate how many of their fellow Americans support diversity and inclusion. Establishing this phenomenon has consequences for how we understand the prevalence of prejudice and discrimination and lack of inclusion in the country, particularly that prejudice and discrimination are at least in part maintained by misperceptions of social norms regarding how Americans feel about and react to diversity in the US.

The development of pluralistic ignorance relates to information sources and how individuals process information from their environment. Group membership and identification influence the types of social interactions that individuals experience, and social interactions are a key source of information when it comes to perceptions of attitudes among one’s peers. Thus, I

was interested in which demographic groups had the greatest underestimation of support for diversity and inclusion among Americans. To examine this question, I compared the pluralistic ignorance averages for each group of each demographic category (see Table 3 for means and standard deviations). I expected White participants to demonstrate greater pluralistic ignorance compared to non-White participants since they are less likely to engage in conversations about racial disparities in the US. My hypothesis was supported; White participants underestimated support significantly more compared to non-White participants ($b = 7.53$, $F(1, 2008) = 55.84$, $p < .001$).

I also found that age slightly, but significantly, predicted greater underestimation of support, indicating that the older one is, the more likely they are to underestimate support among Americans. Also, when comparing just men and women to each other, men tended to underestimate support significantly more so than women ($b = -2.66$, $F(1, 1987) = 7.09$, $p = .007$). However, the effect of age and gender on pluralistic ignorance are so small that they likely do no warrant meaningful implications.

I was additionally interested in differences in underestimation between Republicans and Democrats because Republicans are less likely to be supportive of policies and practices related to diversity and inclusion whereas Democrats are known to be more focused on progressive initiatives and social justice (Frimer et al., 2017). I compared the means of pluralistic ignorance scores between the three political affiliation groups using one-way ANOVA with dummy-coded groups (Democrats being the comparison group). I hypothesized that both Democrats and Republicans would underestimate agreement with the diversity- and inclusion-related statements, which the results support—Republicans and Democrats, as well as Independents, underestimated support for diversity and inclusion in the population. My hypothesis that Republicans would be

more pluralistically ignorant compared to Democrats was also supported ($b = 10.25$, $F(1, 2007) = 70.06$, $p < .001$). Democrats were additionally less pluralistically ignorant than Independents ($b = 6.77$, $F(1, 2007) = 33.38$, $p < .001$).

Although there were some differences in underestimation of support for diversity and inclusion among Americans based on demographic characteristics, the results reveal that the phenomenon is generalizable across all demographic categories and groups. Regardless of age, race, gender, political affiliation, and voting decisions, participants underestimated how many of their fellow Americans agree with the statements in support of diversity and inclusion. These findings imply that there are likely factors other than group membership and identification that factor into the development of misperceptions that one has about support for diversity and inclusion among Americans. Media and how one interacts with media may play a significant role since media is a prominent method for communicating public opinions.

I conducted correlational analyses to examine the relationship between pluralistic ignorance about support for diversity and inclusion and media use, habits, and trust (see Table 4 for all correlations). Given that Republicans are likely to consume more conservative media and Democrats are more likely to consume liberal media (which the data confirm), and sentiment about diversity and inclusion in the US differs between conservative and liberal media sources (with liberal media portraying discrimination as a serious issue, also confirmed by the data), I expected consumption of conservative media to predict greater underestimation of support for diversity and inclusion among Americans compared to use of liberal media. Contrary to expectations, greater use of conservative media did not predict pluralistic ignorance. Liberal media, however, did significantly predict less pluralistic ignorance. This effect also remained significant when controlling for political affiliation. These results show that the political leanings

of the media sources one chooses to get their news may play a role in the development of pluralistic ignorance as it relates to diversity and inclusion, but only for those who consume liberal-leaning media sources. These findings may be due to differences in how or how frequently conservative and liberal media discuss and portray issues related to diversity and inclusion. Differences in how much Democrats and Republicans trust information being communicated through media may also play a role, which is discussed below.

I further anticipated that the less participants trust media in general to provide them with accurate information the more they would underestimate support among Americans. This is because the denial of information being communicated from sources that intentionally communicate public opinion (i.e., media) implies that distrusting individuals may have less information to base one's perceptions of their peers' attitudes regarding diversity and inclusion. The data support my hypothesis. Trust in media remained a significant predictor of pluralistic ignorance when political affiliation was controlled for.

I was further interested in exploring if trust differed depending on political affiliation given the previous finding that conservative media did not predict pluralistic ignorance, and found that Democrats are more trusting of media compared to Republicans ($b = -0.66$, $F(1, 2007) = 210.50$, $p < .001$). Thus, an individual's tendency to trust media (or lack of) to provide accurate information may play a major role in the development of pluralistic ignorance and may also suggest that media are providing accurate information about how Americans generally feel about diversity and inclusion. Moreover, since Republicans tend to be less trusting of media, they may be rejecting the accurate information about Americans being communicated through media.

My hypothesis that the more participants perceived media in general to be biased against liberal ideas and values the more they underestimate their fellow Americans' support for

diversity and inclusion was technically supported, but the effect was negligible and likely does not provide much meaningful differences in pluralistic ignorance. Furthermore, I did not find support for my prediction that the more participants perceive other people to be more influenced by the media than themselves the more pluralistically ignorant they would be, which was surprising given that research has shown this cognitive bias to be a predictor of pluralistic ignorance.

Lastly, I expected that greater underestimation of support for diversity and inclusion in the population would predict lower self-reported likelihood of confronting discrimination when witnessing it via the vignettes compared to those lower in pluralistic ignorance, which the results supported. I expected greater underestimation to predict fewer intentions to behave inclusively toward outgroup members, which was also supported. These findings provide further evidence for previous research demonstrating that pluralistic ignorance causes self-silencing. Specifically, these results confirm that underestimating support for diversity and inclusion in the US is associated with self-silencing intentions such as a reduced likelihood that one would confront discrimination when witnessing it and lower intentions to engage in inclusive behavior.

I conducted exploratory analyses between pluralistic ignorance and modern racism and sexism and found that both significantly predicted greater underestimation of support for diversity and inclusion among Americans. This result could indicate that perceiving discrimination to no longer be a problem in society leads individuals to underestimate the importance of the issue to others. A lack of perceived exposure to discrimination that is characteristic of those high in aversive prejudice may also lead these individuals to assume that discrimination is not an issue and therefore support for diversity and inclusion is unnecessary. Republicans were also particularly high in modern racism and sexism compared to Democrats

(modern racism: $b = 0.72$, $F(1, 2007) = 184.26$, $p < .001$; modern sexism: $b = 0.68$, $F(1, 2007) = 231.99$, $p < .001$). However, this factor only partially explained some of their differences in attitudes about and perceptions of Americans when it comes to diversity and inclusion meaning there are other important factors to consider in the relationship.

Table 3

Pluralistic Ignorance by Demographic Group in Each Study

Demographic Category and Group	Pilot	Study 1	Study 2a	Study 2b (Biden Voters)	Study 2b (Trump Voters)
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Overall	27.14 (17.99)	12.73 (22.29)	22.06 (31.94)	18.95 (16.30)	1.84 (12.64)
Age (correlation)	.00 (<i>p</i> = .96)	< .001	.00 (<i>p</i> = .98)	-.06 (<i>p</i> = .35)	-.09 (<i>p</i> = .18)
Gender		.10 (<i>p</i>			
Men	27.79 (17.72)	14.21 (22.85)	23.92 (33.27)	19.01 (11.99)	2.67 (12.84)
Women	26.34 (18.33)	11.55 (21.67)	20.22 (30.94)	18.82 (20.31)	1.11 (12.47)
Non-Binary & Other	34.23 (12.28)	5.95 (24.25)	19.70 (10.17)	19.89 (9.91)	NA
Race & Ethnicity					
Asian / Asian American	23.63 (18.04)	8.29 (21.74)	22.09 (9.78)	22.83 (10.03)	2.25 (14.33)
Black / African American	25.36 (22.13)	5.36 (22.41)	24.37 (11.43)	34.02 (15.28)	-3.71 (9.01)
Hispanic / Latino/a/x	NA	8.39 (20.70)	21.86 (9.01)	19.69 (13.10)	-3.25 (10.15)
White	27.40 (17.19)	15.85 (21.73)	21.75 (39.72)	17.43 (16.90)	2.13 (12.94)
Multiple Races/Ethnicities	29.96 (15.33)	8.49 (23.83)	21.39 (10.73)	10.06 (6.62)	2.13 (11.52)
Other	26.37 (20.41)	12.76 (25.53)	29.50 (12.91)	28.41 (1.91)	9.02 (9.9)
Political Affiliation					
Democrat	24.36 (17.16)	8.72 (28.33)	22.32 (28.07)	18.42 (16.60)	4.86 (11.17)
Independent	28.26 (18.59)	17.76 (29.55)	23.19 (9.09)	23.74 (11.89)	-0.53 (13.48)
Republican	33.05 (17.72)	18.97 (30.42)	19.93 (53.93)	24.33 (14.89)	1.80 (12.68)
Vote in 2020 Presidential Election					
Joe Biden	25.24 (17.46)	8.44 (21.54)	22.68 (29.82)	18.95 (16.30)	NA
Donald Trump	33.81 (18.49)	17.66 (21.59)	26.89 (10.31)	NA	1.84 (12.64)
Other	30.53 (14.23)	16.80 (21.18)	19.80 (9.75)	NA	NA

Did not vote	24.88 (18.34)	11.35 (23.50)	17.05 (47.70)	NA	NA
<p><i>Note:</i> "NA" indicates that this group was not measured in the study or there was only one participant in the group. Due to the small portion of participants who identify as American Indian/Alaska Native, Middle Eastern/North African/Arab, Native Hawaiian/Other Pacific Islander, and Other, they have been combined into one group labeled "Other." Also, those who did not vote for either Biden or Trump or did not select "Did not vote" are combined into one group labeled "Other" due to being small portions of the sample. In Study 2b, pluralistic ignorance is by definition a misperception of the opinions of one's group. Therefore, Biden voters' estimates of opinions in the Trump voter population and vice versa are not considered pluralistic ignorance and are not included in the pluralistic ignorance scores. Study 2b pluralistic ignorance scores are split into two columns, one for Biden voters' pluralistic ignorance regarding other Biden voters, and one for Trump voters' pluralistic ignorance regarding other Trump voters. Pluralistic ignorance scores are not shown for Study 3 since this was an experiment and scores are expected to be affected by experimental condition (see Figure 1 for differences in pluralistic ignorance by experimental condition in Study 3).</p>					

Table 4*Correlations Between Variables in Study 1*

Variable	1	2	3	4	5	6	7	8	9	10	11	12
(1) Pluralistic Ignorance	1.00											
(2) Conservative Media Consumption	.02	1.00										
(3) Liberal Media Consumption	-.18***	.44***	1.00									
(4) Media Exposure to content related to diversity and inclusion	-.17***	.30***	.47***	1.00								
(5) Belief that Others are More Easily Influenced by Media	.03	-.19***	-.32***	-.18***	1.00							
(6) Trust in Media	-.24***	.24***	.55***	.33***	-.32***	1.00						
(7) Portrayal of Discrimination as Serious in Media	-.15***	.04	.30***	.24***	-.06**	.14***	1.00					
(8) Media Bias Against Advancement of Diversity & Inclusion	.07**	.02	.01	0.04	-0.01	-.14***	-.08***	1.00				
(9) Media Bias Against Progressive Ideas & Values	-.06**	-.22***	.12***	0.03	.09***	.05*	.04	.26***	1.00			

(10) Intentions to Behave Inclusively	-.23***	.20***	.35***	.40***	-.05*	.21***	.25***	.01	.06*	1.00
(11) Likelihood of Confronting Discrimination	-.23***	.18***	.35***	.35***	-.11***	.20***	.27***	.07**	.09***	.47***
(12) Modern Racism	.25***	.42***	.03	-.05*	-.07**	-.06*	-.20***	.02	-.23***	-.14***
(13) Modern Sexism	.20***	.38***	-.11***	-.11***	-.01	-.12***	-.25***	-.05*	-.31***	-.02***

*** = $p \leq .001$, ** = $p \leq .01$, * = $p \leq .05$

Study 2a

An alternative explanation for the strength of pluralistic ignorance I found in the pilot study and in Study 1 is that Americans simply underestimate their peers' agreement with any statement regardless of its content—that I could present any position to them, and they would predict that few of their peers support it. To rule out this alternative explanation, the goal for Study 2a was to test whether the observed pluralistic ignorance effects are due to particularities of the stimulus material I used in the two studies. I examined whether individuals continued to underestimate support for diversity and inclusion in the population when asking their agreement with statements about diversity and inclusion that are both supportive and unsupportive of diversity and inclusion. By “unsupportive” I mean items that are more agreeable to those who personally do not support diversity and inclusion.

I predicted that the alternative explanation would lack support in this study. Specifically, I hypothesized that a majority of participants in Study 2a would generally underestimate agreement with the supportive statements and overestimate disagreement with the unsupportive statements among the US population, resulting in pluralistic ignorance similar to what was found in the pilot study and in Study 1 (H9).

Methods

I recruited a sample of 500 US adults (at least 18 years old) on Prolific. See Table 1 for the full description of the demographic breakdown of this sample. As in the previous studies, participants completed an online survey.

Materials. The following outlines the pluralistic ignorance measure and demographic items (see Appendix B for a full description of the materials).

1. *Actual agreement and perceived agreement with statements about diversity and inclusion.* Participants were asked to indicate their level of agreement on a 5-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree” with ten statements about diversity and inclusion. These statements were different from the ones used in the previous studies and varied in whether they were supportive of diversity and inclusion (e.g., “An accurate and detailed account of the history of prejudice and discrimination in the US should be required curriculum in all public secondary schools”) or were not supportive (e.g., “The US would be better off if we stopped allowing so many immigrants from Central and South America into our country”). They were also asked to provide the percent of the US population they think “Somewhat Agree” and “Strongly Agree” with the statements. The order in which the statements were presented to participants was randomized and the order in which participants were asked to indicate their own agreement vs. their perceptions of the agreement in the US population was counterbalanced. The degree of pluralistic ignorance present among participants was determined by calculating participant agreement with the statements (the percent of the sample who “Somewhat Agree” and “Strongly Agree” with each statement) and comparing it to their perceptions of American agreement with the statements (the percentage of the population the participant believes would “Somewhat Agree” and “Strongly Agree” with each statement). For supportive items, pluralistic ignorance was computed by subtracting perceived agreement from actual agreement, but for unsupportive items pluralistic ignorance was computed by subtracting actual agreement from perceived agreement. I computed two pluralistic ignorance scores per participant, one for the supportive items and one for the unsupportive items. I also computed an

overall pluralistic ignorance score by averaging the two pluralistic ignorance scores. As in Study 1, positive scores indicate underestimation, and negative scores indicate overestimation of support for diversity.

2. *Demographics.* I collected the same demographic data as in Study 1.

Results and Discussion

Consistent with the pilot study and Study 1, and as hypothesized, participants generally underestimated the percent of the US population who agreed with the supportive diversity- and inclusion-related statements by about 23% (see Table 5 for statement-level, support-level, and overall pluralistic ignorance scores). As predicted, participants also generally overestimated the percent of the US population who agreed with the unsupportive diversity- and inclusion-related statements by about 21%. Across all statements, participants underestimated support for diversity and inclusion in the population by about 22%. The results of this study provide further support for the previous studies showing how Americans generally underestimate support for diversity and inclusion among other Americans. This phenomenon is also supported in a new way in that Americans tend to overestimate support for positions that are unsupportive of diversity and inclusion.

The data also do not support the alternative explanation that Americans generally underestimate their peers' agreement with any position regardless of its content—participants did not underestimate support for both supportive and unsupportive positions in the US regarding diversity and inclusion. Many participants agreed with the unsupportive statements as well, which ameliorates any potential concerns about social desirability in responding. Thus, I can conclude that the results from the pilot and in Study 1 are likely due to particularities of the content being presented in the statements about diversity and inclusion.

Table 5*Degree of Pluralistic Ignorance for 10 Diversity- and Inclusion-Related Statements in Study 2a*

Statements	% Actual Agreement	% Perceived Agreement	Difference
Supportive Statements			
1. An accurate and detailed account of the history of prejudice and discrimination in the US should be required curriculum in all public secondary schools.	82%	58%	24%
2. It is okay if a portion of my taxes helps pay for the removal of confederate monuments and/or statues of former slave holders.	56%	36%	20%
3. I would pay 1% more in taxes each year if I knew that money was going toward college scholarships for high-achieving minority students who couldn't otherwise afford higher education.	54%	33%	21%
4. I would not apply for a job at a company that is known to be biased against LGBTQ+ people.	63%	43%	20%
5. I would confront a friend if they were ever being racist toward another person.	86%	56%	30%
Average	68%	45%	23%
Unsupportive Statements			
6. The US would be better off if we stopped allowing so many immigrants from Central and South America into our country.	14%	39%	25%
7. Minority groups receive more resources than they deserve, thus we don't need any more policies that benefit them.	13%	35%	22%
8. Critical Race Theory and diversity training demonizes white people too much.	23%	49%	26%
9. A business owner should be able to decide not to provide services to someone based on their race and ethnicity and/or being gay.	13%	31%	18%

10. White people do not deserve the amount of criticism they receive from members of other racial groups.	31%	44%	13%
Average	19%	40%	21%
Overall Average			22%

Note. Percentages in the “Difference” column represent the degree of average pluralistic ignorance demonstrated for each statement. Pluralistic ignorance for the supportive statements were calculated by subtracting % Perceived Agreement in the population from % Actual Agreement in the population. Pluralistic ignorance for the unsupportive statements were calculated by subtracting % Actual Agreement in the population from % Perceived Agreement in the population. Positive scores for the supportive statements indicate underestimation, and positive scores for the unsupportive statements indicate overestimation. An overall pluralistic ignorance score was calculated by averaging the pluralistic ignorance scores across all 10 statements.

Study 2b

In the previous studies, participants made judgements about all Americans. However, the perceptions of one's ingroup may play a larger role in an individual's own behavior related to diversity and inclusion since the strength of the influence of social norms on behavior is theorized to be greater when emphasizing norms of more proximal groups (e.g., friends, family; Neighbors et al., 2008). Thus, I was curious as whether individuals would be more accurate when making judgements about people similar to themselves or when making judgements about people dissimilar to themselves. The purpose of this study was to examine how people perceive their more similar peers and more dissimilar peers—those who voted the same and differently to themselves in the 2020 Presidential Election—regarding support for diversity and inclusion. I hypothesized that participants who were asked to estimate support for diversity and inclusion among those who voted the same as them would be more accurate than participants who were asked to estimate support among those who voted differently than them (H10).

Methods

Participants. In Prolific, I recruited a sample of 491 Biden voters and 455 Trump voters (at least 18 years old) by prescreening for those who voted for Biden or Trump in the 2020 Presidential Election. The demographics of Biden and Trump voters were similar across age and gender, although Biden voters had slightly greater racial/ethnic diversity (see Table 1 for the demographic breakdown of the total sample). If in the survey a participant recorded that they did not vote for either Biden or Trump, they were excluded from the data analysis.

Materials. The methods for this study were identical to that used in Study 2a with a few minor exceptions (see Appendix B). The two main differences of this study were that only those who voted for Biden and Trump in the 2020 Presidential Election were recruited to participate,

and participants were randomized to either provide their perceptions of agreement with the 10 statements among either Biden voters or Trump voters instead of perceptions of agreement among the whole US population. Thus, participants had to either estimate the percent of Biden voters or the percent of Trump voters who they thought would agree with the statements (a 2x2 design). Differences between perceptions of agreement among Biden/Trump voters and actual agreement among Biden/Trump voters for each statement for this study are labeled as “misperception” scores. A misperception score would only be considered “pluralistic ignorance” for participants who provide estimates for their ingroup (e.g., Biden voters who estimated other Biden voters). Overall misperception scores were calculated the same as the overall pluralistic ignorance scores for Study 2a for Biden and Trump voters independently.

Results and Discussion

As expected, Biden voters underestimated support for diversity and inclusion among other Biden voters (19%; see Table 6 for misperceptions scores for each group in the 2x2 design and Table 7 for a breakdown of actual agreement and perceived agreement for each statement). Surprisingly, Trump voters accurately estimated the amount of support among other Trump voters. I examined the main effects who participants voted for (Biden or Trump) and whether participants were asked to estimate support among Biden voters or Trump voters, as well as the interaction between these two factors using a general linear model. The main effect of vote was significant ($b = -5.65$, $F(1, 940) = 36.08$, $p < .001$); Trump voters’ perceptions were almost 6% more accurate on average than Biden voters. The main effect of estimating support among either Biden or Trump voters was also significant ($b = -11.47$, $F(1, 940) = 148.84$, $p < .001$), indicating that those who were asked to estimate support for diversity and inclusion among Trump voters tended to be more accurate in their perceptions by about 11%. The interaction was also

significant ($b = -16.20$, $F(1, 940) = 74.30$, $p < .001$), which indicates that the difference in estimating perception of support among Biden and Trump voters was particularly strong for Trump voters. It appears that Trump voters are relatively accurate when they are asked to estimate the support for diversity and inclusion among their ingroup, other Trump voters, but vastly underestimate support among the outgroup, Biden voters.

From these results, it is evident that Trump voters have a better understanding of how those similar to them in political views feel about diversity and inclusion in the US. Thus, these findings beg the question: Why are Trump voters more accurate at predicting their ingroup's attitudes about diversity and inclusion compared to Biden voters, but are worse at predicting the attitudes of outgroups and Americans in general as seen in Study 1? These results are unexpected and additional examination into the factors that cause these differences is warranted to understand these results. Although, I speculate that cognitive biases in information processing and errors in social comparison, such as the false consensus bias, that are more common among conservatives may be a key factor. Those who are politically conservative may have perceived that more people, including Biden voters, are more similar to them in their support for diversity and inclusion than was actually true. As for their accuracy with estimating support among their fellow Trump voters, sentiment among Trump voters concerning diversity and inclusion may be more salient and well-defined compared to sentiment among Biden voters.

Table 6*Overall Misperception Scores for Biden and Trump Voters*

	Overall Misperception	
	Biden Voters	Trump Voters
Perceptions of Biden Voters	19%	21%
Perceptions of Trump Voters	16%	2%

Note. Positive values indicate underestimation of support in the population. Perceptions of the ingroup are considered pluralistic ignorance.

Table 7*Actual and Perceived Agreement for 10 Diversity- and Inclusion-Related Statements in Study 2b*

Statements	Participants Who Were Biden Voters			Participants Who Were Trump Voters		
	% Actual Agreement	% Perceived Agreement of Biden Voters	% Perceived Agreement of Trump Voters	% Actual Agreement	% Perceived Agreement of Trump Voters	% Perceived Agreement of Biden Voters
Supportive Statements						
1	90%	64%	19%	44%	35%	54%
2	76%	52%	13%	13%	15%	47%
3	69%	76%	13%	25%	23%	46%
4	76%	54%	24%	28%	31%	49%
5	92%	64%	25%	73%	54%	61%
Average	81%	62%	19%	37%	32%	51%
Unsupportive Statements						
6	7%	20%	75%	55%	59%	21%
7	7%	17%	66%	47%	48%	20%
8	7%	22%	73%	71%	65%	26%
9	10%	20%	67%	37%	44%	20%
10	16%	36%	75%	78%	66%	28%
Average	9%	23%	71%	58%	56%	23%

Note. The statements are the same ones used in Study 2a and the list can be found Table

Study 3

For my final study, I was interested in whether social norms messaging could correct the underestimation of perceived support for diversity and inclusion among Americans and as a result reduce self-silencing and increase inclusion. Therefore, this study consisted of two conditions: a descriptive social norms messaging condition that communicated how most Americans support diversity and inclusion, and a control condition that was unrelated to diversity and inclusion in the US. I hypothesized that those in the descriptive social norms messaging condition relative to the control would demonstrate less pluralistic ignorance (H10). I also hypothesized that those in the descriptive social norms messaging condition would exhibit less self-silencing-related intentions and demonstrate more support for diversity and inclusion and more inclusive behaviors compared to those in the control condition (H11).

I was also interested in exploring the relationship between social norms messaging and intergroup anxiety which is a feeling of anxiety or nervousness when interacting with members of outgroups (Stephan, 2014). Intergroup anxiety relates to perceptions of self-efficacy in having successful interactions. This is because communicating to individuals that these interactions are desired by their peers and that speaking up against discrimination is common may increase their sense of self-efficacy in having these interactions, which is important for behavior to occur according to theories of behavior (e.g., Theory of Planned Behavior; Ajzen, 1991).

I was further interested in exploring whether level of concern about discrimination as a serious social issue in society is affected by social norms messaging that communicates how most Americans support diversity and inclusion. On one hand, communicating this norm may lead individuals to believe that others support diversity and inclusion because they care about inequality and social justice, which then could result in their own perception that discrimination

is currently a serious problem. On the other hand, by communicating that most Americans already support diversity and inclusion, individuals may perceive that the issue is being resolved and is thus not as large of a problem as it used to be. This latter result could potentially be detrimental to individuals' own motivation to engage in inclusion, whereas the former result could potentially motivate greater inclusion.

Method

Participants. My target sample size was 867 White US adults on Prolific who are at least 18 years old. After excluding respondents based on incomplete participation and failing to respond seriously to the survey items (e.g., saying 100% of Americans would agree with all 10 statements) I had data from 839 participants. I recruited White participants specifically because they are members of what is considered the “majority” group in the US and one of the broader implications for this research is to examine methods to promote inclusive behavior among majority group members toward members of marginalized groups. Further, the results from Study 1 suggest White US adults hold the greatest degree of pluralistic ignorance concerning support for diversity and inclusion in the US, thus it makes the most sense to target this group of adults for improving intergroup outcomes. A breakdown of the demographics for this sample is found in Table 1.

Procedure. This experiment utilized two surveys, and participants were led to believe that they participated in two separate studies. Participants accessed the link to the first survey in Prolific. The consent form for the first survey described the purpose of the study to be about examining whether US adults can accurately identify American trends. Participants were also notified that there would be a second survey that they will be automatically redirected to after

completion of the first one, and only after completing both surveys could they receive their compensation.

After the consent form for the first survey, participants were randomly assigned to one of two conditions: the descriptive social norms messaging condition where a positive norm about most Americans valuing diversity and support inclusion was communicated, or the control condition where statistics about how Americans' lives have changed due to the COVID-19 pandemic were presented. Participants engaged in a Two Truths and One Lie game (see below for more details) through which the information in each condition was communicated. This task was followed by demographic questions.

The consent form for the second survey described the purpose of the survey as collecting opinions, perspectives, and intentions of US adults on topics related to social trends and issues. Participants were then directed to a questionnaire that included the outcomes being measured: actual agreement and perceived agreement with statements related to diversity and inclusion, intergroup anxiety, concern about discrimination as a social issue, likelihood of confronting discrimination, posting an inclusive message on one's social media account, and amount of a bonus payment left (out of \$1) to be donated to an organization that support diversity and inclusion efforts in the US. These measures were followed by more demographic items.

Materials. The following include the experimental manipulation and outcome variables being measured. (A full description of the materials is provided in Appendix C.)

1. *Descriptive social norms messaging experimental manipulation.* Both conditions included a Two Truths and One Lie game where participants were presented with three statements that summarized statistics about the opinions and experiences of Americans. Those in the descriptive social norms messaging condition saw statements suggesting that

most Americans value diversity and support inclusion and those in the control saw statements that described how Americans have adjusted to the COVID-19 pandemic. The statements were developed from statistics from online sources that report national-level polling data (e.g., Pew Research Center, Gallup). Participants had to click and drag each of the statements to either the “Truth Box” or “False Box.” This was a task I developed specifically to manipulate social norms information and participant feedback from previous applications in my research show that participants generally enjoy this task. There were three rounds of this game, each containing three statements where one of the statements had been altered (a false statement). The two correct statements suggested widespread support for diversity, whereas the third statements suggested—incorrectly—that only a small percentage of Americans supported a particular pro-diversity issue or policy. Participants decided which two statements they thought were true and which one they thought was false. After participants submitted their choices, they received feedback on their answers. The correct versions of all three statements were shown together with links to the websites that reported detailed results of the surveys from which the three statements were drawn. An example of a true statement in the descriptive social norms messaging condition is, “Most (64%) of White US adults see diversity as having a positive impact on the country’s culture,” and an example of a false statements is, “About half of US employees and those seeking jobs say a diverse workforce **is important** when they evaluate companies and job offers.” An example of feedback participants received after deciding on which statements were true and false is: “‘About half of US employees and those seeking jobs say a diverse workforce is important when they evaluate companies and job offers.’ This is false! [A poll of Americans](#) found that 76% of US

employees and job seekers evaluate companies and job offers based on them **having a diverse workforce.**” The entire Two Truths and One Lie game is described in detail in Appendix C.

2. *Perceived agreement with statements about diversity and inclusion.* Participants were asked to provide the percent of the US population they thought would “Somewhat Agree” and “Strongly Agree” with the six diversity- and inclusion-related statements used in Study 1. The pluralistic ignorance scores were computed the same way as in Study 1. Again, a positive score indicates underestimation of perceived support for diversity and inclusion in the population.
3. *Support for diversity and inclusion.* Participants were asked to indicate their level of agreement with the same six diversity- and inclusion-related statements using a 5-point Likert scale ranging from “Strongly Disagree” and “Strongly Agree” ($\alpha = .90$). Although in previous studies, this measure was used to represent the population-level agreement with the diversity- and inclusion-related statements and then used to calculate pluralistic ignorance scores, because the sample only consisted of White Americans, these scores would not be representative of all Americans and were thus not used to calculate pluralistic ignorance scores. This measure was used to examine whether participants would conform their level of support for diversity and inclusion to their perceptions of their peers’ level of support.
4. *Confronting discrimination.* The same three vignettes and questions used to measure likelihood of confronting discrimination in Study 1 were used in this study as well ($\alpha = .83$).

5. *Intergroup anxiety*. Intergroup anxiety was measured using 5 items (e.g., “When conversing with people belonging to underrepresented or marginalized groups... I am concerned that I will say something that offends them”). Participants indicated their agreement with these statements on a 5-point Likert scale from “Strongly Disagree” to “Strongly Agree” ($\alpha = .90$).
6. *Concern about discrimination*. Degree of concern about discrimination being an issue in society was measured using a 4-item scale (e.g., “I consider discrimination to be a serious problem”). As with the previous two scales, participants rated their agreement with the statements on a 5-point Likert scale from “Strongly Disagree” to “Strongly Agree” ($\alpha = .91$).
7. *Posting an inclusive message to social media*. Participants were asked whether they use social media or not (e.g., Facebook, Instagram, Twitter) and if so, whether they would be willing to post an inclusive message to their social media account. The inclusive message was provided to them in the survey: “Given everything happening in the world, I think it’s more important than ever to treat people in a welcoming, respectful, and inclusive way.” The inclusive message provided to participants to post was determined after piloting several versions of an inclusive message for how willing individuals would be to post the message on social media ($N = 99$); I used the message that was ranked highest in terms of willingness to post on social media. This piloting was conducted to reduce the likelihood of a floor effect due to individuals feeling uncomfortable posting the message to social media. Participants who decided to share the inclusive message were asked to take a screenshot of the post (masking or cropping their username) and upload it in the survey as proof that they completed the task.

8. *Donating money to a diversity- and inclusion-supporting organization.* Participants were provided the prompt, “Before we end the study, based on your completion time and effort put into responding to the questions, you are eligible to receive an extra \$1.00 (i.e., Prolific bonus payment) for taking your time and answering questions thoroughly. This bonus will be provided on top of the base rate specified in Prolific. You can decide whether to take the full amount or just a portion of it. Any bonus payments (or portions of the bonus) not taken, will be donated to the National Urban League. What percent of the \$1.00 would you like to receive as a bonus payment?” The amount of the bonus payment that participants left to be donated to the organization is the indicator of inclusive donating behavior. The National Urban League is an organization that provides support to underserved urban communities across the US. I provided participants with the link to the National Urban League website so that they could learn what this organization is about before considering donating some or all their bonus payment. Bonus payments in online platforms similar to the one I use are often used as a behavioral outcome measure in research (e.g., Lindkvist & Luke, 2022).
9. *Demographics.* I collected the same demographic data as in Study 1.

Results and Discussion

I created composite scores for the constructs that were measured with multi-item scales: likelihood of confronting discrimination, intergroup anxiety, concern about discrimination as a social issue, and support for diversity and inclusion. Posting the inclusive message on social media was a dichotomous outcome variable. The portion of the \$1 bonus payment that participants elected to donate to the diversity- and inclusion-supporting organization was a

numeric amount ranging from 0% to 100%. I estimated a series of General Linear Models to analyze the data and regress the outcome variables onto the condition variable.

Consistent with my hypothesis, the results revealed that participants in the descriptive social norms messaging condition underestimated support for diversity and inclusion among Americans to a significantly lesser degree than those in the control condition ($b = -6.69$, $t(837) = -5.51$, $p < .001$; see Figure 1 for a graph of the differences between conditions). Thus, communicating accurate information about Americans' support for diversity and inclusion is an effective way to correct pluralistic ignorance about diversity and inclusion.

Those in the descriptive social norms messaging condition were also significantly more supportive of diversity and inclusion overall compared to those in the control condition ($b = 0.15$, $t(837) = 2.40$, $p = .017$; see Table 7 for differences between conditions for all outcome variables). This effect was mediated by pluralistic ignorance (indirect effect: $b = 0.01$, $t(836) = 0.18$, $p = .855$). The results are consistent with the idea that communicating accurate information about Americans' support for diversity and inclusion results in individuals conforming to their corrected norm perceptions and increasing their own support.

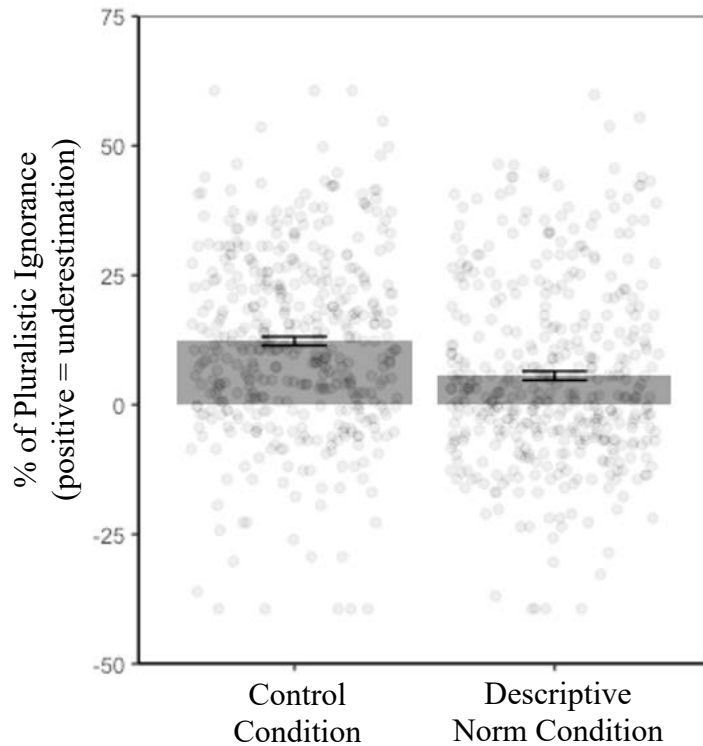
Contrary to my hypotheses, there were no significant differences between conditions on any of the other outcome variables. Participants in both the descriptive social norms messaging condition and control condition were similar with regards to likelihood of confronting discrimination when witnessing it, intergroup anxiety, concern about discrimination as a social issue, likelihood of posting the inclusive message to social media, and portions of the bonus payment left to be donated to a diversity- and inclusion-supporting organization.

The results of this study demonstrate that it is possible to significantly reduce (but not completely eliminate) pluralistic ignorance about perceived Americans' support for diversity and

inclusion using social norms messaging that communicates accurate information about how many Americans support diversity and inclusion. This reduction additionally results in increased self-reported support for diversity and inclusion. However, I did not find that a reduction in underestimating support in the population resulted in reductions in self-silencing intentions nor an increase in engagement in inclusive behavior. Therefore, although reducing pluralistic ignorance among Americans using a social norms messaging intervention may increase support for diversity and inclusion, it is inconclusive as to whether the reduction also motivates improvements to important intergroup outcomes such as speaking up against discrimination and increasing inclusive behavior.

Table 7*Differences Between Conditions for Outcomes in Study 3*

Outcome Variables	Condition <i>M</i> (<i>SD</i>)		Test for Significance Differences
	Control (<i>N</i> = 423)	Descriptive Norm (<i>N</i> = 416)	
Pluralistic Ignorance	12.27 (17.50)	5.58 (17.65)	$t(837) = -5.51, p < .001$
Support for Diversity and Inclusion	3.94 (0.96)	4.10 (0.89)	$t(837) = 2.40, p = .017$
Intentions to Confront Discrimination	2.87 (1.17)	2.91 (1.21)	$t(837) = 0.44, p = .659$
Intergroup Anxiety	2.44 (0.94)	2.45 (1.00)	$t(837) = 0.14, p = .889$
Concern about Discrimination	1.99 (1.10)	1.98 (1.07)	$t(837) = -0.24, p = .809$
Posted Inclusive Message to Social Media	0.05 (0.21)	0.04 (0.21)	$\chi^2 = 0.01, p = .925$
Donation of Bonus Payment	72.46 (37.07)	76.34 (34.76)	$t(837) = 1.56, p = .119$

Figure 1

Note. Those in the control condition (the left bar) underestimated support for diversity and inclusion in the US population to a significantly greater degree than those in the descriptive norm condition (the right bar). Raw data points for each condition are displayed as gray dots.

General Discussion

Behavior is largely driven by the perceptions of what one's peers think and do. Behavior in the intergroup domain is no exception. Concerningly, Americans generally underestimate how supportive their fellow Americans are when it comes to diversity and inclusion which potentially has consequences for self-silencing about the topic and individual engagement in intergroup behavior and inclusion. Across five studies, I aimed to better understand this tendency to be pluralistically ignorant about diversity and inclusion and what it means for intergroup relations. In Study 1, I examined factors that predict underestimation of support for diversity and inclusion in the US population and found that adults who identified as Republican and those who had

strong aversive prejudiced beliefs were most likely to underestimate support. Additionally, certain aspects of media and peoples' relationship with media was a strong predictor of pluralistic ignorance suggesting that these factors may be key to the formation of norm perceptions regarding one's peers. Especially those with greater trust in media to provide accurate information and those who consumed more liberal-leaning media sources underestimated to a lesser extent how much support for diversity and inclusion there was among Americans.

Lastly, the greater one underestimated support for diversity and inclusion in the population, the less likely they were to confront discrimination when witnessing it and endorse inclusive behavioral intentions. These findings suggest that pluralistic ignorance about diversity and inclusion might promote self-silencing intentions, leading individuals to perceive speaking up against discrimination and engaging in inclusive behavior as non-normative. What more, these intentions are consequential for the prevalence and maintenance of discrimination in society.

In Studies 2a and 2b, I was interested in addressing an alternative explanation for whether individuals had a general tendency to underestimate popular opinions regardless of whether they were in support of or opposed to diversity and inclusion. Measuring pluralistic ignorance for both supportive and unsupportive statements about diversity and inclusion in the US, I confirmed that Americans tend to *underestimate agreement with supportive* ideas about diversity and inclusion among Americans and *overestimate agreement with unsupportive* ideas about diversity and inclusion among Americans. I also discovered that Trump voters were particularly accurate at estimating the support of other Trump voters (their ingroup) regarding diversity and inclusion but inaccurate at estimating support among Biden voters (their outgroup). Biden voters were

consistently inaccurate at estimating support among other Biden voters (their ingroup) and Trump voters (their outgroup). I speculate that differences between political conservatives and liberals in information processing and biases in social comparison likely explain these fascinating results and thus likely influence pluralistic ignorance development.

In my third study, a social norms messaging intervention that provided individuals with correct statistics about the opinions of Americans regarding diversity and inclusion worked to significantly reduce the amount of underestimation that individuals had regarding perceptions of how many Americans generally support diversity and inclusion. This reduction also resulted in greater agreement with positions that support diversity and inclusion in the country. However, there was no effect of the social norms messaging on self-silencing intentions (likelihood of confronting discrimination when witnessing it) or engagement in inclusive behavior (posting an inclusive message on social media and donating money to an organization supporting diversity and inclusion efforts in the US). This suggests that although it is possible to reduce pluralistic ignorance by communicating accurate information about how Americans feel regarding diversity and inclusion, this method may not be sufficient to completely correct misperceptions of norms and increase speaking up against discrimination and increase inclusive intergroup behavior.

There are a couple limitations to consider in the current research. There was a lack of political representation in Study 3. My sample was Democratic-leaning, and despite Democrats also tending to underestimate peer support for diversity and inclusion like Republicans, communicating norms of speaking up against discrimination, engaging in inclusive behavior, and supporting policies that improve diversity, equity, and inclusion may not have as large an effect as it might have on Republicans since Democrats are largely supportive of these actions at baseline.

Another potential limitation is that, despite using recruitment quotas for the Pilot Study and Study 1 to target as representative of a sample of US adults as possible based on age, race, and gender (and political affiliation for Study 1), the samples ended up not being as representative of the US population as hoped for with representation of certain groups falling short of their percent in the population. There may have been a lack of representation across other demographic factors such as socioeconomic status, religious affiliation, and sexual orientation as well.

Moreover, the observed discrepancies between perceived agreement with the statements and actual agreement with the statements used to measure support for diversity and inclusion could have been due to participants' actual level of agreement being measured inaccurately. There may have been a tendency for biased responding such as a tendency to respond in socially desirable ways. It is possible that participants did not agree as strongly to the statements as they indicated but felt that supporting diversity and inclusion would be the more positively viewed way of responding by societal standards. One reason to support why this may not be the case is that there was considerable amount of variability in individuals' agreement with the statements, particularly in Studies 2a and 2b where both supportive and unsupportive statements about diversity and inclusion were used. However, this speculation is insufficient to completely rule out biased responding as an explanation for high levels of agreement with the statements.

From these five studies, it is evident that pluralistic ignorance about diversity and inclusion is an important factor to highlight in the grander scope of understanding the underlying mechanisms that maintain current intergroup relations. Specifically, rather than a change in intergroup attitudes that have been the dominant approach to addressing issues of intergroup relation for decades, it may be necessary to investigate how changes to one's environment and

information sources mitigate the value-action gap (Southerton, 2012) between good intergroup attitudes and intentions and inclusive behavior. From my research, it appears that most Americans support diversity and inclusion efforts to some degree. However, engagement in inclusive behavior and confidence to speak up against discrimination is hindered in part by perceptions that these actions are not widely supported by one's peers. By locating environmental cues and information sources that feed into this underestimation of support among one's peers, which my research contributes to, we will develop a better understanding for why and how discrimination persists in society.

Furthermore, the current research provides insight into a potential mechanism behind why social norms interventions are effective at improving intergroup relations (Murrar et al., 2020). Social norms are theorized to affect norm-conforming behavior change by making social norms salient (Cialdini et al., 1991). However, another potential explanation for their effect is that social norms interventions correct misperceptions of norms among one's peers. Thus, the ability for social norms interventions to promote more inclusive attitudes and behaviors may be due to their corrective ability and having individuals realize the commonality of inclusive attitudes and behavior.

Future research in this area should focus on diving further into the different environmental factors and sources of information that feed into the perceptions that individuals develop about their peers' attitudes concerning diversity and inclusion. The current research is the start of this endeavor, but there are likely many more factors that play a role in the development of these misperceptions. For example, intergroup socialization throughout early developmental periods by parents, caregivers, and teachers likely influence perceptions of peer support for diversity and inclusion. Political agendas and proposed policies in the government

and workplaces likely signal peer support or lack of for diversity and inclusion. There are also cognitive biases and tendencies that shape how information about peer attitudes and behavior are processed and applied to the formation of misperceptions of norms about diversity and inclusion that should be considered.

Additional areas for further examination include employing longitudinal research methods to examine how misperceptions about population support for diversity and inclusion develop and change over time and what factors occurring in one's environment and interpersonal interactions coincide with this change. Longitudinal research may further help to assess whether correcting or reducing the pluralistic ignorance persists as well as changes self-silencing and intergroup behavior over time if not immediately.

Lastly, research measuring pluralistic ignorance about support for diversity and inclusion in the US should use statements and questions from large scale national studies with samples that are both larger and more representative than the ones in my samples. These studies likely provide more accurate statistics on how many Americans truly support diversity and inclusion and relevant policies and practices. Using these statistics will yield more conclusive information on how pluralistically ignorant American are when it comes to estimating support among their peers.

Conclusion

Pluralistic ignorance is prevalent in many important issues and topics. This ignorance can be dangerous when it leads to self-silencing, leaving individuals with the sense that they should not express their attitudes about important issues, and when it leads to behavioral conformity to unhealthy or undesirable norm perceptions. Issues related to diversity and inclusion also fall victim to pluralistic ignorance. By understanding the contributing factors and consequences of

pluralistic ignorance regarding diversity and inclusion, we will better understand intergroup relations and potential ways to mitigate the negative effects that pluralistic ignorance has on intergroup attitudes and behavior that have yet to be accounted for in prejudice- and discrimination-reduction literature. By correcting pluralistic ignorance, we can contribute to the improvement of intergroup relations and promotion of greater support for people from marginalized groups and promote more inclusive interactions between marginalized and non-marginalized groups.

Funding

This material is based upon work supported by the National Science Foundation under Grant No. 2017045 awarded to the principal investigator, Dr. Markus Brauer.

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Appendix A

Materials for Study 1

Actual Agreement and Perceived Agreement with Statements About Diversity and Inclusion

[Statements presented twice but with different instructions]

Instruction 1: Please rate how strongly you agree/disagree with the following statements on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree).

Instruction 2: For each of the following statements, please provide the percent (%) of the adult U.S. population you believe would respond with each of the options of the 5-point rating scale from “Strongly Disagree” to “Strongly Agree” if we were to ask them today. The total of the five percentages must equal 100%.

1. It is okay with me if my local taxes are used for programs that help students from minority groups succeed in school.
2. It is important to support businesses owned by Black people and other non-White people.
3. It is okay with me if my state taxes are used for college scholarships for students from minority groups so that they can attend the state’s public university.
4. I am not bothered by the fact that White people will eventually be a numerical minority in the US.
5. It is important that employers ensure their company/organization fosters an inclusive workplace climate.
6. Racial diversity benefits the country.

Likelihood of Confronting Discrimination

Instructions: We are interested in understanding your opinions about offensive behavior. We will ask you to review a few hypothetical scenarios and report how likely you would be to confront the person/people involved if you were to witness each of the behaviors described in the scenario.

1. You are at the airport and are early for your flight. While you are in line to go through the security check at the airport, you notice that a person ahead of you is selected by a security officer to go through further inspection. The person appears to be an ethnically Middle Eastern or North African woman. The woman asks why she was chosen for this inspection, and the security officer responds to her using a racial slur. You can hear the people around you murmur but no one is saying anything to the woman or to the officer.

How likely is it that you would confront the security officer who said the racial slur (for example: telling the officer that their behavior is inappropriate, making a loud comment to someone and being sure the officer hears it)?

- a. Not likely at all (1)
- b. 2

- c. 3
 - d. 4
 - e. Extremely likely (5)
2. You are in line at the bank and waiting to talk to one of the bank tellers. You happen to notice that a Black man is talking with one of the bank tellers and is seemingly stressed over his finances. You hear the man next to you in line say out loud to himself, “Black people always struggle with money. If only they weren’t so lazy.”

How likely is it that you would confront the person in line who commented on Black people (for example: telling the person that their behavior is inappropriate)?

- a. Not likely at all (1)
 - b. 2
 - c. 3
 - d. 4
 - e. Extremely likely (5)
3. You are at a restaurant with friends for dinner. At the table next to yours, you overhear a man complaining to their waitress about their check and how they should not have been charged for an appetizer they did not like. The man then asks for a manager. The manager, a woman in her forties, walks over to explain that the customer needs to pay for the appetizer since they ate most of it. The man then says, “You women are so unreasonable. Is there a male manager or owner I can talk to instead?” The manager then walks away.

How likely is it that you would confront the man at the table next to you who complained about their check (for example: telling the man that their behavior was inappropriate)?

- a. Not likely at all (1)
- b. 2
- c. 3
- d. 4
- e. Extremely likely (5)

Intentions to Behave Inclusively

Instructions: Please rate on a scale of 1 (Never) to 5 (Extremely Often) how frequently you intend to engage in the following behaviors within the next month.

(Please note that throughout this survey we will be using the term “different social group” to refer to social groups that you do not identify as being a part of including other racial and ethnic groups, religious groups, and sexual orientations.)

1. Spend leisure time with someone from a different social group than you.
2. Invite someone from a different social group than you to a social event.
3. Attend a community / organizational meeting where diversity issues are discussed.
4. Talk to someone from a different social group than you about their experiences.

5. Ask someone from a different social group than you for help.
6. Accept an invitation from someone from a different social group than you to hang out.
7. Accept a request to help someone from a different social group than you.
8. Work with someone from a different social group than you on a work project/team.
9. Invite someone from a different social group than you to connect on a social media platform.
10. Accept an invitation from someone from a different social group than you to connect on a social media platform.

Media Use and Habits

[Questions about media use]

How often do you get news **in general** from the following sources? (Never 1 – Everyday 5)

1. Conservative newspapers and news magazines (online and off-line)
2. Progressive newspapers and news magazines (online and off-line)
3. Conservative news sites, such as Drudge Report or Breitbart News
4. Progressive news sites, such as Huffington Post or Slate
5. Conservative talk radio, such as Rush Limbaugh or Sean Hannity (online and offline)
6. Progressive talk radio, such as Amy Goodman (online and offline)
7. Public radio (online and offline)
8. Fox News (online and offline)
9. CNN (online and offline)
10. National network news, such as ABC, NBC, CBS (online and offline)
11. Entertainment news programs or clips from shows such as Last Week Tonight, The Daily Show, etc.
12. Social media platforms such as Facebook, Twitter, and YouTube
13. Podcasts

[Measured on a 5-point Likert scale from “Never” to “Everyday”]

[Questions about media habits]

When you use social media platforms (such as Facebook, Instagram, TikTok, or YouTube), how often do you come across news and information on each of the following topics even though you were going online for a different purpose? (Never 1 – Everyday 5)

1. Current events, public issues, or politics
2. Recent developments in science or technology
3. Stories or posts related to diversity, equity, inclusion, and discrimination

Media Perceptions

Instructions: List the 5 sources of media you primarily learn from about news and current events. Please be very specific about the name of the source (examples include Twitter, NPR, CNN, FOX, The New York Times, ...). *Do not use vague expressions such as “social media” or “radio.”*

Media 1 _____
 Media 2 _____
 Media 3 _____
 Media 4 _____
 Media 5 _____

[Participants will be asked to respond to the same following question for each media source listed.]

You wrote [media source] as the first media source where you primarily learn from about news and current events.

1. To what degree does [media source] portray discrimination against minority groups to still be an important problem in US society?
 - a. Not a problem at all 1
 - b. 2
 - c. Somewhat of a problem 3
 - d. 4
 - e. A major problem 5

[Questions about trust]

1. How much do you trust the five primary media sources you listed above to provide you with accurate information about news and current events?
2. How much do you trust other media sources (not sources you listed) to provide you with accurate information about news and current events?
3. How much do you trust social media to provide you with accurate information about social issues in the US?
4. How much do you trust newspapers and news magazines to provide you with accurate information about social issues in the US?
5. How much do you trust television news to provide you with accurate information about social issues in the US?

[Measured on a 5-point Likert scale from “Do not trust at all” to “Trust completely”]

[Questions about media bias]

1. Do you think news media is biased in favor of or against the advancement of diversity, equity, and inclusion in the US?
 - a. In favor
 - b. Against
 - c. Neutral

2. To what extent do you think news media is biased in favor of or against progressive ideas and values?
 - a. Extremely biased in favor of progressive ideas and values
 - b. Somewhat biased in favor of progressive ideas and values
 - c. Neutral / neither in favor of or against progressive ideas and values
 - d. Somewhat biased against progressive ideas and values
 - e. Extremely biased against progressive ideas and values

Belief that Others are More Easily Influenced by Media Than Oneself

1. How much do media affect your own attitudes about diversity, equity, inclusion, and discrimination?
 - 1 = no influence at all
 - 2 = very little influence
 - 3 = a little influence
 - 4 = some influence
 - 5 = a great deal of influence
2. How much do media affect other Americans' attitudes about diversity, equity, inclusion, and discrimination?
 - 1 = no influence at all
 - 2 = very little influence
 - 3 = a little influence
 - 4 = some influence
 - 5 = a great deal of influence

Modern Racism

(McConahay, 1986)

1. Discrimination against Black people is no longer a problem in the United States
2. It is easy to understand the anger of Black people in America
3. Black people are getting too demanding in their push for equal rights
4. Black people should not push themselves where they are not wanted
5. Over the past few years, Black people have gotten more economically than they deserve
6. Over the past few years, the government and news media have shown more respect to Black people than they deserve

[Measured on a 5-point Likert scale of agreement level]

Modern Sexism

(Swim et al., 1995)

1. Discrimination against women is no longer a problem in the United States
2. Women often miss out on good jobs due to gender discrimination
3. It is rare to see women treated in a sexist manner on television
4. On average, people in our society treat husbands and wives equally

5. Society has reached the point where women and men have equal opportunities for achievement
6. It is easy to understand the anger of women's groups in America
7. It is easy to understand why women's groups are still concerned about societal limitations of women's opportunities
8. Over the past few years, the government and news media have been showing more concern about the treatment of women than is warranted by women's actual experiences

[Measured on a 5-point Likert scale of agreement level]

Demographics

1. What is your age in years?
2. What is your race/ethnicity? (check all that apply)
 - a. Arab / Middle Eastern / North African
 - b. Asian / Asian American
 - c. Black / African American
 - d. Hispanic / Latina/o/x
 - e. Native American / American Indian / First Nation / Alaska Native
 - f. Pacific Islander / Native Hawaiian
 - g. White / Caucasian
 - h. Other / None of these
2. How do you identify your gender as?
 - a. Genderqueer / genderfluid / non-binary
 - b. Man
 - c. Woman
 - d. Other / none of these
3. How do you define your sexual orientation? (check all that apply)
 - a. Asexual or Ace Spectrum
 - b. Bisexual
 - c. Gay / Lesbian / Homosexual
 - d. Heterosexual
 - e. Pansexual
 - f. Queer
 - g. Other / none of these
4. How would you define your socioeconomic status growing up? (check all that apply)
 - a. Poor
 - b. Working class
 - c. Lower middle class
 - d. Upper middle class
 - e. Upper class
5. What is your current annual income level? ("Less than \$10,000" to "More than \$150,000")
6. What is your religious affiliation? (check all that apply)
 - a. Agnostic / Atheist
 - b. Buddhist

- c. Christian – Catholic
 - d. Christian – Protestant (includes Lutheran, Methodist, Baptist, etc.)
 - e. Christian – Orthodox
 - f. Hindu
 - g. Jewish
 - h. Muslim
 - i. Spiritual, not religious
 - j. Other / none of these
7. What is your political identity?
- a. Democrat
 - i. Would you call yourself a Strong Democrat or a not very strong Democrat?
 - 1. Strong Democrat
 - 2. Not very strong Democrat
 - b. Independent
 - i. Do you think of yourself closer to the Republican or Democratic Party?
 - 1. Republican
 - 2. Democratic
 - 3. No preference
 - c. Republican
 - i. Would you call yourself a Strong Republican or a not very strong Republican?
 - 1. Strong Republican
 - 2. Not very strong Republican
 - d. Other (please specify)
 - i. Do you think of yourself closer to the Republican or Democratic Party?
 - 1. Republican
 - 2. Democratic
 - 3. No preference
8. In the 2020 Presidential Election, who did you vote for?
- a. Donald Trump
 - b. Howie Hawkins
 - c. Jo Jorgensen
 - d. Joe Biden
 - e. Other
 - f. I did not vote

[Display This Question: If in the 2020 Presidential Election, who did you vote for? = I did not vote]

9. If you were to have voted in the 2020 Presidential Election, who would you have voted for?
- a. Donald Trump
 - b. Howie Hawkins
 - c. Jo Jorgensen
 - d. Joe Biden

- e. Other
10. What U.S. state do you currently reside in?
 11. What state county do you currently reside in?
 12. What type of community do you live in?
 - a. Large city (>100,000 inhabitants)
 - b. City (25,000 – 100,000 inhabitants)
 - c. Small city, town, or village (<25,000 inhabitants)

Appendix B

Materials for Studies 2a and 2b

Actual Agreement and Perceived Agreement with Statements About Diversity and Inclusion

[Statements presented twice but with different instructions]

Instruction 1: We are interested in your opinions about several statements related to diversity, equity, and inclusion.

Please rate on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree) your agreement with the following statements:

Note: Many of the statements include the term "minority groups" which is synonymous with (i.e., used interchangeably with) "marginalized groups," and "underrepresented groups."

Instruction 2: We are interested in your beliefs about *other Americans/Biden Voters/Trump Voters* and their opinions on diversity, equity, and inclusion.

What percent of US adults/Biden Voters/Trump Voters do you believe would respond with "Strongly Agree" and "Somewhat Agree" with each of the following statements?

For example, if you think 20 percent would "Strongly Agree" and 15 percent would "Somewhat Agree," write in the total of the two, 35.

Note: Many of the statements include the term "minority groups" which is synonymous with (i.e., used interchangeably with) "marginalized groups," and "underrepresented groups."

1. An accurate and detailed account of the history of prejudice and discrimination in the US should be required curriculum in all public secondary schools.
2. It is okay if a portion of my taxes helps pay for the removal of confederate monuments and/or statues of former slave holders.
3. I would pay 1% more in taxes each year if I knew that money was going toward college scholarships for high-achieving minority students who couldn't otherwise afford higher education.
4. I would not apply for a job at a company that is known to be biased against LGBTQ+ people.
5. I would confront a friend if they were ever being racist toward another person.
6. The US would be better off if we stopped allowing so many immigrants from Central and South America into our country.
7. Minority groups receive more resources than they deserve, thus we don't need any more policies that benefit them.
8. Critical Race Theory and diversity training demonizes white people too much.
9. A business owner should be able to decide not to provide services to someone based on their race and ethnicity and/or being gay.

10. White people do not deserve the amount of criticism they receive from members of other racial groups.

Demographics

Same items will be used as in Study 1.

Appendix C

Materials for Study 3

Descriptive Social Norms Message Experimental Manipulation

Descriptive Norm Questions:

[Instructions] You will be playing a game of Two Truths and One Lie. You will be presented with three statements and you will need to identify which two you think are true and which one you think is false. The theme for this game is opinions Americans have about diversity, equity, and inclusion. Please make your best guesses and do not look up answers on the internet. We will reveal the two truths and one lie after you submit your decisions.

- 1) How do Americans perceive diversity and inclusion in the US?
 - a. A large majority of Americans think that racial diversity **benefits** the country.
 - b. Most White US adults **have not confronted** a friend or family member after they have said a racist or racially insensitive comment.
 - c. Over 75% of White adults in the US have paid **a lot of or some attention** to issues of race and racial inequality.

- 2) How do Americans feel about diversity and inclusion in the workplace in the US?
 - a. About half of US employees and those seeking jobs say **a diverse workforce is important** when they evaluate companies and job offers.
 - b. Most employed Americans **care** whether their employers invest in fostering an inclusive work environment.
 - c. About 80% of Americans think that **diversity is important** for the workplace.

- 3) What do Americans think about the growing diversity of the US?
 - a. Most (64%) of White US adults see diversity as having **a positive impact** on the country's culture.
 - b. A small percent of Americans think that the increasing diversity of the US makes the country **a better place to live**.
 - c. A small number of US adults think that a future where majority of the country's population is made up of Black Americans, Latinos and Asian Americans **is a bad thing**.

Control Condition Questions:

[Instructions] You will be playing a game of Two Truths and One Lie. You will be presented with three statements and you will need to identify which two you think are true and which one you think is false. The theme for this game is changes Americans have made during the COVID-19 pandemic. Please make your best guesses and do not look up answers on the internet. We will reveal the two truths and one lie after you submit your decisions.

- 1) How have Americans' work life been affected by COVID-19?
 - a. Over 50% of U.S. adults who said their job responsibilities can be done from home for the most part reported they **would want** to work from home after the coronavirus outbreak ends.
 - b. A very small portion of employed U.S. adults working from home all or most of the time during the coronavirus outbreak said that since the beginning of the outbreak, having an adequate workspace has been **very easy** for them.
 - c. Almost 20% of employed U.S. adults with the same job they have had since the before the coronavirus outbreak said they had **more flexibility** to choose their work hours compared to their flexibility before the outbreak.

- 2) What were Americans' relationship with technology like due to COVID-19?
 - a. A fifth of American adults **watched a concert or a play** that was livestreamed through the internet or an app as a result of the coronavirus outbreak.
 - b. Almost a third of American adults **ordered food online** through an app from a local restaurant as a result of the coronavirus outbreak.
 - c. About 30% of U.S. adults said that the internet has been **essential** for them personally during the coronavirus outbreak.

- 3) How has COVID-19 impacted various parts of peoples' lives in the U.S.?
 - a. Over 25% of Americans between the ages of 18 and 29 reported that their faith **grew stronger** as a result of the coronavirus outbreak.
 - b. Less than half of U.S. adults said the coronavirus outbreak is **a major threat** to their personal finance situation.
 - c. About half of Americans report **spending less time** communicating in-person compared to 10 years ago.

[Feedback Participants Receive]

CORRECT/INCORRECT

Descriptive Norm Condition:

- 1) How do Americans react to issues related to race in the US?
 - a. A large majority of Americans think that racial diversity **benefits** the country. **This is true!**

*A [Pew Research Center poll](#) also found that 75% White adults and 65% Republican/leaning Republican adults in the US find it **good for the country** that there is racial and ethnic diversity.*
 - b. Most White US adults **have not confronted** a friend or family member after they have said a racist or racially insensitive comment. **This is false!**

*Actually, most White US adults (64%) who have heard a friend or family member say a racist or racially insensitive comment **has confronted** them about it, according to [a large poll of Americans](#).*

- c. Over 75% of White adults in the US have paid **a lot of or some attention** to issues of race and racial inequality. **This is true!**

*A [2020 Pew Research Center poll](#) found that 40% of White adults have been paying **a lot of attention** and 37% of White adults have been paying **some attention** to issues related to race and racial inequality.*

2) How do Americans feel about diversity and inclusion in the workplace in the US?

- a. About half of US employees and those seeking jobs say **a diverse workforce is important** when they evaluate companies and job offers. **This is false!**

*[A poll of Americans](#) found that 76% of US employees and job seekers evaluate companies and job offers based on them **having a diverse workforce**.*

- b. Most employed Americans **care** whether their employers invest in fostering an inclusive work environment. **This is true!**

*A majority (72%) of employed Americans, [according to this report](#), say **they want** their employer to invest in an inclusive workplace.*

- c. About 80% of Americans think that **diversity is important** for the workplace. **This is true!**

*[A recent national poll](#) found that 5 out of 10 Americans think **diversity is “very important”** and 3 out of 10 Americans think diversity is **“somewhat important.”***

3) What do Americans think about the growing diversity of the US?

- a. Most (64%) of White US adults see diversity as having **a positive impact** on the country’s culture. **This is true!**

*A [Pew Research Center poll](#) found that 64% of White adults in the US think that diversity of races and ethnicities **is a good thing** for the country’s culture.*

- b. A small percent of Americans think that the increasing diversity of the US makes the country **a better place to live**. **This is false!**

*Most (53%) of Americans believe the increasing racial, ethnic, and nationality diversity in the US makes the country **a better place to live**, whereas only 15% believe it makes the country a worse place to live, [according to a recent poll](#).*

- c. A small number of US adults think that a future where majority of the country's population is made up of Black Americans, Latinos and Asian Americans **is a bad thing. This is true!**

A [recent Pew Research Center poll](#) found that only 11% of Americans (9% of Republicans in particular) think a majority of the US being made up of Black Americans, Latinos, and Asian Americans in the future is bad for the country.

Control Condition:

- 1) How have Americans' work life been affected by COVID-19?

- a. Over 50% of U.S. adults who said their job responsibilities can be done from home for the most part reported they would want to work from home after the coronavirus outbreak ends. **This is true!**

*According to [a 2020 Pew Research Poll](#), 54% of adults in the U.S. with job responsibilities that can mostly be done from home said they **would want to continue working from home all or most of the time even after the coronavirus outbreak ends**.*

- b. A very small portion of employed U.S. adults working from home all or most of the time during the coronavirus outbreak said that since the beginning of the outbreak, having an adequate workspace has been **very easy** for them. **This is false!**

*Actually, this [Pew Research Poll](#) shows that 4% of U.S. adults who are employed and working from home at least most of the time during the coronavirus outbreak said having an adequate workspace has been **very difficult** for them.*

- c. Almost 20% of employed U.S. adults with the same job they have had since the before the coronavirus outbreak said they had **more flexibility** to choose their work hours compared to their flexibility before the outbreak. **This is true!**

*For adults who maintained the same job since before the coronavirus outbreak, 19% said that compared to before the outbreak, they experienced **more flexibility** in choosing their work hours, according to [a recent poll](#).*

- 2) What were Americans' relationship with the internet like due to COVID-19?

- a. A fifth of American adults **watched a concert or a play** that was livestreamed through the internet or an app as a result of the coronavirus outbreak. **This is true!**

*Twenty percent of U.S. adults **watched a livestream concert or play** via the internet or app due to the coronavirus outbreak, according to [a Pew Research Poll from 2020](#).*

- b. Almost a third of American adults **ordered food online** through an app from a local restaurant as a result of the coronavirus outbreak. **This is true!**

*A [Pew Research Poll](#) reported that 32% of U.S. adults **ordered food from a local restaurant via an online app** as a result of the coronavirus outbreak.*

- c. About 30% of U.S. adults said that the internet has been **essential** for them personally during the coronavirus outbreak. **This is false!**

*Actually, 53% of U.S. adults said that the internet has been **personally essential** for them during the coronavirus outbreak according to [a recent poll](#).*

3) How has COVID-19 impacted various parts of peoples' lives in the U.S.?

- a. Over 25% of Americans between the ages of 18 and 29 reported that their faith **grew stronger** as a result of the coronavirus outbreak. **This is false!**

*Actually, 17% of U.S. adults ages 18 to 29 said their faith **grew stronger** because of the coronavirus outbreak, according to [a recent poll](#).*

- b. Less than half of U.S. adults said the coronavirus outbreak is **a major threat** to their personal finance situation. **This is true!**

*According to a [Pew Research Poll](#), 41% of U.S. adults feel that the coronavirus outbreak is **a major threat** to their personal finances.*

- c. About half of Americans report **spending less time** communicating in-person compared to 10 years ago. **This is true!**

*According [to a recent Ipsos poll](#), 53% of U.S. adults said they **spent less time** communicating with others in-person compared to 10 years ago.*

Open-Response Questions:

1. How did your views and thoughts about Americans change from before completing the Two Truths and One Lie task to after completing the task?
2. Did any of the information you saw in the Two Truths and One Lie task change your own thoughts, opinions, or intentions [about diversity and inclusion in the US]?
3. Do you have any additional comments you would like to make about the Two Truths and One Lie task or the surveys in general?

Actual Agreement and Perceived Agreement with Statements About Diversity and Inclusion

Instruction 1: We are interested in your opinions about several statements related to diversity, equity, and inclusion.

Please rate on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree) your agreement with the following statements:

Note: Many of the statements include the term "minority groups" which is synonymous with (i.e., used interchangeably with) "marginalized groups," and "underrepresented groups."

Instruction 2: We are interested in your beliefs about *other Americans* and their opinions on diversity, equity, and inclusion.

What percent of US adults do you believe would respond with "Strongly Agree" and "Somewhat Agree" with each of the following statements?

For example, if you think 20 percent would "Strongly agree" and 15 percent would "Somewhat Agree," write in the total of the two, 35.

Note: Many of the statements include the term "minority groups" which is synonymous with (i.e., used interchangeably with) "marginalized groups," and "underrepresented groups."

1. It is okay with me if my local taxes are used for programs that help students from minority groups succeed in school.
2. It is important to support businesses owned by Black people and other non-White people.
3. It is okay with me if my state taxes are used for college scholarships for students from minority groups so that they can attend the state's public university.
4. I am not bothered by the fact that White people will eventually be a numerical minority in the US.
5. It is important that employers ensure their company/organization fosters an inclusive workplace climate.
6. Racial diversity benefits the country.

Intergroup Anxiety

Instructions: We are interested in your responses to a variety of dimensions related to diversity and inclusion. Please respond to the following series of questions and be sure to provide honest and accurate responses.

The term **“social group”** is often used in this survey. A social group is a collection of individuals that share some characteristic(s). They may be defined in terms of dimensions like race, ethnicity, sexual orientation, social class, religion, ability etc.

“When conversing with people belonging to underrepresented or marginalized groups...”

1. ...I am concerned that I will say something that offends them
2. ...I worry they might perceive something I say to be insensitive about their social group
3. ...I fear I might say something that the other person perceives as disrespectful

4. ...I worry that I might inadvertently treat them more negatively than other people
5. ...I believe the conversation will go well for both me and the other person

Concern About Discrimination

Instructions: Please rate on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree) your level of agreement with the following statements:

1. I'm not personally concerned about discrimination against people from underrepresented groups.
2. People need to stop focusing so much time and energy worrying about discrimination.
3. People make more fuss about discrimination against members of underrepresented groups than is necessary.
4. I consider discrimination to be a serious problem.

Confronting Discrimination

Same measure will be used as in Study 1.

Posting an Inclusive Message to Social Media

Instructions: One more thing before we conclude this survey with demographic items! If inclusion is important to you, would you be willing to post on your social media a statement that says you value diversity and promise to try and behave inclusively?

If so, please copy and paste the bolded statement below onto a social media account that you have (e.g., Facebook, Twitter, Instagram), post it for your followers/friends to see, take a screenshot of it (*just the post and nothing else*), and upload it to this survey when prompted to:

Given everything happening in the world, I think it's more important than ever to treat people in a welcoming, respectful, and inclusive way.

Instructions for the screenshot:

- **VERY IMPORTANT:** Before uploading your screenshot, make sure it *only* shows your post and not any other content such as your name or picture, or any other individuals' posts and/or comments (to ensure that there are no identifying information included). It must contain *just* your post of the statement above. If anything other than your post is in the screenshot, we will need to crop the screenshot for you in order to maintain your privacy and confidentiality. If you need to crop some of the post out of the image in order to ensure no other content is shown, it is okay to do so.
- If you are a Mac user: To take a screenshot of your post, click on "Shift + Command + 4" on the keyboard and then click, hold, and drag your mouse over the part of the screen you want to capture (just the post). When you release the mouse, the screenshot should save to your computer.
- If you are a Windows user: To take a screenshot of your post, you can either use the Snip & Sketch tool or the Snipping tool. You can access either of them by searching for them

in your computer's search bar since they are built-in apps. In either of the tools, click the "New" button then click, hold, and drag the mouse over the part of the screen you want to capture (just the post). When you release the mouse, a window should open up of the screenshot. You can then edit and save the screenshot to your computer.

Demographics

Same items will be used as in Study 1.

Bonus Payment Outcome

Before we end the study, based on your completion time and effort put into responding to the questions, you are eligible to receive an extra \$1.00 (i.e., Prolific bonus payment) for taking your time and answering questions thoroughly.

This bonus will be provided on top of the base rate specified in Prolific. You can decide whether to take the full amount or just a portion of it. Any bonus payments (or portions of the bonus) not taken, will be donated to the [National Urban League](#).

What percent of the \$1.00 would you like to receive as a bonus payment?

0% ----- 100%