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Observers of social media discussions about racial discrimination condemn denial but also adopt it

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Sharing experiences with racism (*racial discrimination disclosure*) has the power to raise awareness of discrimination and spur meaningful conversations about race. Sharing these experiences with racism on social media may prompt a range of responses among users. While previous work investigates how disclosure impacts disclosers and listeners, we extend this research to explore the impact of observing discussions about racial discrimination online—what we call *vicarious race talk*. In a series of experiments using real social media posts, we show that the initial response to racial discrimination disclosure—whether the response denies or validates the poster's perspective—influences observers' own perceptions and attitudes. Despite observers identifying denial as less supportive than validation, those who observed a denial response showed less responsive attitudes toward the poster/target (Studies 1–3) and less support for discussions about discrimination on social media in general (Studies 2–3). Exploratory findings revealed that those who viewed denial comments also judged the transgressor as less racist, and expressed less support and more denial in their own comments. This suggests that even as observers negatively judge denial, their perceptions of the poster are nonetheless negatively influenced, and this impact extends to devaluing the topic of discrimination broadly. We highlight the context of social media, where racial discrimination disclosure—and how people respond to it—may be particularly consequential.

When individuals feel that they or their loved ones have experienced racial discrimination, they sometimes disclose these experiences to others[1,2]. We refer to this as *racial discrimination disclosure*. An increasingly common place that people share discrimination disclosures is on social media. Racial discrimination disclosures on social media have the power to raise awareness of discrimination and spur meaningful conversations about race. For instance, Christian Cooper's social media post about being racially profiled in Central Park while bird watching in 2020 brought national attention to everyday racism faced by Black people in the United States[3].

In addition to their societal impact, sharing personal experiences, especially those involving stress or adversity, can provide benefits to the discloser. Research indicates that such disclosures can lead to improvements in physical health, psychological functioning, and subjective well-being[4–8]. The benefits of disclosure could be particularly important in racial discrimination disclosure, as experiencing discrimination either directly or vicariously through a family member has been linked to greater depressive symptoms, anxiety, and anger[9].

However, the benefits of disclosure are contingent upon the discloser feeling understood, validated, and supported by the listener[10–12]. In addition, in social media contexts, whether people feel like their audience is responsive to their perspective can shape the extent to which they feel comfortable sharing their experiences. In one set of studies, Facebook users who perceived their social network to be more responsive and supportive disclosed more openly and honestly in their posts[13]. Thus, we theorize that for targets of discrimination to be able to share authentically about their experiences and reap the benefits of doing so, it is critical that their social networks meet them with support.

Despite the potential societal and personal benefits, people who disclose experiences of discrimination face heightened risk of backlash, minimization, and dismissal. Indeed, Black Americans who claim experiences of discrimination are often labeled as complainers or troublemakers[14–16]. Moreover, White Americans

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often underestimate the prevalence of anti-Black racial bias and discrimination, both at societal and individual levels[17–20]. Thus, while online racial discrimination disclosures could provide an opportunity for learning and gaining perspective[21], they also carry the potential to challenge readers' race-related beliefs[22,23]. This can lead to responses that deny, rather than validate, the experiences of the discloser.

Research on disclosure has predominantly focused on the impact of disclosure within one-on-one exchanges, emphasizing the dynamics between the discloser and listener[24–27]. However, disclosure regularly extends beyond dyadic interactions to group settings and involves third party observers[13,28]. Approximately half of social media users report primarily consuming content rather than posting their own[29]; thus, more work is needed to understand how individuals and social media users are impacted by conversations they observe.

We propose that, in addition to its impact on the discloser's experience, responsiveness (or lack thereof) impacts observers' perceptions of the discloser and the disclosed experience. Social learning and social influence research posit that we learn how to navigate our social world from observing others, and observing interactions has powerful effects on one's perceptions of social norms and future behavior[30,31]. Individuals may be especially ready to adopt others' views and behavior when engaging with race-related discourse, as there are limited models of how to talk about race in American society[2,32–34].

In this work, we use the term *vicarious race talk* to refer to observing conversations about race. We propose that vicarious race talk has important psychological and behavioral impacts on observers. This framework is inspired by vicarious intergroup contact research, which shows that observing interactions between an ingroup and outgroup member can have similar effects on intergroup attitudes as engaging in an interaction directly[35–41]. We build on this literature in several ways. First, similar to traditional vicarious contact settings, a participant observes an interaction between two people (poster and commenter; Fig. 1A). However, rather than manipulating mere presence or valence of intergroup contact, we focus on the topic of the interaction (racial discrimination) and manipulate specific content within it (Fig. 1B). Second, we focus on observers' judgments about the legitimacy of the discrimination experience and behavior toward the discloser, rather than on broad racial attitudes or interest in contact. Finally, we simulate an ecologically valid context where vicarious race talk happens constantly: social media.
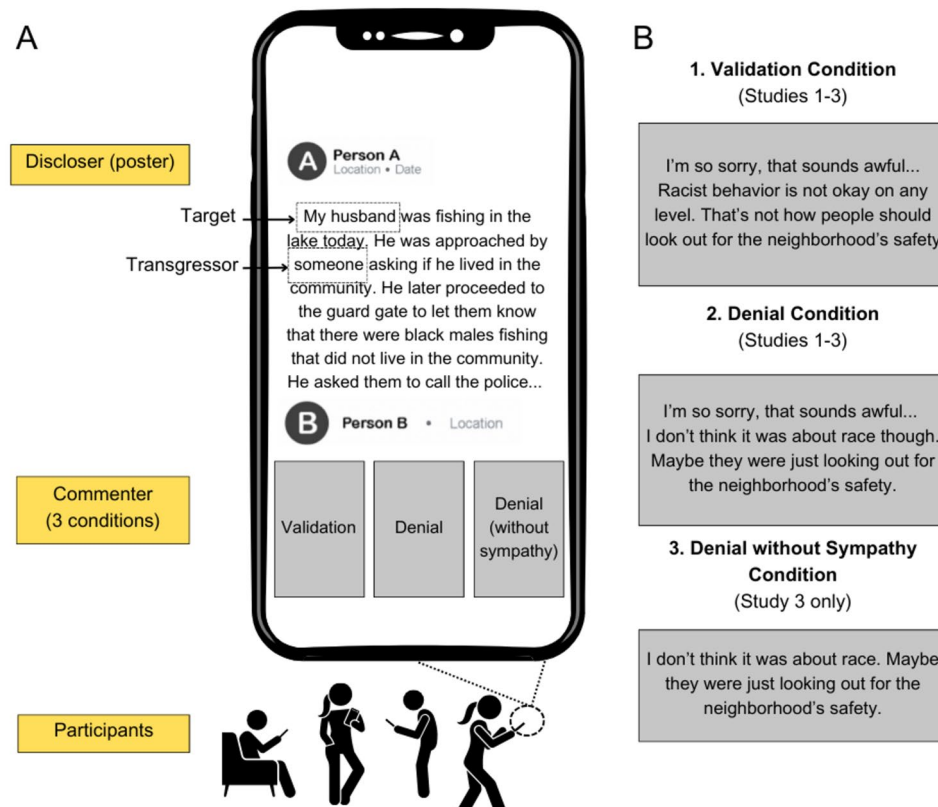
Figure 1. (**A**) Conceptual demonstration of the interaction context and experimental design. The post depicted is an abbreviated version of a discrimination disclosure used as stimuli in all 3 studies. "Discloser (poster)" signifies Person A, who posted the discrimination disclosure. "Target" is the person in the story who experienced discrimination, who is either the discloser or a close other (i.e. spouse or child), and "Transgressor" is the person/people who are accused of racist behavior. "Commenter" is the hypothetical person who denies or validates the experience. "Participants" signify the role of observers. In this framework, vicarious race talk occurs when the participant observes an interaction between the poster and the commenter. (**B**) Specific text used in each experimental condition.

Given the prevalence of discrimination denial at the societal and interpersonal levels, we focus on whether a response denies the role of racism in the experience or validates the target's perspective. How might those who observe denial of discrimination in a social media thread perceive this type of response? On one hand, observers may judge a response that denies racism as a perfectly appropriate response to discrimination disclosure, in line with American societal norms that tend to minimize racism's prevalence and impact[42]. On the other hand, denying someone's lived experiences, whether related to race or not, may be seen as unsupportive and dismissive[43]. Moreover, public denial, regardless of one's private beliefs, could be judged as inappropriate, as many Americans are motivated to respond in unprejudiced ways[44].

Importantly, observers' explicit judgments of whether denial is supportive or appropriate may not consistently align with their attitudes. Indeed, while explicit racism is condemned by many, subtle language undermining discrimination persists widely[45]. Thus, we also examine whether denial can shape how observers perceive the broader situation and how they behave within it. We theorize that commenters on a discrimination disclosure post can either lend credence to the poster's perspective or cast doubt upon it, and in doing so provide a model for how others should regard the discrimination experience and its target. For instance, some research shows that witnessing condemnation or confrontation of racism fosters anti-racist sentiments and increased recognition of biased behavior[46,47]. Conversely, exposure to hate speech has been linked to heightened prejudice[48], and exposure to colorblind language fosters colorblind ideology and implicit bias[49].

Overall, this work extends social learning and vicarious contact research to examine how different kinds of *responses* to racial discrimination disclosure—whether a comment denies or validates the experience—impact observers' own attitudes and responsiveness to the racial discrimination experience and its target. We consider how these responses to racial discrimination disclosure influence observers' perceptions of the poster, the situation, and discrimination as a topic more broadly. In doing so, we consider whether discrimination denial might aid in perpetuating a culture, both online and in the real world, in which such discussions are stifled and unwelcome.

Research overview and hypotheses

Figure 1 provides a schematic of the design for Studies 1–3. We operationalized vicarious race talk as the participants' observation of an interaction between the *poster* and the *commenter* (Fig. 1A). Across three experiments, we manipulate the nature of this vicarious race talk. We utilized a sample of real discrimination disclosure posts, and constructed "validation" and "denial" comments that were representative of a larger sample of comments on a social media platform. Each participant read one discrimination disclosure post in which the *poster* described an instance of discrimination that happened either to themselves or a close other (i.e., a spouse or child; see SI for stimuli). We refer to the person who experienced discrimination as the *target* (See Fig. 1A). This operationalization of discrimination disclosure is based on prior research showing that vicarious experiences of discrimination through family members can have similarly negative outcomes as experiencing discrimination to the self[9], and is also consistent with theories of inclusion of other in the self, in which individuals incorporate the identities and perspectives of close others into their own self-concept[50].

Beneath the discrimination disclosure post, participants saw one comment that either validated the poster's perspective or denied the role of racism in the poster's experience (Study 3 tested an additional denial condition; Fig. 1B). In the denial conditions, racism is explicitly denied and an alternative explanation is offered for the transgressor's behavior ("Maybe they were just looking out for the neighborhood's safety"), reflecting the commonality of such justifications in real-life racial profiling cases[51]. In the validation condition, the commenter expresses disapproval of the transgressor's behavior, thus validating the poster's perspective ("That's not how people should look out for the neighborhood's safety").

After participants viewed this interaction, we first measured their judgments of how supportive the comment was (Studies 1–3). We hypothesized that the denial comment would be perceived as less supportive than the validation comment. Second, we tested the effect of exposure to a denial versus validation comment on participants' attitudes toward the poster/target (Studies 1–3). We hypothesized that participants observing denial would report less responsive attitudes toward the poster/target compared to participants observing validation. Third, we examined whether the effect of denial versus validation extended to participants' support for discrimination disclosure on social media in general (Studies 2–3). We hypothesized that participants who observed denial would view discrimination disclosure as a less appropriate and valuable topic on social media than those who observed validation. Fourth, we assessed whether observing denial or validation influenced judgments about whether the *transgressor* described in the post was racist, hypothesizing that participants observing denial would evaluate the transgressor as less racist than those who observed validation (Studies 1–3). Finally, we explored the effect of exposure to denial on participants' supportiveness in their own written comment (Studies 1–3); we hypothesized that when asked to respond to the thread themselves, participants who observed denial would convey less support and be more likely to also deny the poster's perspective relative to those who observed validation.

Importantly, although this work is rooted in vicarious intergroup contact theory, we do not explicitly manipulate *interracial* discussions. Although the commenters may be presumed to identify with a different racial-ethnic group than the non-White discloser, we do not explicitly label them as such in order to minimize social desirability bias and to mirror the fact that many social media platforms afford some level of anonymity to their users. In addition, this design reflects our focus on the *content* of the interaction, rather than the identity of the poster.

To investigate the effect of denial versus validation on these outcomes, we ran a linear regression model for each outcome, with the exception of presence of support and denial in participants' comments, for which we ran a logistic regression for binary outcomes. In all models, we include age and political orientation as covariates (see Methods). In Study 3 (preregistered on OSF), in addition to replicating outcomes from Studies 1–2,

we tested an additional condition to assess the role of sympathy in responses to discrimination disclosure (see Robustness and Moderation Results).

Results

Participants' judgements of a comment that denies or validates discrimination

After presenting participants with a discrimination disclosure post and either a denial or validation comment, we asked four items measuring how supportive participants thought the comment was (e.g., "How respectful is this comment?"; "How hurtful is this comment?" (reverse-coded); Study 1: alpha = 0.93; Study 2: alpha = 0.90; Study 3: alpha = 0.77; see SI for all items). We hypothesized that a denial comment would be explicitly judged as less supportive than a validating comment. Consistent with this hypothesis, across three studies, participants rated responses denying discrimination as less supportive than those validating the poster's perspective (Study 1: $b = -1.57$ [$-1.81, -1.33$], $t(261) = -12.94$, $p < 0.001$, $d = -1.60$; Study 2: $b = -1.40$ [$-1.54, -1.27$], $t(661) = -20.92$, $p < 0.001$, $d = -1.63$; Study 3: $b = -0.75$ [$-0.92, -0.58$], $t(817) = -8.67$, $p < 0.001$, $d = -0.61$) (Fig. 2).

Denial's influence on participants' attitudes toward the poster/target

After viewing the discrimination disclosure thread, participants completed four items that captured how responsive they felt toward the poster/target[12], including the extent to which the participant felt bad for the target, how fair they thought the poster's description was, how much they could see the poster's perspective, and whether the poster may have misunderstood the transgressor's intentions (reverse coded). We refer to this composite measure as attitudes toward the poster/target (Study 1: alpha = 0.81; Study 2: alpha = 0.84; Study 3: alpha = 0.72).

Consistent with our hypothesis, across three studies, participants in the denial condition expressed less responsive attitudes toward the poster/target relative to those in the validation condition (Study 1: $b = -0.23$ [$-0.41, -0.06$], $t(262) = -2.61$, $p = 0.01$, $d = -0.32$; Study 2: $b = -0.16$ [$-0.28, -0.04$], $t(657) = -2.59$, $p = 0.01$, $d = -0.20$; Study 3: $b = -0.28$ [$-0.44, -0.12$], $t(817) = -3.39$, $p = 0.001$, $d = -0.24$).

Denial's influence on participants' attitudes toward discrimination disclosure

While discrimination disclosures have the potential to spur meaningful conversations about racism[52], this potential relies on viewers of the disclosure perceiving it as a legitimate topic of conversation[15]. Thus, in Studies 2–3, we tested whether the impact of observing denial or validation extended beyond the specific situation to participants' broader attitudes about the value and appropriateness of discrimination disclosure on social media. We asked participants the extent to which they thought social media was an appropriate place to share discrimination experiences, and how valuable these types of posts were; these two items formed a composite (Study 2: $r = 0.70$; Study 3: $r = 0.64$). In both studies, we find that participants in the denial condition rated discrimination disclosure
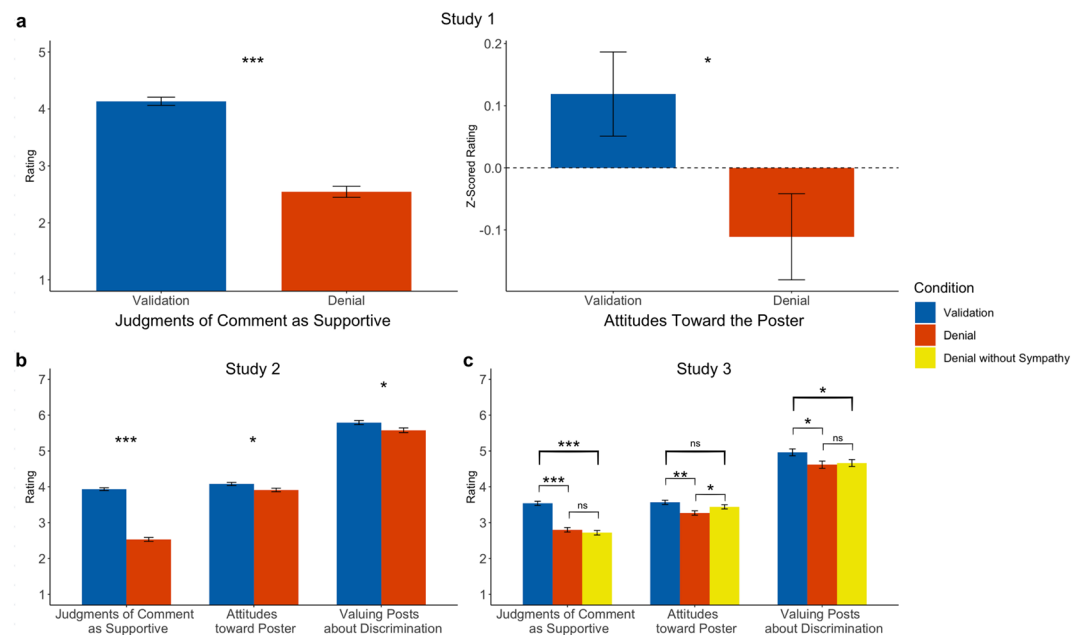
Figure 2. Primary outcomes by condition across Studies 1–3. Whiskers represent standard error. * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$. Panel (**a**): Judgments of the comment as supportive and attitudes toward the poster/target by condition in Study 1. Attitudes toward the poster/target composite items were z-scored because they were originally presented on different scales (in Study 1 only). Panel (**b**): Judgments of the comment as supportive, attitudes toward the poster/target, and valuing posts about discrimination by condition in Study 2. Panel (**c**): Judgments of the comment, attitudes toward the poster/target, and valuing posts about discrimination by condition in Study 3.

posts as less appropriate and valuable for social media relative to participants in the validation condition (Study 2: $b = -0.21$ [$-0.38, -0.04$], $t(652) = -2.49$, $p = 0.01$, $d = -0.19$; Study 3: $b = -0.33$ [$-0.60, -0.06$], $t(816) = -2.36$, $p = 0.02$, $d = -0.17$).

Denial's influence on participants' judgements of the transgressor

In addition to measuring perceptions of the poster, we also measured perceptions of the transgressor—the person being accused of racist behavior in the post. Here, we report exploratory findings on one key item: the extent to which the transgressor's behavior is perceived as racist (a composite measure of perceptions of the transgressor is reported in Tables S12–S14). Previous work has demonstrated how peers can influence not only one's expression of prejudice[46,53], but also their perceptions of specific discriminatory acts[47,54]. We hypothesized that participants exposed to a denial comment may be less likely to label the transgressor's actions as racist compared to those in the validation condition. Across all three studies, participants in the denial condition viewed the transgressor's actions as less racist than those in the validation condition (Table 1). Because of the exploratory nature of this measure, we additionally show data combined across all three samples (Table 1).

Denial's influence on participants' own behavior toward the target

To explore whether the effect of denial and validation could extend beyond attitudes to behavior, we asked participants to write a comment on the thread themselves (i.e., "If you were to leave a comment, what would you say?"). Two trained undergraduate research assistants who were blind to condition coded participants' own comments for the presence of six themes. The two primary themes were a) expressing support for the poster and/ or target ("support"; Cohen's kappa = 0.83); and b) denying the role of racism in the poster's experience ("denial"; Cohen's kappa = 0.77) (Table S11 reports the four additional themes) (Table 2).

A logistic regression model compared the prevalence of each theme by condition, controlling for age and political orientation. Given the lack of power to detect differences because of missing data common in open-ended responses, we conducted a combined analysis of these themes collapsing across our three studies (Fig. 3). Table S11 reports regression results for each study. Across all studies, participants in the validation condition were more likely to express support for the poster ($b = 0.60$ [$0.30, 0.89$], $z(1303) = 3.97$, $p < 0.001$, $OR = 1.82$), and less likely to express denial towards the poster ($b = -0.94$ [$-1.36, -0.54$], $z(1305) = -4.49$, $p < 0.001$, $OR = 0.39$) than participants in the denial condition (Fig. 3).

Robustness and moderation

The impact of sympathy in denial comment

In Studies 1–2, both the denial and validation comments offered a basic expression of sympathy ("I'm so sorry") before either validating or denying the poster's experience. Indeed, disclosure of negative experiences is often met with positive emotional support[28]. In Study 3, we introduce a third condition that denies the poster's experience *without* expressing sympathy ("denial without sympathy" condition) to examine the role that expressions of sympathy may play in bolstering or dampening the effects of denial on participants. While we expect both the denial and denial without sympathy comments to be viewed less positively than the validating comment, there were two possibilities regarding participants' attitudes toward the poster/target and the content. The first possibility was that mere exposure to a denial comment, regardless of whether it also expresses sympathy, would

Predictor	Study 1 Estimates (validate vs. denial)	Study 2 Estimates (validate vs. denial)	Study 3 Estimates (validate vs. denial)	Estimates (validate vs. denial without sympathy)	Estimates (denial vs. denial without sympathy)	Combined analysis Estimates (validate vs. denial)
Likelihood that transgressor is racist (1—Not at all likely to 5—Extremely likely)	$b = -0.41$ [-0.66, -0.16]**, $d = -0.40$	$b = -0.21$ [-0.38, -0.04]*, $d = -0.19$	$b = -0.46$ [$-0.68, -0.24$]***, $d = -0.29$	$b = -0.32$ [$-0.55, -0.10$]**, $d = -0.20$	$b = 0.13$ [$-0.08, 0.35$]^{NS}, $d = 0.08$	$b = -0.33$ [$-0.46, -0.21$]***, $d = -0.28$

Table 1. Exploratory results for perceived racism of the transgressor (Studies 1–3 and all studies combined). Values in brackets represent 95% confidence intervals. Combined analysis did not include the denial without sympathy condition. *$p < 0.05$ **$p < 0.01$ ***$p < 0.001$.

Theme	Description	Examples
Support (kappa = 0.83)	Do they express support for the poster? (e.g. validate experience; express sympathy/sorrow; communicate common understanding of the experience)	"I am so sorry that happened… Please know you have my support and prayers." "So sad." "This behavior by croissant Karen is despicable."
Deny (kappa = 0.77)	Do they deny that the poster's experience was racist? (e.g. makes non-race-related attribution; explicitly denies the role of race)	"I'm not sure I would pin it on racism as much as fear."

Table 2. Primary themes in participants' open-ended comments with inter-rater reliability, definitions, and examples. 0 = theme not present, 1 = theme present.
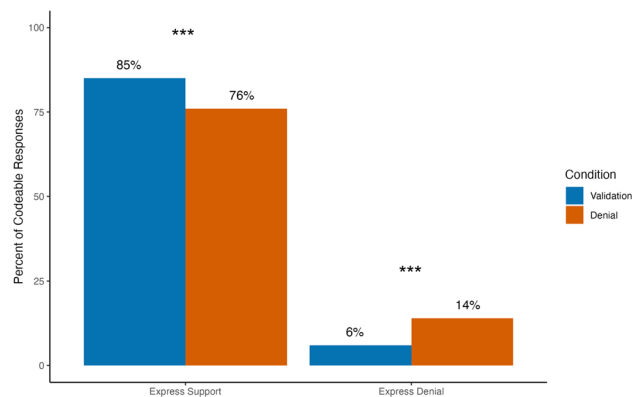
Figure 3. Percentage of participants who expressed support and denial by condition (excluding participants who did not write a codeable response), collapsing across Studies 1–3. *** = $p < 0.001$.

negatively impact how individuals perceive the content and the poster. If this were the case, participants in both the denial and denial without sympathy conditions would similarly exhibit less responsive attitudes toward the poster/target and regard discrimination disclosure posts as less valuable, compared to those in the validation condition. Alternatively, it is also possible that the inclusion of sympathy in a denial response might encourage participants to more readily adopt a denial perspective. Sympathy-infused denial could potentially be perceived as a more socially acceptable means of discrediting the poster/target's viewpoint, while a denial comment lacking expressions of sympathy might be deemed excessively harsh or violating norms of supportive behavior. If so, those exposed to denial without sympathy would exhibit *more* responsive attitudes toward the poster/target and regard discrimination disclosure posts as more valuable than those exposed to denial with sympathy.

In Study 3, participants judged the denial without sympathy comment as equally unsupportive as the denial comment with sympathy ($b = -0.09$ [-0.26, 0.08], $t(817) = -1.04$, $p = 0.30$, $d = -0.07$), and as less supportive than the validation comment ($b = -0.84$ [-1.01, -0.67], $t(817) = -9.51$, $p < 0.001$, $d = -0.67$). When it came to attitudes, participants reported fewer responsive attitudes toward the poster/target when the denial comment included an expression of sympathy compared to when it did not ($b = -0.18$ [-0.34, -0.01], $t(817) = -2.13$, $p = 0.03$, $d = -0.15$). In fact, participants who viewed the denial without sympathy comment had similarly responsive attitudes as those who observed a validation comment ($b = 0.11$ [-0.06, 0.27], $t(817) = 1.25$, $p = 0.21$, $d = 0.09$). This supports the notion that denial without any expression of sympathy may appear overly harsh to participants, leading to reactance that counteracts the negative impact of denial. However, even as the denial without sympathy comment bolstered participants' responsive *interpersonal attitudes* toward the poster/target, it did not mute the effect on broader attitudes about discrimination disclosure; participants in the denial without sympathy condition valued discrimination disclosures at similar levels to those in the denial with sympathy condition ($b = 0.03$ [-0.24, 0.30], $t(816) = 0.24$, $p = 0.81$, $d = 0.02$), and less than those in the validation condition ($b = -0.29$ [-0.57, -0.02], $t(816) = -2.09$, $p = 0.04$, $d = -0.15$). Participants in the denial without sympathy condition also rated the transgressor's behavior as less racist than those in the validation condition, and there was no significant difference between the denial with sympathy and denial without sympathy conditions (Table 1).

Finally, in their own comments, participants in the denial without sympathy condition expressed similar levels of support ($b = -0.06$ [-0.45, 0.33], $z(648) = -0.31$, $p = 0.76$, $OR = 0.94$) and denial ($b = 0.21$ [-0.26, 0.67], $z(648) = 0.88$, $p = 0.38$, $OR = 1.23$) to those in the denial with sympathy condition; they expressed significantly less support ($b = -0.45$ [-0.88, -0.03], $z(648) = -2.08$, $p = 0.04$, $OR = 0.63$) and more denial ($b = 1.59$ [0.93, 2.33], $z(648) = 4.50$, $p < 0.001$, $OR = 4.91$) than those in the validation condition. These findings suggest that exposure to discrimination denial negatively shapes how observers regard and respond to discrimination disclosures on social media, regardless of how it is delivered and even when they hold positive attitudes about the individual target.

Moderation: participant race
Across all studies, we equally sampled Black and White participants in order to test how vicarious discussions of race impact members of the target's ingroup and outgroup. We initially hypothesized an interaction between condition and participant race across our outcomes, such that White participants would be more impacted by denial than Black participants. However, we did not find interaction patterns on any of our primary outcomes (with one exception; see Table S8). Thus, primary results in all studies were collapsed across race (see Tables S6–S8 for models including race for all studies).

Moderation: concern about racism
We theorized that the impact of observing discrimination denial may depend on the extent to which participants are generally concerned about racism, as those higher in concern about racism may be more vigilant to unsupportive communication about race. Thus, in Studies 2–3, we measured participants' concern about racism using two items (Study 2: r = 0.74; Study 3: r = 0.60) and tested whether it moderated the effect of condition on the primary outcomes. In Studies 2 and 3, concern about racism moderated participants' judgments of the comment, such that participants higher in concern about racism viewed the validating comment more positively than

the denial comment, while those low in concern rated the two comments similarly (Study 2: $b = -0.69$ [-0.82, -0.55], $t(650) = -10.04$, $p < 0.001$, $d = -0.79$; Study 3 validation vs. denial with sympathy: $b = 0.59$ [0.44, 0.75], $t(814) = 7.53$, $p < 0.001$, $d = 0.53$; Study 3 validation vs. denial without sympathy: $b = 0.67$ [0.51, 0.83], $t(814) = 8.03$, $p < 0.001$, $d = 0.56$). However, concern about racism did not moderate attitudes about the poster/target or discrimination disclosure posts broadly (see Tables S9–S10), which suggests that even those who view racism as a substantial problem in society are still influenced by denial.

Discussion

Overall, this work highlights the power of responsiveness to discrimination disclosure in shaping observers' perceptions and behavior. Specifically, whether a responder denies or validates that the experience was racist influences observers' perceptions of the experience and its poster/target, and extends to their support for discrimination disclosure on social media in general. Observers are influenced by denial despite recognizing it as a less supportive response and even when they are highly concerned about racism, highlighting the potential for denial to influence people even when they are not motivated to accept it. This aligns with previous work showing how one's perceptions and behaviors may appear contradictory[45,55].

This work provides an initial understanding of the vicarious effects of race discourse, and sets a foundation for future research on this complex process. First, these studies presented a single comment to participants in order to isolate the effect of exposure to denial versus validation. Future work can expose participants to a broader array of comments, including multiple, often conflicting viewpoints, similar to what one may see on a typical social media platform. For instance, by manipulating the balance between denial and validation responses, researchers can explore the impact and threshold at which one kind of response outweighs the other. Second, subsequent studies should also explicitly manipulate the racial identity of the commenter to discern whether racial identity of the commenter plays a significant role in the observed effects. Third, while we test whether concern about racism moderated the effect of denial on participants' perceptions, future research could test additional moderators such as racial centrality, personal experiences with discrimination, and frequency of intergroup contact. These factors may influence how Black and White observers respond to discrimination denial. Fourth, future work can also investigate how the content of a discrimination disclosure affects the influence of denial. For example, discourse that centers around systemic versus interpersonal instances of racism might affect observers' broader attitudes towards race relations in the United States differently. Finally, follow-up work should also test this effect in other online and offline contexts, for instance by manipulating different characteristics and goals associated with the social media platform, and by utilizing in-person lab and field paradigms. This multifaceted approach can deepen our understanding of the complexities surrounding observers' reactions within diverse social environments.

Another strength of this work is the large enough sample size to power an investigation of the interaction between racial identity (Black, White) and condition. Contrary to our expectations, the findings held across Black and White participants, and effects were sometimes even driven by Black participants (see SI). This suggests that the vicarious effects of denial and validation are not specific to intergroup processes, which is consistent with some other racial bias studies[56]. It is possible that the denial comment activates similar skepticism among White and Black observers alike. However, another possibility is that a denial comment triggers a concern among Black participants about being judged as "playing the race card"[32], leading them to adhere to a higher threshold for validating claims of racism.

By examining these questions in the context of social media, we spotlight a setting where racial discrimination disclosure—and how people respond to it—may be particularly consequential. Despite the potential psychological and physical benefits for the discloser[5,57] and increased awareness of racism[14], conversations about race are often silenced on social media platforms[58,59]. Indeed, racial discrimination disclosure posts are reported and removed more often than posts disclosing negative experiences unrelated to race[60]. However, when these conversations do occur, we show that responses matter. Responses that deny or validate the experiences of people of color serve as building blocks for cultures that support or stifle important conversations about racial discrimination. If exposure to just one comment that denies a poster's discrimination experience impacts an individuals' responsiveness to discrimination disclosure on social media, it is easy to envision how this sentiment can spread quickly through social media[61].

Even as social media presents an unprecedented and critical opportunity for more diverse groups of people to connect and discuss meaningful and difficult topics around race and social inequality, it also poses risks. This work highlights one underemphasized risk—how exposure to denial of racism can spread to its community of observers. Even one seemingly trivial comment on a social media platform can have ripple effects to those who observe it, ultimately shaping the community's discourse.

Methods

Study 1

Participants

Two hundred and sixty-seven White and Black adults were recruited through Prolific, an online recruitment platform (53% Black, 47% White; 76% women, 21% men, 3% Non-binary; mean age = 33.09). Table S1 reports additional demographic information. An additional 18 participants who identified as another race were excluded. An a priori power analysis for an ANOVA with interaction effects revealed that this sample size provided 90% power to detect an effect size of f = 0.20.

Procedure

All studies reported in this paper were approved by the Institutional Review Board at Stanford University and Dartmouth College, and complied with ethical standards for human subjects research (including obtaining consent).

After providing consent, participants were told that they would view a randomly selected social media thread from a platform meant for neighbors to stay connected. We chose to present our hypothetical social media platform as locally-based, as racial discrimination is a common occurrence in neighborhoods, particularly those with shifting demographics[62]. Participants were not aware that the content of the thread would be specific to race. They were then presented with one of four posts (randomly selected) in which the poster described an experience of racial discrimination against either themselves or a family member (see Fig. 1A for an example). All posts were sampled from a social media platform (Table S4). Posts were pretested and matched on perceived positivity/ negativity of the event described, the language valence, and how racist the transgressor's actions were perceived to be. To reflect the covert nature of modern racism[55], the experiences described in the stimuli were relatively ambiguous. Pilot results indicate that participants were able to recognize the presence of racial discrimination in the described event. A fifth post that differed from the others on valence was excluded (Table S5).

Directly under the post, participants were randomly assigned to see one comment, which either denied or validated the poster's experience (Fig. 1B). We developed these comments to represent common responses we observed in a large corpus of discrimination disclosure threads. To isolate the effect of denial and validation of the poster's attribution of racism, both comments began by expressing sympathy, but differed in their judgment of the experience described by the poster. The denial comment questioned the poster's perception of the experience, while the validating comment supported the poster's perception. After viewing the comment, participants were asked about their judgments of the comment and the poster, as well as some additional measures (see supplement). The attitudes toward the poster/target composite included four items, three of which were on a 1–5 scale, and one of which was on a 1–7 scale; thus, we z-scored the composite for analyses (see supplement for full list of items).

Finally, participants answered basic demographic questions (age, gender, political orientation, education attainment, state of residence, race) and were paid for their time.

Analysis

For each outcome, we ran a linear regression model with condition (denial/validation) as the predictor. Age and political orientation had significant effects on the primary outcomes. Thus, they were included in all models as covariates. We planned to exclude values greater than three standard deviations from the mean from analysis. Neither of our primary outcomes contained outliers.

Study 2

Participants

Six hundred and sixty-six Black and White Americans were recruited through Prolific to participate in Study 2 (51% Black, 49% White; 59% women, 39% men, 2% non-binary; mean age = 36.01). Table S2 reports additional demographic information. An additional 15 participants who did not identify as Black or White were excluded from analysis. Our sample size was based on an a priori power analysis for ANOVA with interactions with 95% power and an effect size of f = 0.14, which was the smallest effect size among our significant results in Study 1.

Procedure

Study 2 followed the same procedure as Study 1, with the addition of two new measures: how valuable and appropriate discrimination posts are and concern about racism.

Analysis

For each outcome, we ran a linear regression model with condition (denial/validation) as the predictor and age and political orientation as covariates. We planned to exclude values greater than three standard deviations from the mean from analysis. This resulted in four responses being excluded from analysis of responsive attitudes toward the poster/target, and nine responses being excluded from analysis of valuing discrimination disclosure posts; no outliers were excluded from analysis of judgements of the comment.

Study 3

Participants

We conducted an a priori power analysis for an ANOVA with interactions using our smallest effect size from a pilot study (f = 0.11), for a 2 × 3 factorial design (race: Black/White; condition: validate/denial/denial without sympathy) with 80% power, which suggested a sample size of 800. Accordingly, we recruited 828 Black and White American participants from Cloud Research, an online recruitment platform (51% Black, 49% White; 50% women, 49% men, 1% non-binary; mean age = 45.58). Table S3 reports additional demographic information. An additional 44 participants who did not identify as Black or White were excluded from analyses.

Procedure

Study 3 included the two conditions from Studies 1–2 (denial and validation), as well as the denial without sympathy condition (Fig. 1B). This study followed the same procedure and used the same measures as Studies 1–2.

Analysis

Study 3 was pre-registered on Open Science Framework (https://osf.io/g7pyh/). The judgments of transgressor and comment qualitative coding outcomes were pre-registered as exploratory analyses. For each outcome, we ran a linear regression model with condition (denial with sympathy vs. denial without sympathy vs. validation) as the predictor and age and political orientation as covariates. Again, we planned to exclude values for each outcome that fell outside three standard deviations of the mean; there were no outliers for our primary outcomes in Study 3.

Qualitative coding

Two trained undergraduate research assistants who were blind to condition coded participants' own comments for the presence of six themes. The two primary themes were (a) expressing support for the poster ("support"); and (b) denying the role of racism in the poster's experience ("denial") (see Table S11 for additional themes). The "support" category intentionally conflated validation of the poster's perspective with expressions of sympathy. This was because explicit validation of the poster's attribution of racism was rare, perhaps because an expression of sympathy alone (without denial; e.g., "I'm so sorry, that sucks") can be assumed to implicitly validate the poster's perspective. Across all three studies, we excluded 244 responses which were either left blank, or not codeable (e.g., "n/a", "I would not respond", nonsensical characters). Cohen's kappas for all themes ranged from 0.71 to 1.00. After all responses were coded, disagreements were settled by lead authors. Given the rate of missing data, we conducted analyses for each individual study as well as a combined analysis (which excluded the denial without sympathy condition from Study 3). Logistic regression models compared frequencies of each theme by condition, controlling for age and political orientation.

Data availability

The data and analysis files for all studies and the pre-registration for Study 3 are available on Open Science Framework at https://osf.io/g7pyh/. Note that a redacted version was uploaded at a later stage, with proof that the original submission was dated before data was collected. We redacted the pre-registration in accordance with a data usage agreement with the company from which we obtained the social media posts used as stimuli.

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Author contributions

K.L.S., M.H., and C.L. conceptualized, designed, implemented, and analyzed the research and wrote the manuscript. J.L.E. helped conceptualize the research and provided feedback on manuscript drafts.

Competing interests

J.L.E. serves on the advisory board for a social media company. The position is unpaid. J.L.E. participates in the advisory board as a learning opportunity—to gain broader insight on the tech industry as a whole. This kind of proximate engagement with leaders and stakeholders is critical to the research team's work and mission: to produce scholarship that has an impact on the world. Understanding the space, larger ecosystem, and levers for change is necessary to produce innovative and rigorous research.

Additional information

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