



Celebrating organizational history triggers social identity threat among Black Americans

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Many mainstream organizations celebrate their historical successes. In their history, however, they often marginalized racial minorities, women, and other underrepresented groups. We suggest that when organizations celebrate their histories, even without mentioning historical marginalization, they can undermine belonging and intentions to join the organization among historically marginalized groups. Four experiments demonstrate that Black participants who were exposed to an organization that celebrated their history versus the present showed reduced belonging and intentions to participate in the organization. These effects were mediated by expectations of biased treatment in the organization. Further, when organizations had a history of Black people in power, celebrating history was no longer threatening, highlighting that the negative effects of celebrating history are most likely when organizations are or are assumed to be majority-White and have treated Black Americans poorly. Taken together, these findings suggest that emphasizing organizational history can be a source of social identity threat among Black Americans.

stigma | race | belonging | history | social identity threat

“Our history has roots that continue today and set the foundation for tomorrow.”—*Wells Fargo*

This tendency to celebrate organizational history is not unique to Wells Fargo but occurs across organizations, including companies, religious institutions, colleges and universities, nonprofits, and many others. Celebrating an organization's history may serve people's motivation to feel positive about their group (1–3) or signal an organization's prestige. At first glance, such sentiments may seem harmless or even positive. In the present research, however, we examine how organizations celebrating their history could create social identity threat among Black Americans.

Social Identity Threat

Social identity threat is the concern that one might be devalued or excluded based on one's group membership (4, 5), particularly common among members of marginalized groups. Members of marginalized groups are often hypervigilant for environmental cues that they will be treated differently based on their group membership (6). The presence of such cues, such as numerical underrepresentation of one's group, can undermine motivation, engagement, and performance even without the presence of prejudiced people (7, 8). Social identity threat can contribute to group-based disparities by leading marginalized individuals to chronically perform below their potential (9) or to disidentify with succeeding in the organization (10). We examine whether organizations celebrating their history is a previously unidentified cue that triggers social identity threat among Black Americans.

Historical Racism in the United States

An unfortunate reality in U.S. society is that most mainstream organizations participated in the marginalization of racial minorities and other underrepresented groups. For instance, Wells Fargo was tied to the U.S. slave trade through several of its predecessor organizations (11). In other organizations, racial minorities may have been marginalized through a lack of representation due to structural barriers or a failure on the part of the organization to recruit and retain these groups.

Indeed, Black Americans (vs. White Americans) tend to possess a deep understanding of historical racism and its connection to present-day disparities. Black vs. White Americans are more likely to acknowledge systemic racism in the present because they possess more

Significance

Many organizations desire to foster diversity and inclusion, despite historically marginalizing certain groups. These organizations often celebrate their history in their mission statements, web pages, and other communications, focusing on the founders, accomplishments, and values, but omitting marginalization. The current research demonstrates that celebrating organizational history (e.g., good old days) can reduce belonging and application intentions among Black Americans. Consistent with the idea that this occurs because of widespread historical marginalization of Black Americans, celebrating history is not threatening in organizations with a history of Black people in power. Many organizations may be unaware of the negative effect celebrating history has on their diversity and inclusion efforts and need to be careful about their approach.

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accurate knowledge of America's racist history (12, 13). Similarly, antebellum architecture—common on slave plantations—threatens belonging and spontaneously evokes thoughts about slavery among Black, but not White Americans (14). Thus, Black Americans' knowledge of historical racism can influence interpretation of present events.

Effects of Celebrating History on Social Identity Threat

Although disparities persist (15), outright prejudice and discrimination are less common, and organizations increasingly embrace diversity and egalitarianism (16–18). Indeed, it would be uncommon for an organization to explicitly condone its past discrimination. Yet, some organizations subtly celebrate past racism—for example, through preserving confederate monuments (19) or naming buildings after slave holders, which can undermine belonging among Black Americans (20). In the present research we take this idea one step further. We suggest that when organizations celebrate their histories—even with no reference to group membership or historical discrimination—they will engender social identity threat among Black Americans. Because Black Americans are aware that marginalization of their group was pervasive historically, when organizations celebrate their history, even without providing content about that history, they may (intentionally or unintentionally) signal that they are insensitive to—or perhaps even condoning of—historical mistreatment of Black Americans. Indeed, nostalgia for a past when White people had unchallenged dominance is a core part of White nationalism (21). Thus, celebrating history may lead Black Americans to conclude that in the present, the organization is not a place in which they will be valued.

The Present Research

Across four studies (plus one in *SI Appendix*), we examined whether organizations that celebrate their history trigger social identity threat among Black Americans. Study 1 tested this hypothesis in the presence of a cue suggesting that the organization had historically excluded Black people. Study 2 removed this cue and tested the hypothesis in a new paradigm. Study 3 examined expectations of bias as a mechanism. Study 4 tested moderation, demonstrating that celebrating history is not threatening in organizations that have a history of Black people in power. This is consistent with the notion that these effects occur when organizations clearly or possibly had a history of marginalizing Black people.

Open Practices Statement

The data and code for all studies are publicly accessible at this link: https://osf.io/jkd9n/?view_only=e94c55b2a3684e9f9c477d5e71fd3f72. The exact materials for every study are in *SI Appendix*. Studies 2, 3, and 4 were preregistered (links in the *Materials and Methods* section). In all studies, we excluded participants who did not identify themselves as Black/African American. In Studies 2 to 4, we made exclusions consistent with preregistered exclusion criteria. For all measures of interest, we aimed to have at least two-items as a part of the index.

Results

Study 1. Study 1 tested whether celebrating organizational history creates social identity threat for Black Americans. One hundred and ninety-two Black Americans recruited through TurkPrime (22) were randomly assigned to encounter an organization's

website that either celebrated their history or did not. They viewed screenshots of a fictional consulting company's ("Mitchell and West Consulting Group" ["MWCG"]) website.

The first screenshot was ostensibly taken from the "About" page of the company's website and included a paragraph that described the company's mission and values. The second screenshot was ostensibly taken from the "Careers" page and included testimonials from two employees (a man and a woman) of the company.

We initially thought historical celebration might only be threatening if there were cues that the organization had been discriminatory. Therefore, in both conditions, the "About" page also included a black-and-white photo of four White men who were the ostensible founders of the company, with the following caption: "The MWCG founders at the building site of the original company headquarters in Charleston, South Carolina, 1951." We expected that participants would interpret the photo of the all-White founders and the information that the company was founded in the South during the Civil Rights Era as an indication that Black Americans were historically marginalized in the company.

After viewing these materials, participants completed a manipulation check, along with perceptions of organizational success and communion. Two primary reasons people might want to join an organization would be if it seemed particularly successful or communal (similar to warmth and competence; e.g., ref. 23). Therefore, we also measured perceived success and communion and attempted to equate these across conditions. Participants also reported their anticipated belonging in the company (6) and intentions to apply for a job there, both measured on five-point scales, with higher numbers indicating more belonging and intentions. Participants also reported their trust in the organization. Results on trust for all studies are available in *SI Appendix* and support the same conclusions as in the text. After responding to the scales, participants were asked, "Please provide any additional thoughts or comments you might have about this company." We examine participants' open-ended responses in an exploratory manner to examine whether the psychological processes we attempt to capture with our researcher-generated items are also reflected in the responses participants spontaneously generated. Participants responded to this question in all studies, and we present analyses across all studies here to ensure enough power because responding to this question was not required and therefore yielded fewer responses.

Analysis plan. First, to check that our manipulation was successful, we regressed our manipulation check on the history condition factor (1 = history celebration, -1 = control). To assess the effects of history celebration, we ran regression models examining the effect of history condition on each of our dependent variables.

Manipulation checks. Participants in the history condition ($M = 4.63$, $SD = 0.72$) perceived that the company valued history to a greater extent than did those in the control condition ($M = 3.93$, $SD = 0.80$), $b = 0.35$, 95% CI [0.24, 0.46], $t(190) = 6.42$, $P < 0.001$, $d = 0.93$. There were no significant differences by condition for perceived success ($P = 0.26$, $d = -0.15$) or communion ($P = 0.22$, $d = -0.18$); we therefore did not control for these variables in the analyses below. This lack of difference suggests that the content in the control condition did not lead to impressions that the control company was more warm or competent and that general positive impressions of the two companies could not account for effects on belonging or application intentions.

Anticipated belonging. As predicted, participants in the history condition anticipated less belonging in the organization ($M = 2.71$, $SD = 1.15$) than did those in the control condition ($M = 3.18$,

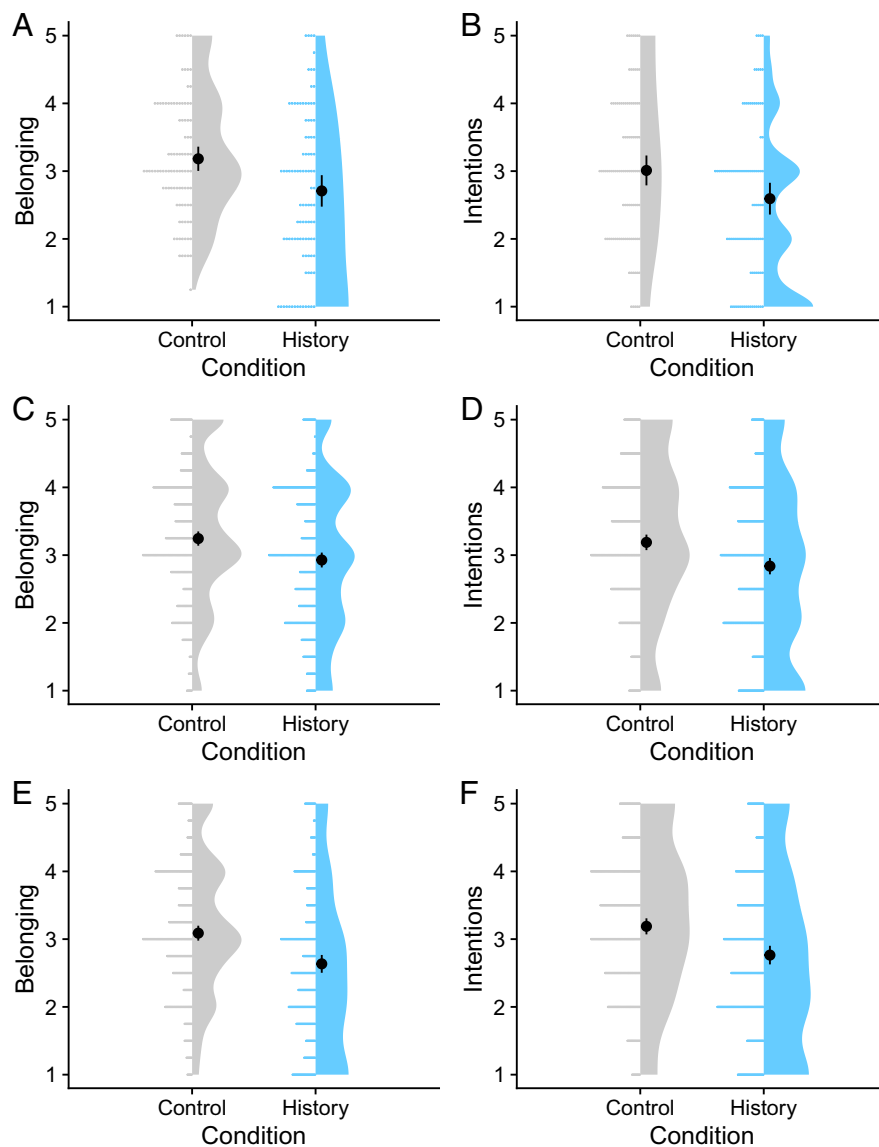


Fig. 1. Anticipated belonging and behavioral intentions by History versus Control conditions in Studies 1 (panels A and B), 2 (panels C and D), and 3 (panels E and F). The black dots represent the mean of each condition, the line through the dot represents the 95% CI of the mean, the dots on the left side of the graphs represent the raw data, and the solid color represents the distribution of data.

$SD = 0.88$), $b = -0.24$, 95% CI $[-0.38, -0.09]$, $t(190) = -3.21$, $P = 0.002$, $d = 0.46$ (Fig. 1A).*

Application intentions. Participants in the history condition also reported lower intentions to pursue employment opportunities in the organization ($M = 2.59$, $SD = 1.16$) relative to those in the control condition ($M = 3.01$, $SD = 1.09$), $b = -0.21$, 95% CI $[-0.37, -0.05]$, $t(190) = -2.57$, $P = 0.011$, $d = 0.37$ (Fig. 1B).

Open-ended responses. We examined open-ended responses in an exploratory manner to assess whether participants' responses were consistent with our theorizing. Participants spontaneously mentioned more concerns that the organization was racist in the history condition (44.7%) than in the control condition (24.6%), $\chi^2(1, 826) = 36.77$, $P < 0.001$ (details in *SI Appendix*).

*One possibility is that participants are simply inferring that the company is conservative. In this study, we had an exploratory item in which participants rated the company's political ideology. Although participants inferred that the company was more conservative in the history condition, $b = 0.17$, 95% CI $[0.04, 0.31]$, $t(190) = 2.51$, $P = 0.013$, the effect of history on belonging persisted even when perceived ideology was included as covariate, $b = -0.17$, 95% CI $[-0.31, -0.03]$, $t(189) = -2.42$, $P = 0.017$. This suggests that although perceived conservatism may be part of the effect, it is not the full picture.

Some of the open-ended responses in the history condition included:

- "I would hope that the history they mean is hard work ethic but I am not sure because it just reads as old ways like racism."
- "I think the company may be a little too much about heritage and may discriminate against minorities some."
- "It looks like this company would only welcome White men and no one else would be treated fairly."
- "It's the focus on the words 'history,' 'tradition,' and 'old fashioned values' that set me on edge. Just like the phrase, 'Make America great again,' it's code for, 'put certain people back into their rightful inferior place.'"

These qualitative responses highlight that the psychological processes we propose seem to occur.

In sum, Study 1 demonstrated that emphasizing an organization's history can reduce belonging and application intentions for Black Americans. The open text responses are consistent with the notion

that this occurs because celebrating history serves as a signal of racism. Importantly, this initial documentation occurred in the presence of an old black-and-white photo of White men, ostensibly depicting the founders in the Southern United States, which likely functioned as a cue that the organization has a racist history.

Study 2. In Study 1, we used the photo of White men in both conditions because we thought a cue of historical marginalization might be necessary for history celebration to be threatening. Another possibility is that a cue of historical marginalization would *not* be necessary because Black Americans are aware that their group was historically marginalized in mainstream organizational contexts (24). Because of this sociocultural context, Black Americans may infer past marginalization, even if it isn't directly mentioned in the materials. Thus, in Study 2, we tested whether simply celebrating history or not—without any explicit cue of historical marginalization—would undermine belonging and interest. Note that there is an additional study in [SI Appendix, Study S1](#) that manipulated whether a marginalization cue was present or not. There was some spill-over of that manipulation onto perceived historical celebration (the manipulation check measure), creating some complexities in interpretation, but the results generally support the same conclusions as in the text.

Additionally, participants might have inferred that the company celebrating its history is older than the control company. Our hypothesis is not about the age of the company, but rather how much organizations celebrate their history. Therefore, in Study 2, we fixed the age of the company to be 100 y old across conditions. Finally, we examined reactions to a grocery store, rather than a consulting company to test for generalization across different types of businesses.

Six-hundred-and-forty-one Black Americans recruited from Prolific were presented with materials ostensibly from the “Fine Foods” website. In both conditions, participants read that Fine Foods was founded 100 y ago in Chattanooga, TN to equate the length of time the company had been in existence. As in Study 1, after viewing these materials, participants completed a manipulation check and reported their anticipated belonging and intentions to apply to work at Fine Foods.

Manipulation checks. As expected, participants in the history condition ($M = 4.45$, $SD = 0.69$) perceived that the company valued history to a greater extent than did those in the control condition ($M = 3.88$, $SD = 0.90$), $b = 0.28$, 95% CI [0.22, 0.34], $t(639) = 8.87$, $P < 0.001$, $d = 0.70$. In this study, participants perceived the company in the history condition as less successful, $b = -0.07$, 95% CI [-0.12, -0.03], $t(639) = -2.99$, $P = 0.003$, $d = 0.24$, and communal, $b = -0.07$, 95% CI [-0.12, -0.01], $t(639) = -2.26$, $P = 0.025$, $d = 0.18$ (though both to a much lesser extent than historical celebration). We controlled for these covariates in the regression analyses below to ensure they could not account for the effect of celebrating history. We note that this is a conservative test, as inferring the company is racist could also undermine perceived success and communion. Further, the size of the effects on success and communion (d 's) are similar to the prior study and are smaller than the effects on belonging and intentions in models without covariates; the significant differences in this study likely reflect the increase in power to detect the small effects on these perceptions. A trade-off in increasing power in studies is that although increasing N increases the likelihood of detecting real effects of interest, it can also increase the likelihood of detecting uninteresting, small effects. Results without covariates are available in [SI Appendix](#) and support the same conclusions with even larger effect sizes.

Anticipated belonging. As predicted, participants in the history condition anticipated less belonging in the organization ($M = 2.93$, $SD = 1.00$) than did those in the control condition ($M = 3.24$,

$SD = 0.95$), $b = -0.12$, 95% CI [-0.19, -0.05], $t(637) = -3.23$, $P = 0.001$, $d = 0.26$ (Fig. 1C).

Application intentions. Participants in the history condition also reported lower intentions to pursue employment opportunities in the organization ($M = 2.84$, $SD = 1.10$) relative to those in the control condition ($M = 3.19$, $SD = 1.04$), $b = -0.14$, 95% CI [-0.22, -0.06], $t(637) = -3.41$, $P < 0.001$, $d = 0.27$ (Fig. 1D).

Thus, Study 2 replicated Study 1 in a new company context, highlighting the generalizability of these effects. Study 2 also demonstrated that including a potentially threatening picture of old White men was not necessary to obtain the effect, though removing this cue did seem to reduce the effect size. Finally, Study 2 demonstrated that these effects occur even when the age of the company was held constant.

Study 3. Both of the previous studies mentioned that the company was founded in the south. One could think of this as a cue of historical marginalization. Therefore, in Study 3, we remove all mention of the south. We additionally examined a potential mechanism, expectations of biased treatment. Black Americans may infer that when members of the organization emphasize history, they either do not recognize that Black Americans were historically marginalized or they wish things were the way they used to be, either of which should raise concerns about biased treatment in the present, resulting in reduced belonging and intentions.

Five-hundred-and-thirty-eight Black participants recruited from Prolific participated in this study. The procedure was identical to Study 1 except for the removal of the marginalization cues (the black-and-white photograph of White men and mention of the south).

Manipulation checks. As expected, participants in the history condition ($M = 4.66$, $SD = 0.70$) perceived that the company valued history to a greater extent than did participants in the control condition ($M = 3.23$, $SD = 0.96$), $b = 0.72$, 95% CI [0.65, 0.79], $t(536) = 19.60$, $P < 0.001$, $d = 1.69$. In this study, in the history condition, the company was viewed as less successful, $b = -0.16$, 95% CI [-0.21, -0.10], $t(536) = -5.83$, $P < 0.001$, $d = 0.50$, and communal, $b = -0.26$, 95% CI [-0.32, -0.19], $t(536) = -7.41$, $P < 0.001$, $d = 0.64$ (though both to a much lesser extent than historical celebration), so we controlled for these variables in the regression analyses below. Results without covariates are available in [SI Appendix](#) and offer even more support for the same conclusions.

Expected bias. Consistent with our predictions, participants who saw the history-focused company ($M = 2.59$, $SD = 1.14$) anticipated receiving more biased treatment relative to those in the control condition ($M = 2.17$, $SD = 0.92$), $b = 0.11$, 95% CI [0.03, 0.20], $t(534) = 2.53$, $P = 0.012$, $d = 0.22$.

Anticipated belonging. Participants who saw the history-focused company ($M = 2.64$, $SD = 1.07$) also anticipated lower belonging in the organization relative to those who saw the control company ($M = 3.09$, $SD = 0.95$), $b = -0.11$, 95% CI [-0.19, -0.02], $t(534) = -2.49$, $P = 0.013$, $d = 0.22$ (Fig. 1E).

Application intentions. Finally, participants who saw the history-focused company ($M = 2.76$, $SD = 1.12$) reported lower intentions to pursue employment opportunities in the organization relative to those in the control company ($M = 3.20$, $SD = 1.02$), $b = -0.09$, 95% CI [-0.18, -0.00], $t(534) = -2.06$, $P = 0.040$, $d = 0.18$ (Fig. 1F).

Mediation. We predicted that celebrating history would reduce belonging and intentions to pursue employment opportunities through expectations of biased treatment in the organization. To test these predictions, we ran separate mediation models in which belonging and intentions were the outcome variables. In both

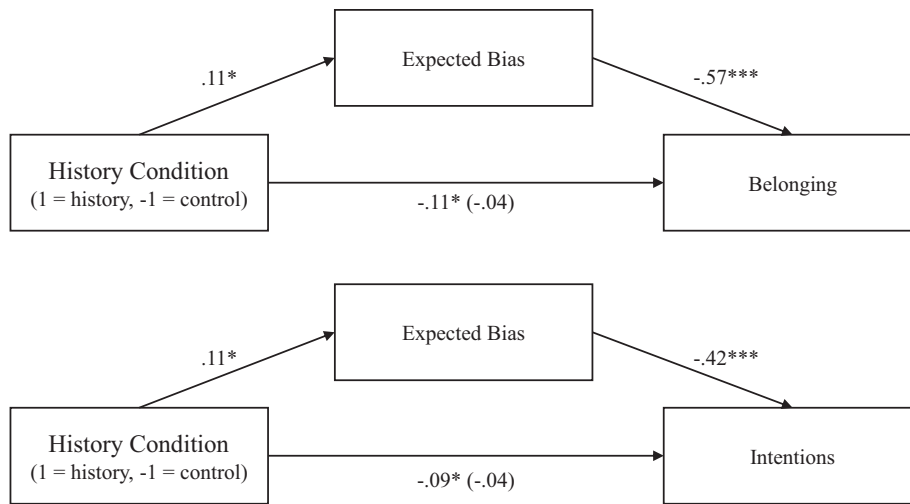


Fig. 2. Mediation models: Effects of celebrating history on belonging and intentions through expected bias. The total effect and direct effect are presented outside of and within the parentheses, respectively.

models, the history condition was the independent variable and expected bias was the hypothesized mediator (Fig. 2). Consistent with our predictions, these analyses revealed significant indirect effects of the history condition through expected bias for belonging: $b = -0.06$, 95% CI $[-0.11, -0.01]$, and intentions: $b = -0.05$, 95% CI $[-0.09, -0.01]$.[†]

Study 3 replicated that organizations celebrating their history can undermine belonging and interest among Black Americans, even with no mention of the south, the last remaining marginalization cue in Study 2. Study 3 demonstrated that these effects of historical celebration were mediated by expectations of biased treatment.

Study 4. We hypothesize that Black Americans feel threatened by historical celebration not because history is threatening, per se, but because of past marginalization. If instead it is clear that an organization's history was not discriminatory, celebrating history should no longer have this negative effect. We provide a critical test of this hypothesis in Study 4: we crossed our manipulation of history celebration with a manipulation of whether the company clearly had Black people in positions of power or no information was provided about company demographics. Throughout these studies, we did not provide information about company demographics to participants, but pretesting suggested they inferred the company was about 60% White, mirroring the percent of the population that is White in the United States.

The procedures of Study 4 were identical to Study 3 except for the addition of a manipulation of whether there were Black people in power in the company. Six-hundred-and-twenty-two Black Americans were randomly assigned in our 2 (Historical Celebration: Present or Absent) \times 2 (Black People In Power: Yes or No Information Provided) design.

Manipulation checks.

History. As expected, participants in the history condition perceived the company as more focused on history ($M = 4.61$, $SD = 0.58$) than did those in the control ($M = 3.39$, $SD = 0.93$) condition, $b = 0.61$, 95% CI $[0.55, 0.67]$, $t(618) = 19.55$, $P < 0.001$, $d = 1.57$. The main effect of Black people in power and the

[†]Study 2 had included these expected bias items, along with several items that assessed whether the company seemed to have a racist history. When expected bias and racist past were entered as parallel mediators, there was support for each of them on belonging (indirect effects: bias: -0.03 , 95% CI $[-0.06, -0.01]$; racist past: -0.01 , 95% CI $[-0.03, 0.00]$) and on intentions (indirect effects: bias: -0.03 , 95% CI $[-0.07, -0.01]$; racist past: -0.01 , 95% CI $[-0.03, 0.00]$). Thus, inferences that the company had a racist past and would be racist in the present both seem to mediate the negative effects of history celebration.

History \times Black people in power interaction were nonsignificant ($P_s > 0.30$).

Success. The history manipulation also had a small effect on success, $b = -0.06$, 95% CI $[-0.11, -0.01]$, $t(618) = -2.41$, $P = 0.016$, $d = 0.19$. The Black people in power manipulation did not have an effect, $b = 0.00$, 95% CI $[-0.05, 0.05]$, $t(618) = 0.05$, $P = 0.961$, $d = 0.00$, but there was an interaction between the history manipulation and the Black people in power manipulation, $b = 0.11$, 95% CI $[0.06, 0.16]$, $t(618) = 4.49$, $P < 0.001$. Therefore, we controlled for perceived success in the analyses below.

Communal. There was a small effect of the history manipulation on perceptions of how communal the organization was, $b = -0.06$, 95% CI $[-0.12, -0.01]$, $t(618) = -2.22$, $P = 0.027$, $d = 0.18$. There was also an effect of the Black people in power manipulation, $b = 0.18$, 95% CI $[0.12, 0.24]$, $t(618) = 6.26$, $P < 0.001$, $d = 0.50$, and an interaction between the Black people in power and history manipulations, $b = 0.10$, 95% CI $[0.04, 0.15]$, $t(618) = 3.41$, $P < 0.001$, $d = 0.27$. Therefore, we include perceptions of the organization's communion as a covariate in the primary analyses below.

History celebration \times Black people in power interaction.

Anticipated belonging. The main effect of history condition on anticipated belonging was nonsignificant, $b = -0.03$, 95% CI $[-0.09, 0.03]$, $t(616) = -0.95$, $P = 0.343$. There was, however, a main effect of the Black people in power manipulation such that participants in the Black people in power condition anticipated more belonging than did those in the no information condition, $b = 0.31$, 95% CI $[0.24, 0.37]$, $t(616) = 9.40$, $P < 0.001$.

Most importantly, consistent with our predictions, there was an interaction between the history condition and Black people in power condition, $b = 0.07$, 95% CI $[0.01, 0.14]$, $t(616) = 2.32$, $P = 0.021$ (Fig. 3A). Among participants who received no information about the racial make-up of the company, those who viewed the history-focused company anticipated less belonging in the organization relative to those who viewed the control company, $b = -0.10$, 95% CI $[-0.19, -0.02]$, $t(616) = -2.30$, $P = 0.022$, $d = 0.19$. In contrast, among participants who learned there had been Black people in power, the effect of history condition was nonsignificant, $b = 0.04$, 95% CI $[-0.19, -0.02]$, $t(616) = 0.99$, $P = 0.325$, $d = 0.08$.

Application intentions. For intentions to pursue employment opportunities in the company, the main effect of history was nonsignificant, $b = -0.03$, 95% CI $[-0.10, 0.05]$, $t(616) = -0.72$, $P = 0.473$. There was once again a main effect of the Black people

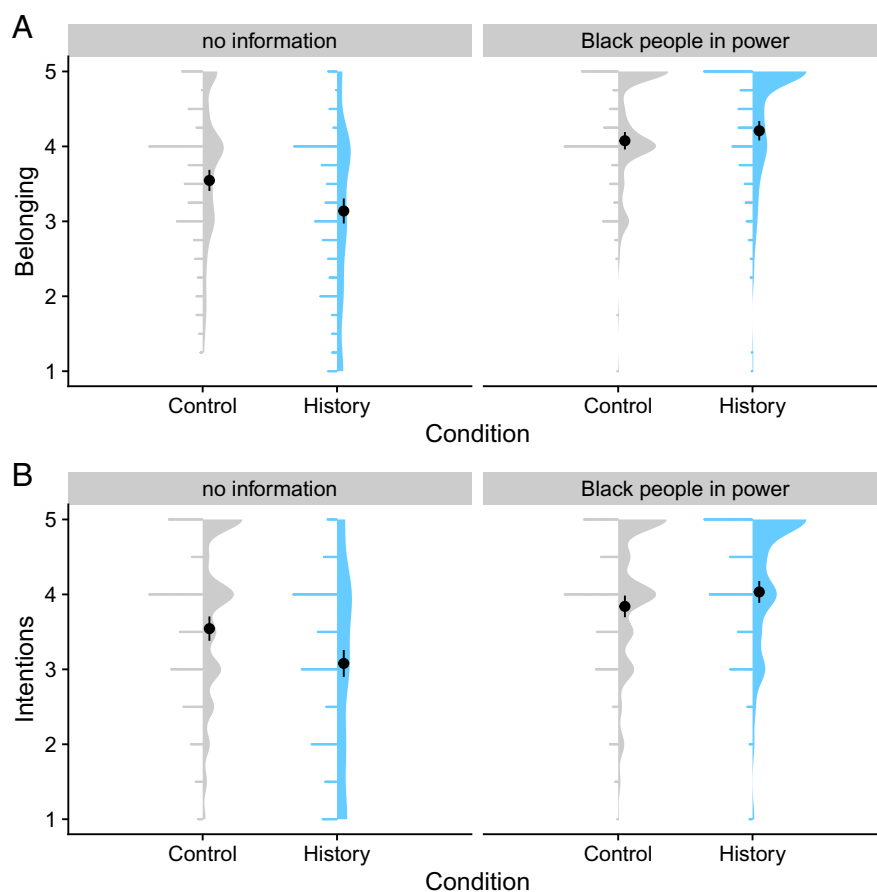


Fig. 3. Anticipated belonging (panel *A*) and intentions (panel *B*) by History condition and Black people in power condition (Study 4). The black dots represent the mean of each condition, the line through the dot represents the 95% CI of the mean, the dots on the left side of the graphs represent the raw data, and the solid color represents the distribution of data.

in power manipulation such that those in the Black people in power condition reported greater intentions than did those in the no Black people in power condition, $b = 0.24$, 95% CI [0.17, 0.32], $t(616) = 6.28$, $P < 0.001$.

Importantly, as above, there was also a History manipulation \times Black people in power manipulation interaction, $b = 0.10$, 95% CI [0.02, 0.17], $t(616) = 2.56$, $P = 0.011$ (Fig. 3*B*). Among participants who received no information about the racial make-up of the company, those in the history condition reported lower intentions to pursue employment opportunities in the company than did those in the control condition, $b = -0.12$, 95% CI [-0.23, -0.02], $t(616) = -2.31$, $P = 0.021$, $d = 0.19$. In contrast, among participants who learned there had been Black people in power, the effect of history condition was again nonsignificant and in the opposite direction, $b = 0.07$, 95% CI [-0.03, 0.17], $t(616) = 1.32$, $P = 0.188$, $d = 0.11$.

Study 4 provided additional support that celebrating history can undermine belonging and interest among Black Americans. Additionally, Study 4 demonstrated that celebrating any history does not inevitably have these pernicious effects: when Black Americans encountered an organization with a history of Black people in power, celebrating history no longer undermined belonging and interest.

General Discussion

Many organizations celebrate their histories, even though these histories often included racism. Across four in-text studies and one supplemental study, Black participants who encountered an

organization that celebrated their history (vs. the present) demonstrated lower anticipated belonging and intentions to pursue employment. In Study 1, we examined this effect in the presence of a photo of White men and a company founded in the south. In Study 3, we found that such marginalization cues were *not* necessary for the effects of celebrating history to emerge, though the effect sizes were smaller. Given the broader historical context of pervasive racism, even with no suggestion that this particular organization had a history of discrimination, Black participants were concerned about fair treatment in the present. These concerns about biased treatment accounted for the effect of celebrating history on belonging and intentions. Study 2 showed that these effects were not due to the inferred age of the company. Study 4 examined a boundary condition of these effects: when it is clear that historically, there were Black people in power in the company. Study 4 informs theory by identifying that history is not threatening per se; it's a history that could plausibly have involved marginalizing Black people that is threatening. Unfortunately, practically speaking, most companies are likely in the position of not being able to clearly state that they did not marginalize Black people. Taken together, these studies suggest that except for those companies who can make it clear they did not historically marginalize Black Americans, when organizations celebrate their history, they create identity-threatening experiences for Black Americans. Considering previous work documenting the negative effects of social identity threat (see ref. 5 for a review), celebrating history could ultimately undermine participation, retention, and performance among Black Americans, thereby reinforcing group-based disparities.

Theoretical Contributions.

Identifying a novel social-identity-threatening cue. The present research identifies celebrating history as a novel identity-threatening cue—one that is common across various organizations but may be underappreciated as a potential source of disparities. There are a couple of reasons to suspect that celebrating history may be particularly pernicious. First, people in the organization who celebrate history may be unaware of the negative consequences, especially since they need not explicitly reference group membership for history to be threatening. Second, celebrating history may serve psychological needs for majority group members, such as group-esteem (1–3), making it particularly likely for organizations to engage in history celebration.

Clarifying that content-free mentions of history can be threatening.

This work also builds on prior research demonstrating that environmental features associated with racist history, such as antebellum architecture and confederate monuments threaten belonging among Black Americans (14, 20). We found that celebrating history led to social identity threat among Black participants even when there was no information or cues about the historical standing of their group directly provided in the materials. These results suggest that because of the sociocultural context of pervasive historical racism in the United States, celebrating history can be threatening to Black Americans unless it is clear the organization did not have a history of racism. That is, even though the materials themselves are content-free, the sociocultural context isn't.

Implications and Future Directions.

Whether and how organizations should talk about their history.

Although this research clarifies that celebrating organizational history can create social identity threat, it leaves open the questions of whether and how organizations should address their history. Study 4 suggests that emphasizing history is not harmful per se, but rather, it is harmful when there are no explicit cues that the organization was historically diverse and inclusive.

A challenge is that most organizations do not have a history of diversity and inclusion. In this situation, one approach would be for organizations to simply avoid discussing their histories. Alternatively, it is likely important to acknowledge and make amends for racist history. Prior work suggests that acknowledging that antebellum buildings were common on slave plantations promotes feelings of belonging among Black Americans (14). Additionally, increasing knowledge of past discrimination can increase acknowledgment of racism in the present among White Americans (24, 25). Future research should explore how organizations can discuss their history to promote belonging among historically marginalized groups.

Celebrating history in the context of other social identity-threatening cues.

In many real-world organizational settings, people have access to other cues about the standing of their group, including the current numerical representation of their group (6) or the organization's diversity philosophy (8). These cues could actually be more diagnostic of how one's group is likely treated in the organization. For example, a large number of Black people in an organization in the present might be a signal that Black people tend to be treated well and have influence in the organization. Emphasizing history may be less impactful when one has access to other, potentially more diagnostic, cues about one's current standing. Future research should further explore how celebrating history interacts with other cues of social identity threat.

Generalizability to other marginalized groups. Our theoretical perspective predicts that other groups who have been historically marginalized should also experience social identity threat when organizations celebrate their history, at least in domains in which they have been marginalized. However, empirical tests have yet

to be conducted to examine whether celebrating history would undermine belonging among other historically marginalized groups, including women, Native Americans, or members of the LGBTQIA+ community. Examining generalizability to these groups is an important task for future research.

Conclusion

Many organizations celebrate their histories. Although these messages may seem relatively harmless from a majority group member's perspective, the present research suggests that they may hold a more threatening meaning for members of historically marginalized groups.

Materials and Methods

Human Subjects Approval. This research was reviewed and approved by the Institutional Review Board at Ohio State University (Protocol # 2017B0517). All participants provided informed consent prior to participation.

Preregistrations. Prior to data collection for Studies 2, 3, and 4, the predictions, stopping rule, exclusion criteria, and analysis plan were preregistered on the open science framework. In Studies 3 and 4, there were a couple of additional hypotheses we preregistered but were not supported; these are reported in *SI Appendix*.

Study 2's preregistration is accessible in the Study 2 folder of this link: https://osf.io/jkd9n/?view_only=e94c55b2a3684e9f9c477d5e71fd3f72.

Study 3's preregistration: https://osf.io/nf7cq/?view_only=49df6bc071984ef498b02be8c5bfaf1a

Study 4's preregistration: https://osf.io/fhkwr/?view_only=f9a0184008af421cbeeb02f34d868da6

Participants.

Study 1. We recruited 198 Black participants through TurkPrime (22). In this study, we excluded six participants who did not identify as Black/African American, resulting in 192 participants for analyses. Information about attrition and exclusions for each study, and whether they differ by condition is reported in *SI Appendix*, along with detailed demographic information. A sensitivity power analysis conducted in G*Power (26) suggested that across infinite samples, this sample size would allow us to observe a $d = 0.41$ with 80% power. Given the absence of previously available data through which to estimate an effect size, we thought this was a reasonable starting place.

Study 2. We aimed to recruit 650 participants through Prolific, which resulted in 652 complete lines of data.

We excluded six participants who did not identify as Black/African American. Additionally, consistent with our preregistered exclusion criteria, we included two open-text Winograd Schema Challenge questions (27) to screen out poor quality data (e.g. "data farmers"). These questions detect inattentive responding and people who are not proficient in English. For example, participants were asked, "The firemen arrived before the police because they were coming from so far away. Who came from far away?" (Response options: firemen, police; Correct response: police). We excluded five participants who answered both questions incorrectly or who provided an answer to at least one that did not correspond to a response option. This resulted in 641 participants for analyses. A sensitivity power analysis conducted in G*Power (26) suggested that across infinite samples, this sample size would allow us to observe a $d = 0.22$ with 80% power.

Study 3. Six-hundred-and-thirty-seven Black Americans were recruited to participate via Prolific. A sensitivity power analysis performed in G*Power (26) suggested that across infinite samples, this size would provide 80% power to detect $d = 0.22$. Additionally, consistent with our preregistered exclusion criteria, we also included two randomly selected Winograd Schema Challenge (27, 28) questions and excluded participants who answered one or more of these questions incorrectly. Note that this is a stricter exclusion criterion compared to the previous study, which accounts for the greater number of exclusions. We employed this stricter criterion in Studies 3 and 4 because they were run at a time when there were increased concerns about data quality on online data collection platforms (29). Our final sample consisted of 538 Black participants.

Study 4. Seven-hundred-and-ninety-four Black Americans were recruited to participate in the study via TurkPrime (22). A sensitivity power analysis in G*Power (26) suggested that we would have 80% power to detect an interaction effect size

of $d = 0.20$. Consistent with our preregistered exclusion criteria, we excluded participants who answered at least one of two Winograd questions incorrectly. Our final sample consisted of 622 Black participants.

Materials

Study 1.

History manipulation. To manipulate organizational celebration of history, we varied the content of the screenshots from the fictional consulting company's website to emphasize either the company's history (history condition) or their present (control condition). The materials participants saw were adapted from real companies' websites and communications and were pretested so that the conditions would be equated on perceived success and communion, to ensure those perceptions could not account for any observed effects (details about pretesting in *SI Appendix*).

In the history condition, the content focused on the historical success of the company. For instance, the first screenshot included the header "Our long history of excellence" and the description included content such as "At MWCG, we root our success in our rich history" and "We are proud of our company's history, and we believe that honoring the past is the key to success in the here and now." The second screenshot included two testimonials from current MWCG employees that further highlighted the company's emphasis on their history. For instance, one testimonial was "What sets Mitchell & West apart from other consulting firms is its history. From day one when you join the MWCG team, you learn about the extraordinary accomplishments of our founders. I've tried to uphold their vision in the work I do today. I'm really proud to be a part of that."

In contrast, the control condition focused on the company's present success. For instance, the first screenshot included the header "Our commitment to excellence" and content such as "At MWCG, we root our success in our commitment to excellence" and "We are proud of the present success of our company, and we believe that an emphasis on excellence is the key to success in the here and now." The second page included testimonials that focused on the present success of the company (e.g., "What sets Mitchell & West apart from other consulting firms is its commitment to excellence. From day one when you join the MWCG team, you learn all about extraordinary accomplishments of the current team members. Learning about their stories inspired me to incorporate the MWCG vision in the work I do today. I'm really proud to be a part of that.").

Measures.

Manipulation checks. To assess the effectiveness of our historical celebration manipulation, participants were asked to rate the extent to which they thought the organization valued "history," "tradition," and "heritage." For each item, responses were given on a five-point scale (1 = *Not at all* through 5 = *Extremely*). A composite was formed by taking an unweighted average of the items, with higher numbers indicating greater valuation of history ($\alpha = 0.88$).

Covariates. To rule out potential alternative explanations, participants also rated the extent to which the organization valued "success," "productivity," and "work ethic"; which were combined into a "success" composite ($\alpha = 0.77$) as well as "teamwork" and "community"; which were combined into a "communion" composite ($\alpha = 0.66$).

Anticipated belonging in the organization. We assessed anticipated belonging in the organization with the following four items adapted from previous research (6): "How much do you think you would feel like you belong at MWCG?"; "How comfortable do you think you would feel at MWCG?"; "How accepted do you think you would feel at MWCG?"; "How respected do you think you would feel at MWCG?". Responses were given on a five-point scale (1 = *Not at all* through 5 = *Extremely*). We formed a composite by taking an unweighted average of the items, with higher scores indicating greater anticipated belonging in the organization ($\alpha = 0.95$).

Behavioral intentions. Two items assessed participants' intentions to seek and share employment opportunities at MWCG. Assessing both of these behavioral intentions allowed us to ensure our effects were not limited to a particular type of intention. We anticipated that participants' own intentions to apply to work at the organization would be highly correlated with their intentions to send a job ad to a friend so from the start, planned to combine them into a general "behavioral intentions" index. The items were: "If you were looking for a new job, how likely would you be to apply for a job at MWCG?" and "If you knew your friend was looking for a new job, how likely would you be to send them a job ad for MWCG?"

Responses were given on a five-point scale (1 = *Not at all likely* through 5 = *Extremely likely*). A composite was formed by taking an unweighted average of the two items with higher scores indicating greater application intentions ($\alpha = 0.94$).

Study 2.

History manipulation. We adapted the materials from an actual grocery chain's website. Additionally, because the primary goal of this study was to fix the age of the company across conditions, we needed to mention that the company was old in the control condition. However, we did not want this to convey celebration of history so in this control condition, the company mentioned its age, but distanced itself from its history. Thus, the comparison in this study is between companies that are both old, but embrace versus distance themselves from their past. In the history condition, the description included sentences like, "Fine Foods is proud of its past and that it has maintained the values of its founder. This connection to our history is evident in all that we do." In contrast, the control condition included sentences like, "Fine Foods is proud of all of the changes it's made over the years to become a company that truly reflects modern values. This connection to progress is evident in all that we do."

Measures. The history ($\alpha = 0.85$), success ($\alpha = 0.70$), and communion ($\alpha = 0.64$) manipulation checks, as well as the belonging ($\alpha = 0.95$) and intentions ($\alpha = 0.90$) measures were identical to those used in Study 1 except that they referred to Fine Foods rather than MWCG.

Study 3. The manipulation in Study 3 was identical to Study 1 except for the exclusion of the marginalization cues.

Measures. The history ($\alpha = 0.90$), success ($\alpha = 0.77$), and communion ($\alpha = 0.65$) manipulation checks, as well as the belonging ($\alpha = 0.95$) and intentions ($\alpha = 0.87$) measures were identical to those used in Study 1. Our hypothesized mediator variable, expectations of bias was assessed with the following six items (1 = *Not at all* to 7 = *Extremely*): "How prejudiced do you think people who work at MWCG are?"; "How much do you think you would feel understood by the people who work at MWCG?" (reversed); "How likely do you think it is that you would be discriminated against if you worked at MWCG?"; "To what extent do you think that the people at MWCG would judge you based on your race/ethnicity?"; "To what extent do you think that people at MWCG would stereotype you based on your race/ethnicity?"; "To what extent do you think you would be treated unfairly based on your race/ethnicity at MWCG?" The second item showed a low correlation with the scale ($r = 0.41$) and was dropped prior to our analyses to increase scale reliability (final scale: $\alpha = 0.94$). All results hold when this item was included in the scale.

Study 4.

Black people in power manipulation. Participants were randomly assigned to a condition in which Black people clearly held positions of power or there was no information about the racial make-up of the organization. This manipulation was crossed with the manipulation of historical celebration from Study 3. The specific content of the two Black people in power conditions differed slightly based on which of the two history conditions in which it appeared. In the Black people in power + history condition, the company was portrayed as having a history of Black people holding positions of power. In the Black people in power + control condition, the company was portrayed as having a present of Black people holding positions of power.

In the first screenshot included in the Black people in power + history condition, there was a black-and-white photo of five Black male professionals, ostensibly from the 1950's, with the caption: "The MWCG founders in the boardroom of the original company headquarters, 1951." In addition, the paragraph described the company's history of diversity and inclusion. For instance, it included phrases such as "At MWCG, we root our success in our rich history of diversity and inclusion" and "We are proud of our company's history of diversity and we believe that honoring the past is the key to success in the here and now." The second screenshot included testimonials from current employees that further emphasized these ideas. For instance, one testimonial was "Here at MWCG, we really like to think about the good old days. Our commitment to maintaining the success created by our founders is at the heart of everything we do. We find that our culture of honoring our diverse and inclusive heritage benefits not only our employees, but also our clients."

In the first screenshot in the Black people in power + control condition, there was a photo of a group of Black male and female professionals, with the caption "The current MWCG management team in the boardroom of our company

headquarters." Notably, whereas the Black people in power + control condition photo included men and women, the Black people in power + history condition photo included only men. This was because we were unfortunately unable to find a photo from the 1950-'s that included both Black men and Black women in a business/professional context. We felt it was necessary to include women in the photo in the Black people in power + control condition, as participants may find it hard to believe that a modern business is truly diverse and inclusive if their current management includes only men.

The description of the company included content that highlighted the company's present emphasis on diversity and inclusion, such as "At MWCG, we root our success in our commitment to excellence in diversity and inclusion" and "We are proud of the present success of our company and we believe that an emphasis on diversity and inclusion is the key to success in the here and now." The second page included employee testimonials such as "Here at MWCG, we like to think about what we can do to achieve excellence. Our commitment to the success of our team members is at the heart of everything we do. We find that our culture of diversity and inclusiveness benefits not only our employees, but also our clients."

The two "no information about racial make-up" conditions (i.e., the no racial information + history condition and the no racial information + control condition) were identical to the history and control conditions used in Study 3.

Manipulation checks. We assessed perceptions of the organization's endorsement of values related to history ($\alpha = 0.86$), success ($\alpha = 0.79$), and communion ($\alpha = 0.65$) using the same items from Studies 1, 2, and 3.

Dependent measures. Anticipated belonging ($\alpha = 0.94$) and intentions to pursue employment opportunities in the organization ($\alpha = 0.90$) were assessed using the same measures as previous studies.

Reflexivity Statement. All three of the authors are US-born White scholars residing in the United States. The first two authors are women and the third

author is male. The first two authors developed these ideas partly through their experiences in organizations that celebrated history and the observation that it made them feel devalued as women. Those experiences informed their theorizing of how discussions of history might generalize to affect Black people. All three authors had numerous discussions with a diverse set of colleagues about the ideas in this manuscript that certainly shaped the theorizing. All three authors have made the study of race, racism, and prejudice a central part of their scholarship. All three authors acknowledge that their backgrounds as White people may limit their understanding of the experiences of Black people.

Data, Materials, and Software Availability. Anonymized data from experiments conducted in qualtrics data have been deposited in Open Science Framework (https://osf.io/jkd9n/?view_only=e94c55b2a3684e9f9c477d5e71fd3f72) (30).

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1. S. Mukherjee, P. S. Salter, L. E. Molina, Museum spaces as psychological affordances: Representations of immigration history and national identity. *Front. Psychol.* **6**, 692 (2015).
2. T. Wildschut, M. Bruder, S. Robertson, W. A. P. van Tilburg, C. Sedikides, Collective nostalgia: A group-level emotion that confers unique benefits to the group. *J. Pers. Soc. Psychol.* **107**, 844–863 (2014).
3. H. Tajfel, J. Turner, "An integrative theory of inter-group conflict" in *The Social Psychology of Intergroup Relations*, W. Austin, S. Worchel, Eds. (Brooks/Cole, 1979).
4. C. M. Steele, S. J. Spencer, J. Aronson, "Contending with group image: The psychology of stereotype and social identity threat" in *Advances in Experimental Social Psychology*, M. P. Zanna, Ed. (Academic Press, 2002), pp. 379–440.
5. S. J. Spencer, C. Logel, P. G. Davies, Stereotype threat. *Annu. Rev. Psychol.* **67**, 415–437 (2016).
6. M. C. Murphy, C. M. Steele, J. J. Gross, Signaling threat: How situational cues affect women in math, science, and engineering settings. *Psychol. Sci.* **18**, 879–885 (2007).
7. M. C. Murphy, G. M. Walton, "From prejudiced people to prejudiced places: A social-contextual approach to prejudice" in *Frontiers in Social Psychology Series: Stereotyping and Prejudice*, C. Stangor, C. S. Crandall, Eds. (Psychology Press, 2013), pp. 181–203.
8. V. Purdie-Vaughns, C. M. Steele, P. G. Davies, R. Dittmann, J. R. Crosby, Social identity contingencies: How diversity cues signal threat or safety for African Americans in mainstream institutions. *J. Pers. Soc. Psychol.* **94**, 615–630 (2008).
9. G. M. Walton, S. J. Spencer, Latent ability: Grades and test scores systematically underestimate the intellectual ability of negatively stereotyped students. *Psychol. Sci.* **20**, 1132–1139 (2009).
10. B. Major, S. Spencer, T. Schmader, C. Wolfe, J. Crocker, Coping with negative stereotypes about intellectual performance: The role of psychological disengagement. *Personal. Soc. Psychol. Bull.* **24**, 34–50 (1998).
11. NBC News, Wachovia apologizes to black Americans, *Nbcnews.com*, 2 June 2005, Section Business News (2005).
12. J. C. Nelson, G. Adams, P. S. Salter, The Marley hypothesis: Denial of racism reflects ignorance of history. *Psychol. Sci.* **24**, 213–218 (2012).
13. C. M. Bonam, V. Nair Das, B. R. Coleman, P. Salter, Ignoring history, denying racism: Mounting evidence for the marley hypothesis and epistemologies of ignorance. *Soc. Psychol. Personal. Sci.* **10**, 257–265 (2019).
14. S. Driskell, S. Trawalter, Race, architecture, and belonging: Divergent perceptions of antebellum architecture. *Collabra Psychol.* **7**, 21192 (2021).
15. L. M. Cortina, Unseen injustice: Incivility as modern discrimination in organizations. *Acad. Manag. Rev.* **33**, 55–75 (2008).
16. F. Dobbin, *Inventing Equal Opportunity* (Princeton University Press, 2009), 10.1177/0094306110373238L.
17. J. F. Dovidio, S. L. Gaertner, "On the nature of contemporary prejudice: The causes, consequences, and challenges of aversive racism" in *Confronting Racism: The Problem and the Response*, J. L. Eberhardt, S. T. Fiske, Eds. (Sage Publications Inc., 1998), pp. 3–32.
18. H. Schuman, C. Steeh, L. D. Bobo, M. Krysan, *Racial Attitudes in America: Trends and Interpretations* (Harvard University Press, 1997).
19. K. Henderson, S. Powers, M. Claibourn, J. L. Brown-Iannuzzi, S. Trawalter, Confederate monuments and the history of lynching in the American South: An empirical examination. *Proc. Natl. Acad. Sci. U.S.A.* **118**, e2103519118 (2021).
20. L. Britt, E. Wager, T. Steelman, Meanings and impacts of confederate monuments in the U.S. South. *Du Bois Rev. Soc. Sci. Res. Race* **17**, 105–123 (2020).
21. C. Reyna, K. Harris, A. Bellovary, A. Armenta, M. Zarate, The good ol' days: White identity, racial nostalgia, and the perpetuation of racial extremism. *Gr. Process. Interg. Relat.* **25**, NP81–NP103 (2022).
22. L. Litman, J. Robinson, T. Abberbock, TurkPrime.com: A versatile crowdsourcing data acquisition platform for the behavioral sciences. *Behav. Res. Methods* **49**, 433–442 (2017).
23. A. E. Abele, N. Ellemers, S. T. Fiske, A. Koch, V. Yzerbyt, Navigating the social world: Toward an integrated framework for evaluating self, individuals, and groups. *Psychol. Rev.* **128**, 290–314 (2020), 10.1037/rev0000262.
24. P. S. Salter, G. Adams, M. J. Perez, Racism in the structure of everyday worlds: A cultural-psychological perspective. *Curr. Dir. Psychol. Sci.* **27**, 150–155 (2017).
25. K. H. S. Neufeld, K. B. Starzyk, G. D. Boese, I. H. Efimoff, S. Wright, "The more you know": Critical historical knowledge about Indian Residential Schools increases non-indigenous Canadians' empathy for Indigenous Peoples. *Polit. Psychol.* **43**, 617–633 (2021), 10.1111/pops.12783.
26. F. Faul, E. Erdfelder, A. Buchner, A. G. Lang, Statistical power analyses using G*Power 3.1: Test for correlation and regression analyses. *Behav. Res. Methods* **41**, 1149–1160 (2009).
27. D. Bender, "Establishing a human baseline for the Winograd Schema Challenge" in *MAICS*, M. Glass, Ed. (Jung Hee Kim, Greensboro, NC, 2015).
28. H. J. Levesque, "The Winograd schema challenge" in *Proceedings of the CommonSense-11 Symposium* (Rome, Italy, 2012). <https://cdn.aaai.org/ocs/4492/4492-21843-1-PB.pdf>. Accessed 21 March 2024.
29. H. Bai, Evidence that a large amount of low quality responses on MTurk can be detected with repeated GPS coordinates (2018). <https://www.maxhubai.com/blog/evidence-that-responses-from-repeating-gps-are-random> (9 March 2020).
30. L. E. Wallace, S. L. Reeves, S. J. Spencer, Data from "Celebrating organizational history triggers social identity threat among Black Americans." Open Science Framework. https://osf.io/jkd9n/?view_only=e94c55b2a3684e9f9c477d5e71fd3f72. Deposited 20 December 2023.