*Empirical Research Paper*

# Do Beliefs That Older Adults Are Inflexible Serve as a Barrier to Racial Equality?

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**Abstract**

Past research has demonstrated that older adults are stereotyped as less malleable than young adults. Moreover, beliefs that people are less malleable are associated with lower confrontations of prejudice, as perpetrators are seen as less capable of changing their (prejudiced) behavior. The present research sought to integrate these lines of research to demonstrate that endorsement of ageist beliefs that older adults are less malleable will lead to a lower confrontation of anti-Black prejudice espoused by older adults. Across four experimental studies ($N$ = 1,573), people were less likely to confront anti-Black prejudice espoused by an 82-year-old compared with a 62-, 42-, or 20-year-old, due, in part, to beliefs that older adults are less malleable. Further exploration demonstrated that malleability beliefs about older adults were held across young, middle-aged, and older adult samples. These findings demonstrate how stereotypes about older adults can impede racial equality.

**Keywords**

prejudice confrontations, ageism, racism, malleability

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Prejudice confrontations are verbal challenges directed at a person who commits an act of discrimination (Czopp et al., 2006) and can range from argumentative to educational confrontations (Chaney & Sanchez, 2022; Dickter et al., 2012). Past research has demonstrated that prejudice confrontations can be an effective way to make a perpetrator aware of their bias and motivate them to "break the prejudice habit" (Chaney & Sanchez, 2018; Czopp et al., 2006; Monteith et al., 2010). Beyond potentially evoking attitude and/or behavioral change in perpetrators, confrontations can also signal egalitarian norms (Hildebrand et al., 2020) and serve as a coping strategy for members of marginalized groups (Chaney et al., 2015; Gulker et al., 2013). Yet, despite people often indicating they would confront in hypothetical scenarios, significantly fewer confront prejudice when given the opportunity, in part due to concerns about being viewed negatively by others (Dickter, 2012; Swim & Hyers, 1999) or beliefs that the perpetrator will not change (Rattan & Dweck, 2010). The present research examined one factor that may contribute to lower rates of confrontations due to beliefs that a perpetrator will not change: ageism. Specifically, we examine how ageist beliefs about older adults as inflexible may contribute to lower rates of confrontations directed at older adult perpetrators, demonstrating the role of ageism as a barrier to racial equality. Other beliefs such as older adults being less aware of norms about what is considered prejudiced today and intention to offend are explored as alternative mechanisms.

## Confronting Prejudice

The dyadic (perpetrator-target) or even triadic (perpetrator-target-observer) nature of prejudice confrontations affords multiple research questions that can examine how identities of the involved parties shape decisions to confront prejudice, affective or behavioral changes following confrontations (e.g., Czopp & Monteith, 2003; Gulker et al., 2013; Rasinski & Czopp, 2010), and perceptions of the confronter and perpetrator (e.g., Rasinski & Czopp, 2010). For example, past research has examined the outcomes of having a Black versus White American confront anti-Black racism (e.g., Czopp & Monteith, 2003) or a woman versus a man confront sexism (e.g., Gervais & Hillard, 2014). Such research has focused on how stereotypes of marginalized group confronters as

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oversensitive may shape perceptions of the confrontation (Alt et al., 2019; Kaiser & Miller, 2001) and at times considered how perceivers assume people confronting prejudice hold a marginalized identity (Cadieux & Chasteen, 2015). Examination of how confronters are perceived has been important in documenting that marginalized group-member confronters can be viewed more negatively than privileged group-member confronters by observers (e.g., Rasinski & Czopp, 2010) and perpetrators (e.g., Czopp & Monteith, 2003). Moreover, potential confronters are sensitive to these possible costs of confronting (Shelton et al., 2006; Swim & Hyers, 1999), and comparisons of the costs (e.g., backlash and negative evaluation) versus the benefits of confronting (e.g., attitude change) are important considerations when people decide whether to confront prejudice (Good et al., 2012; Shelton & Stewart, 2004).

Yet significantly less research has focused on how a perpetrator's identity can shape decisions to confront prejudice. Some research has considered the relative power of a perpetrator, noting that people are less likely to confront a boss than a coworker and that these divergent decisions by perpetrator power were again, in part, accounted for by consideration of costs and benefits to confronting (Ashburn-Nardo et al., 2014). Other research has considered the perpetrator's relationship with the potential confronter, finding people indicate greater willingness to confront a friend compared with a stranger, in part due to perceptions of higher costs to confronting a stranger (Brown et al., 2021). The present research explored an additional dimension of perpetrator identity that may impact prejudice confrontation decisions: age. Specifically, we examined how beliefs about older adults might lead to less frequent confrontations of an older adult, compared with a middle-aged or young adult, perpetrator of anti-Black racism. By introducing a factor of perpetrator age, the present research examined how stereotypical beliefs about older adults might mitigate confrontations of older adult perpetrators because of lower perceived confrontation benefits.

## Older Adults and Malleability Beliefs

One factor that can increase the perceived benefits of confronting is a belief that prejudice is malleable. Past research has indicated that people indicate a greater likelihood of confronting prejudice when they believe how prejudiced people are is a malleable trait (Rattan & Dweck, 2010). When people more strongly believed that prejudice was a malleable component of a person, they were more likely to confront a prejudiced statement (Rattan & Dweck, 2010). Such lay theories, or beliefs, about malleability need not be specific to one trait or component, as research has demonstrated that people generally endorse beliefs that people are relatively fixed (entity theory) or malleable (incremental theory) across traits and characteristics (e.g., Carr et al., 2012; Plaks et al., 2009).

Yet, endorsement of such lay theories of malleability do not simply differ across endorsers such that some more strongly endorse a lay theory that people are malleable compared with others; rather, such lay theories also vary across target groups (Lassetter & Neel, 2019; Neel & Lassetter, 2015). For example, younger targets are believed to be more malleable than older targets (Neel & Lassetter, 2015) such that people can hold target-specific lay theories of malleability. Such effects of target age on lay theories of malleability reflect broader stereotyping of older adults as having the less cognitive ability (Cuddy et al., 2005) and being inflexible (Hummert et al., 1994). Integrating target-specific lay theories of malleability and research on prejudice confrontations, we proposed that people would be less likely to confront an older adult who committed anti-Black discrimination than a middle-aged or young adult because older adults would be perceived as less malleable, resulting in lower perceived benefits to confronting. Notably, past research found mixed evidence that the malleability of sexism among perpetrators across ages can impact confrontation intentions (Lassetter et al., 2022). The present research focuses on the malleability of a person (not just their prejudice) and centers on anti-Black racism.

## Ageism and Beliefs About Older Adults

While age-specific lay theories of malleability may reflect one belief about older adults that could contribute to lower rates of confrontation of older adult perpetrators, other stereotypes and attitudes may also lead to lower rates of confronting older adults. Indeed, ageism is a ubiquitous form of bias that is often overlooked because of the seemingly positive and well-intentioned yet paternalistic nature of prototypical ageism (Cary et al., 2017; Chasteen et al., 2021; Nelson, 2016). Stereotypes of older adults as forgetful and invisible but highly warm (Cuddy et al., 2005) present older adults as not knowing better. We thus explored two additional beliefs about older adults that may serve as mechanisms impacting confrontation rates by perpetrator age: awareness of bias and intention to offend. First, we hypothesized that because people perceive older adults as highly warm but forgetful or out of touch (Cuddy et al., 2005), older adults may be perceived as less aware of current norms regarding what is prejudiced. As such, we proposed that perceived awareness of bias may serve as a competing process that could lead to *higher* rates of confronting older adults. That is, prejudice confrontations can be seen as tools to educate people about bias (e.g., Chaney & Sanchez, 2022) and beliefs that older adults are simply unaware of bias may facilitate confrontations of older adults. As such, the present research also explored perceived awareness of bias as an alternative process by which perpetrator age may impact confrontation of older adults relative to middle-aged or young adults.[1]

Relatedly, the perceived intent of a prejudiced transgression is a critical component of assigning blame for a

transgression (e.g., Simon et al., 2019). As older adults are often stereotyped as out of touch (Chasteen et al., 2002; Cuddy et al., 2005), such stereotype endorsement may lead potential confronters to view older adults as discriminating unintentionally. As such, lower rates of confronting older adults may be driven by a perception that the discriminatory behavior was unintentional and thus less deserving of blame when committed by an older compared with middle-aged or young adult. That is, if behavior was not intended to offend, potential confronters may perceive less benefits to confronting and thus be less likely to confront. Critically, awareness of bias and intention to offend are included as alternative mechanisms of exploration (with perceived malleability as our centrally proposed mechanism) to fully account for the ways perpetrator age might bias decisions to confront prejudice. In testing multiple mechanisms, the present research seeks to demonstrate the multiple ways perpetrator age may bias prejudice confrontations.

## Current Research

Integrating past research on prejudice confrontation and lay theories of prejudice (Chaney & Wedell, 2022; Neel & Lassetter, 2015; Rattan & Dweck, 2010), the present research examined how the age of a perpetrator of anti-Black racism would impact prejudice confrontation intentions. Across four studies ($N$ = 1,573), we tested our primary hypothesis that people would view an older adult perpetrator as less malleable, leading to lower perceived benefits of confronting them, and ultimately lower confrontation intentions. In addition, two alternative mechanisms that may impact decisions to confront by perpetrator age were examined: awareness of bias and intention to offend. As such, the present research sought to demonstrate how ageism may serve as a barrier to racial equality such that stereotypes of older adults as fixed could mitigate prejudice confrontations, thus limiting opportunities for older adults to reflect on intergroup biases or learn about current social norms of egalitarianism.

Across four studies, we aimed to replicate our primary hypothesis while examining alternative mechanisms and potential moderators, including participant age group (Study 1), how blatant or subtle the perpetrator's prejudice was (Study 2), and the perpetrator's gender (Study 3). Participant age was explored (Study 1) given the need to consider characteristics of both perpetrators and observers. In Study 2, we sought to examine whether the presence of blatant prejudice would override the effect of perpetrator age, resulting in greater confrontation across perpetrator age. Study 3 examined perpetrator gender given intersectional work on gender shaping age stereotypes (DeArmond et al., 2006). Notably, all studies focused on participants who were nontargets (i.e., people who did not identify as Black) to isolate perceptions about the perpetrator, eliminating potentially confounding factors of costs for target confronters. Data and materials for all studies are available: https://osf.io/v9esn/.

## Study 1

Study 1 examined whether an act of anti-Black discrimination by an older adult would be confronted at lower rates than an act of discrimination by a middle-aged or young adult. We sought to determine whether the effect of perpetrator age on confrontation was, in part, driven by lower perceived malleability or intention to offend among older adults, leading to lower perceived benefits to confronting. Critically, an initial test of our hypothesis (Supplementary Study 1) suggested participant age may impact confrontation rates and beliefs about older adults. Thus, adult participants across three key age groups were recruited: young (18- to 29-year-olds), middle-aged (30- to 59-year-olds), and older adults (60+ years old).

### Method

*Participants.* An a priori power analysis for a 3 (participant age) × 3 (perpetrator age) between-subjects analysis of variance (ANOVA) indicated a desired sample size of 418 to detect a small- to medium-effect size ($f$ =.17/$d$ = 0.34) with 80% power. To account for exclusions, a data collection stop point was set at 460 although two additional participants were recruited due to a stopping error. Participants who did not identify as Black were recruited from Prolific in exchange for monetary compensation. However, 27 participants were excluded for failing manipulation checks, leaving an analytic sample of 435 participants. Critically, we sought to recruit an approximately equal number of participants who were between the ages of 18 to 29 years old, 35 to 59 years old, and 60+ years old to include participant age group as an analytic factor. Ultimately 147 participants identified as 18 to 29 ($M_{age}$ = 25.23, $SD$ = 2.37; range: 19–29), 149 identified as 35 to 59 ($M_{age}$ = 43.51, $SD$ = 7.72; range: 35–59), and 139 participants identified as 60+ ($M_{age}$ = 66.16, $SD$ = 4.97, range: 60–85). The sample was relatively balanced with regard to gender (226 women, 205 men, four nonbinary) and was predominately White (377 White, 35 Asian American, 14 Hispanic American, seven Multiracial, two Native American).

*Procedure.* Upon consenting and providing demographics, participants were presented with the following scenario (adapted from Brown et al., 2021):

> Yesterday, John (pictured above) was on the downtown bus. After a few stops, a Black family boarded and sat down near John. Shortly after the family sat down, he got up, walked down the aisle, and held the handrail. John did not get off at the next stop.

Participants were randomly presented with one of three images of John, as a young adult, middle-aged adult, or older adult. Immediately after reading this scenario, participants provided

**Table 1.** Study 1 ANOVA Results.

| | Perpetrator age Main effect | | | Participant age Main effect | | | Interaction | | |
|---|---|---|---|---|---|---|---|---|---|
| Outcome | *F*(2,426) | *p* | *d* | *F*(2,426) | *p* | *d* | *F*(4,426) | *P* | *d* |
| Offensive | 3.37 | .035 | 0.26 | 2.33 | .109 | 0.20 | 2.53 | .040 | 0.31 |
| Intend to offend | 0.85 | .428 | 0.13 | 1.35 | .261 | 0.16 | 1.32 | .260 | 0.02 |
| Should confront | 0.81 | .426 | 0.13 | 7.94 | <.001 | 0.39 | 0.71 | .588 | 0.17 |
| Would confront | 2.60 | .076 | 0.22 | 12.01 | <.001 | 0.47 | 3.19 | .013 | 0.35 |
| Costs | 0.74 | .480 | 0.11 | 2.05 | .130 | 0.20 | 0.87 | .484 | 0.18 |
| Benefits | 1.32 | .268 | 0.16 | 12.34 | <.001 | 0.48 | 0.98 | .420 | 0.19 |
| Malleability | 4.31 | .014 | 0.29 | 0.04 | .965 | 0.00 | 0.61 | .654 | 0.16 |

*Note.* 18- to 29-year-olds $N = 146$ (44 older perp., 50 middle-aged perp., 52 young perp.); 35- to 59-year-olds $N = 153$ (50 older perp., 52 middle-aged perp., 51 young perp.); 60+-year-olds $N = 136$ (45 older perp., 47 middle-aged perp., 44 young perp.). ANOVA = analysis of variance.

an open-ended response to the question "Why do you believe John moved?," and completed a one-item Likert-type measure of intent to offend ("Do you believe John intended to offend the Black family?"). After, participants completed the measures described below, in that order, and were debriefed.[2]

### Materials

*Photos.* Photographs of young, middle-aged, and older White men were selected from the FACES database (Ebner et al., 2010). A pretest conducted with a separate sample of 40 non-Black Americans recruited from MTurk ($M_{age} = 38.98$, $SD = 10.68$, range: 24–71) provided open-ended estimates of the targets' age and completed Likert-type scales assessing traits of each target. Targets were presented in a random order. Age estimates reflected the three age categories of interest (young target: $M = 26.08$, $SD = 4.77$; middle-aged target: $M = 46.08$, $SD = 6.03$; older target: $M = 71.78$, $SD = 8.92$). Repeated measures analysis of variance (ANOVAs) revealed targets did not significantly differ in how "smart," $F(2,78) = 0.62$, $p = .435$, $d = 0.26$, or "kind," $F(2,78) = 2.64$, $p = .113$, $d = 0.52$, they were rated.

*Offensive.* On a scale from 1 (*not at all*) to 7 (*very*), participants indicated how offensive they found John's behavior. In addition, participants completed one item indicating whether they believed John intended to offend the Black family on a scale from 1 (*not at all*) to 7 (*very*).

*Confronting.* On a scale from 1 (*not at all*) to 7 (*very*), participants responded to two questions about confronting: "Do you believe John should be confronted for his behavior?" and "If you were on the bus, how likely would you be to confront John for his behavior?"

*Confronting Costs and Benefits.* On a scale from 1 (*not at all*) to 7 (*very*), participants completed four items assessing the costs of confronting (e.g., "Would you worry that other people would dislike you if you called out John's behavior?). On the same scale, participants completed three items assessing the benefits of confronting (e.g., "Do you think that you would stop John from engaging in similar behavior in the future if you called him out?"). Both cost ($\alpha = .83$) and benefit ($\alpha = .67$) measures were reliable (adapted from Good et al., 2012).

*Malleability.* On a scale from 1 (*strongly disagree*) to 7 (*strongly agree*), participants completed five items related to how malleable John was (adapted from Rattan & Dweck, 2010). A sample item includes, "John has the potential to significantly change his basic characteristics," and the scale was reliable ($\alpha = .93$).

## Results

*Offensive.* A 3 (participant age) × 3 (perpetrator age) between-subjects ANOVA revealed no main effect of participant age and a significant main effect of perpetrator age (see Table 1).[3] LSD post hoc tests (Fisher's Least Significant Difference) revealed participants rated the middle-aged perpetrator as more offensive than the older adult, $p = .010$, $d = 0.30$, but not the young adult, $p = .318$, $d = 0.11$ (Table 2). The older and young adult did not significantly differ, $p = .114$, $d = 0.20$.

The main effect of perpetrator age was qualified by a significant interaction. Examining the interaction by participant age group revealed no effect of perpetrator age among 18- to 29-year-olds, $F(2,143) = 1.78$, $p = .172$, $d = 0.31$, nor among 35- to 59-year-olds, $F(2,150) = 0.77$, $p = .463$, $d = 0.20$. There was a main effect of perpetrator age among 60+ participants, $F(2,133) = 5.73$, $p = .004$, $d = 0.59$. Participants who were 60+ years old indicated that the older adult was significantly less offensive ($M = 3.11$, $SD = 2.07$) than the middle-aged ($M = 4.57$, $SD = 2.06$), $p < .001$, $d = 0.71$, and the young adult perpetrator ($M = 4.02$, $SD = 2.10$), $p = .041$, $d = 0.44$. The young adult's offensiveness did not significantly differ from the middle-aged perpetrator, $p = .210$,

**Table 2.** Study 1 Descriptive Statistics by Perpetrator Age.

| Outcome | Young adult, *M* (*SD*) | Middle-aged adult, *M* (*SD*) | Older adult, *M* (*SD*) |
|---|---|---|---|
| Offensive | 4.03 (2.10) | 4.26 (2.14) | 3.63 (2.10) |
| Intend to offend | 3.48 (1.98) | 3.52 (2.08) | 3.23 (1.99) |
| Should confront | 2.82 (1.88) | 2.55 (1.80) | 2.58 (1.79) |
| Would confront | 2.16 (1.58) | 1.80 (1.44) | 1.81 (1.22) |
| Costs | 3.13 (1.62) | 3.35 (1.61) | 3.18 (1.65) |
| Benefits | 2.88 (1.37) | 2.63 (1.32) | 2.65 (1.32) |
| Malleability | 4.60 (1.52) | 4.72 (1.50) | 4.17 (1.82) |

*Note.* These descriptive statistics collapse across participant age condition.

**Table 3.** Study 1 Descriptive Statistics by Participant Age.

| Outcome | 18- to 29-year-olds *M* (*SD*) | 30- to 59-year-olds *M* (*SD*) | 60+-year-olds *M* (*SD*) |
|---|---|---|---|
| Offensive | 4.27 (2.03)a | 3.76 (2.17)b | 3.91 (2.16)ab |
| Intend to offend | 3.58 (1.98)a | 3.21 (1.95)a | 3.47 (2.13)a |
| Should confront | 3.15 (1.89)a | 2.37 (1.65)b | 2.43 (1.82)b |
| Would confront | 2.39 (1.67)a | 1.74 (1.32)b | 1.62 (1.13)b |
| Costs | 3.13 (1.66)a | 3.09 (1.60)a | 3.25 (1.59)a |
| Benefits | 3.17 (1.43)a | 2.48 (1.25)b | 2.52 (1.31)b |
| Malleability | 4.48 (1.43)a | 4.50 (1.73)a | 4.53 (1.71)a |

*Note.* The condition means not sharing a subscript significantly differs. These descriptive statistics collapse across perpetrator age condition.

$d = 0.26$, for 60+ participants. There was no main effect of participant age, perpetrator age, or significant interaction for if the perpetrator *intended* to offend.

*Confronting.* The ANOVA for if John should be confronted revealed only a main effect of participant age. LSD post hoc analyses of the significant participant age main effect revealed that 18- to 29-year-olds were more likely to say John should be confronted than 35- to 59-year-olds, $p < .001$, $d = 0.44$, and 60+-year-old participants, $p = .001$, $d = 0.39$ (see Table 3). Note, 35- to 59-year-old and 60+-year-old participants did not significantly differ, $p = .780$, $d = 0.04$.

The ANOVA for if participants *would* confront John indicated a main effect of participant age, no main effect of perpetrator age, and a significant interaction. Examining the interaction by participant age group revealed no effect of perpetrator age for 35- to 59-year-olds, $F(2,150) = 1.03$, $p = .358$, $d = 0.14$, or 60+-year-olds, $F(2,133) = 0.27$, $p = .764$, $d = 0.06$, but a main effect for 18- to 29-year-olds, $F(2,143) = 7.97$, $p < .001$, $d = 0.39$. Participants aged 18 to 29 years old indicated a greater likelihood of confronting the young adult ($M = 2.98$, $SD = 1.79$) than the older adult ($M = 1.91$, $SD = 1.36$), $p < .001$, $d = 0.67$, and the middle-aged perpetrator ($M = 2.20$, $SD = 1.64$), $p = .004$, $d = 0.45$. The 18- to 29-year-olds did not significantly differ in likelihood of confronting the middle-aged and older adult perpetrator, $p = .307$, $d = 0.19$. Note, however, when the significant interaction is explored instead by perpetrator age, no effect of participant age on confrontation of the older adult emerged, $F(2,136) = 0.29$, $p = .749$, $d = 0.06$.

*Confronting Costs and Benefits.* The ANOVA for costs of confronting revealed no significant effects. The ANOVA for benefits of confronting revealed only a main effect of participant age. LSD post hoc tests of the participant age main effect revealed 18- to 29-year-olds reported significantly more benefits to confronting than 35- to 59-year-olds, $p < .001$, $d = 0.51$, and 60+-year-olds, $p < .001$, $d = 0.47$. Note, 35- to 59-year-olds and 60+-year-olds did not significantly differ in perceived benefits to confronting, $p = .802$, $d = 0.03$.

*Malleable.* The ANOVA for malleability indicated only a main effect of perpetrator age. LSD post hoc analyses of perpetrator age revealed the older adult was seen as significantly less malleable than the middle-aged, $p = .005$, $d = 0.33$, and the young adult, $p = .031$, $d = 0.26$. The young and middle-aged perpetrator did not significantly differ, $p = .519$, $d = 0.08$.

*Mediation.* A serial mediation analysis was conducted examining the effect of perpetrator age (dummy coded into two contrasts) on whether would participants confront perpetrator malleability and the benefits of confronting (Figure 1). Analyses were conducted controlling for participant age group and indicated that the serial indirect effects from both Contrast 1 and Contrast 2 to confrontation were

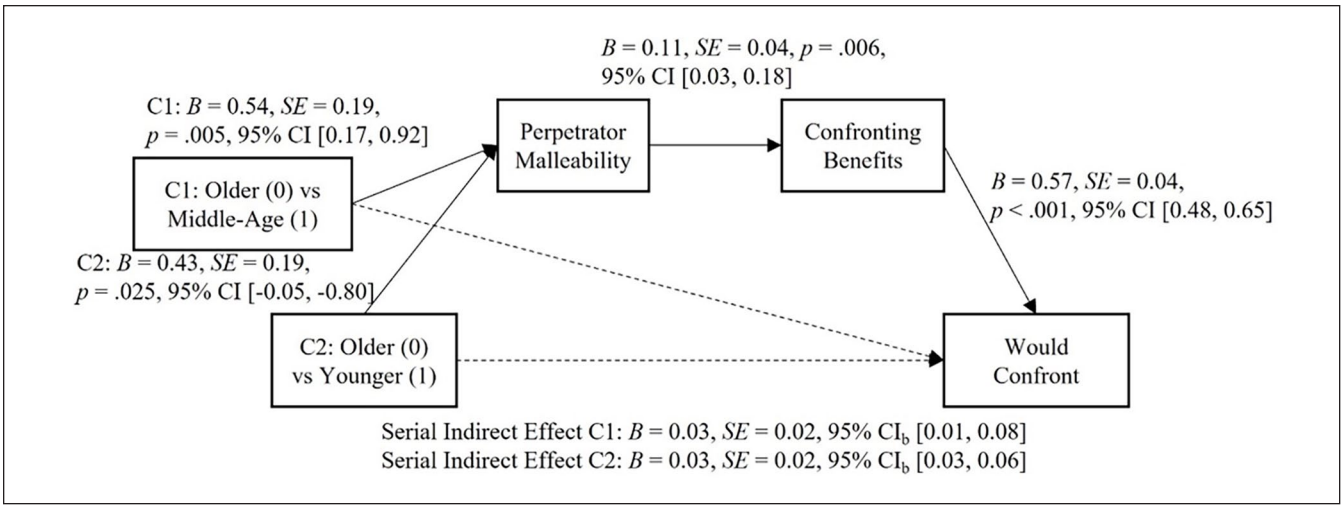


**Figure 1.** Study 1 Serial Mediation Model Examining Effect of Perpetrator Age on If Participants Would Confront.

significant via perpetrator malleability and perceived benefits to confronting.[4]

### *Discussion*

Study 1 participants rated the older adult as significantly less malleable than the middle-aged and young adult perpetrators, but no main effects emerged for benefits to confronting and if the perpetrator should be confronted. Interestingly, the significant interaction for if participants *would* confront the perpetrator revealed that 18- to 29-year-olds would be less likely to confront the older adult compared with the other two perpetrators. Moreover, the effect of perpetrator age on malleability significantly predicted benefits to confronting and ultimately confrontation intentions. Study 1 offered support for the hypothesis that older adults would be confronted less frequently due to lower perceived malleability, and thus fewer benefits to confronting. Finally, there was no effect of perpetrator age on perceived *intent* to offend, suggesting perceived intentionality of bias did not account for the difference in perceived offensiveness of behavior by perpetrator age.

While participant age was included to determine if it might moderate effects of perpetrator age on confrontation intentions, the inclusion of participant age group also offered a unique insight into *who* is most likely to confront prejudice. In Study 1, young adults rated the behavior as more offensive than middle-aged adults and indicated the perpetrator should be confronted, they would confront, and perceived greater benefits to confronting, than either middle-aged or older adult participants. Participant age as an experimental factor was not explored further as it was outside the scope of the present research but is discussed further in the General Discussion. Furthermore, the remaining studies control for participant age in analyses.

## Study 2

Study 2 sought to advance Study 1 in two ways. First, as the present research primarily examines confrontation rates of older adult perpetrators, Study 2 included more nuanced age categories among older adults. We hypothesized that beliefs about the malleability and the competing mechanisms would be most influenced by, for example, an 82-year-old compared with a 62-year-old, despite both often being included in definitions of "older adults." In providing more nuance into the older adult category, the young adult perpetrator was removed, allowing the remaining studies to focus on differences between a 42-year-old middle-aged perpetrator and two older adult perpetrators (62- and 82-year-olds).

In addition, Study 2 introduced awareness of bias as a mechanism by which stereotypical beliefs about older adults may *increase* confrontations of an 82-year-old compared with a 42- or 62-year-old. That is, we hypothesized that people may perceive older adults as being less aware of current norms regarding what is prejudiced, which may make confrontations seem particularly more beneficial as they serve to educate perpetrators. We proposed lower perceived awareness of bias norms would lead to higher rates of confrontations for an 82-year-old perpetrator. Critically, we continued to test our primary proposed mechanism, malleability, and retained intention to offend despite Study 1 null findings.

Finally, Study 2 sought to demonstrate a boundary on the proposed effect of perpetrator age on prejudiced confrontations. That is, the scenario in Study 1 was a relatively ambiguous, mild act of discrimination that allowed for beliefs about older adults to influence confronting decisions and assessments. We hypothesized that in an instance of more blatant prejudice, the effects of perpetrator age would disappear, and higher rates of confrontation would emerge overall. Thus, Study 2 was a 3 (perpetrator age) × 2 (prejudice level) between-subjects design that sought to determine if beliefs

**Table 4.** Study 2 ANCOVA Results With Participant Age Covariate.

| | Perpetrator age Main effect | | | Prejudice level Main effect | | | Interaction | | |
|---|---|---|---|---|---|---|---|---|---|
| Outcome | *F*(2,295) | *p* | *d* | *F*(1,295) | *p* | *d* | *F*(2,295) | *p* | *d* |
| Offensive | 2.94 | .054 | 0.35 | 71.04 | <.001 | 0.98 | 4.39 | .013 | 0.35 |
| Intend to offend | 3.68 | .026 | 0.31 | 125.86 | <.001 | 1.31 | 3.37 | .036 | 0.30 |
| Should confront | 0.46 | .630 | 0.11 | 56.28 | <.001 | 0.87 | 0.80 | .449 | 0.14 |
| Would confront | 4.45 | .012 | 0.35 | 28.53 | <.001 | 0.62 | 0.61 | .546 | 0.13 |
| Costs | 0.68 | .508 | 0.14 | 2.95 | .089 | 0.20 | 0.22 | .806 | 0.06 |
| Benefits | 6.06 | .003 | 0.40 | 20.20 | <.001 | 0.52 | 0.53 | .588 | 0.13 |
| Malleability | 3.91 | .021 | 0.33 | 2.33 | .128 | 0.18 | 0.09 | .918 | 0.05 |
| Aware of bias | 19.80 | <.001 | 0.73 | 1.66 | .198 | 0.16 | 0.06 | .941 | 0.05 |

*Note.* When not controlling for participant age, the only significant change in findings was a main effect of prejudice level on perceived costs, such that participants perceived fewer costs to confronting in the high compared with low prejudice condition. ANCOVA = analysis of covariance.

that older adults are less malleable limit confrontations of older adults, yet beliefs that older adults are less aware of bias may increase confrontations of older adults, during ambiguously discriminatory situations only. Given the null effect of perpetrator age on perceived intention to offend in Study 1, we had no hypotheses around this mechanism.

## *Method*

*Participants.* An a priori power analysis in G*Power for a 2 × 3 between-subjects analysis of covariance (ANCOVA) indicated a desired sample size of 301 to detect a small-medium effect size ($d = 0.36$) with 80% power. To account for exclusions, a data collection stop point was set at 330. U.S. participants who did not identify as Black were recruited from MTurk via CloudResearch (Litman et al., 2017) in exchange for monetary compensation. However, 28 were excluded for failing attention checks, leaving an analytic sample of 302 participants ($M_{age} = 38.17$, $SD = 11.88$; range: 20–74). The sample was relatively gender balanced (163 men, 136 women, three nonbinary) and predominately White (244 White Americans, 28 Asian Americans, 20 Latinx Americans, nine Multiracial, and one Native American).

*Procedure.* Study 2 made several adjustments from Study 1. First, participants were not shown photos to manipulate perpetrator age but rather perpetrator age was included in the scenario. Participants were randomly assigned to read about a 42-, 62-, or 82-year-old White man in either a low- or high-prejudice scenario. The low prejudice scenario was identical to Study 1 except age was included in parentheses. The high prejudice scenario included one adjustment to this scenario (difference marked in italics):

> Yesterday, John (a 42/62/82-year-old White man) was on the downtown bus. After a few stops, a Black family boarded and sat down near John. Shortly after the family sat down, *John muttered, "these Black people can't even control their children.* He then got up, walked down the aisle, and held a handrail. John did not get off at the next stop."

After, participants completed the Study 1 measures of offensiveness, intent to offend, should confront, would confront, malleability ($\alpha = 0.93$), and a new measure of awareness of bias. Participants then completed Study 1 measures of costs ($\alpha = .81$) and benefits ($\alpha = .72$) of confronting, a manipulation check on perpetrator age, and were debriefed.

### *Materials*

*Scenarios.* The same sample that pretested the photos, reported in Study 1, reviewed either the low or the high prejudice scenario (age information removed). After reading the scenario, participants estimated the target's attitude toward Black Americans on a scale from 1 (*very negative/cold*) to 100 (*very positive/warm*). An independent-samples *t* test revealed that John was rated as holding more negative attitudes toward Black Americans in the high ($M = 41.95$, $SD = 2.17$) compared with the low prejudice condition ($M = 58.25$, $SD = 19.95$), $t(38) = 2.94$, $p = .003$, $d = 0.95$.

*Bias Awareness.* On a scale from 1 (*strongly disagree*) to 7 (*strongly agree*) participants completed three researcher-developed items to assess perceived generational awareness of bias. Items such as "People John's age just don't know what behavior is considered prejudiced anymore" were completed, and items were reverse coded such that higher values indicated greater awareness ($\alpha = .86$).

## *Results*

Results of 2 × 3 between-subjects ANCOVAs controlling for participant age are reported in Table 4. LSD post hoc tests were employed to examining significant main effects. Descriptive statistics by perpetrator age are reported in Table 5.

*Offensive.* The ANCOVA revealed a main effect of prejudice condition, no significant main effect of perpetrator age and

**Table 5.** Study 2 Descriptive Statistics by Perpetrator Age Condition.

| Outcome | 42-year-old, *M* (*SE*) | 62-year-old, *M* (*SE*) | 82-year-old, *M* (*SE*) |
|---|---|---|---|
| Offensive | 5.16 (0.15)a | 5.17 (0.15)a | 4.70 (0.16)b |
| Intend to offend | 4.65 (0.16)a | 4.71 (0.16)a | 4.16 (0.16)b |
| Should confront | 3.71 (0.18)a | 3.74 (0.18)a | 3. 52 (0.18)a |
| Would confront | 3.01 (0.16)a | 2.94 (0.16)a | 2.38 (0.16)b |
| Costs | 3.00 (0.15)a | 3.08 (0.15)a | 2.83 (0.15)a |
| Benefits | 3.32 (0.13)a | 3.43 (0.13)a | 2.83 (0.13)b |
| Malleability | 4.61 (0.16)a | 4.21 (0.16)ab | 3.97 (0.16)b |
| Aware of bias | 4.70 (0.15)a | 3.89 (0.15)b | 3.39 (0.15)c |

*Note*. The condition means not sharing a subscript significantly differs. Descriptive statistics presented here collapse across prejudice-level conditions.

significant interaction. Confirming our manipulation of high versus low prejudice, participants rated the high-prejudice perpetrator's behavior as more offensive ($M = 5.76$, $SE = 0.12$) than the low-prejudice perpetrator's behavior ($M = 4.26$, $SE = 0.13$). Examining the interaction revealed no effect of perpetrator age in the high prejudice condition, $F(2, 295) = 0.08$, $p = .923$, $d = 0.06$, but an effect of perpetrator age in the low prejudice condition, $F(2, 295) = 7.47$, $p < .001$, $d = 0.45$. In the low-prejudice condition, the behavior was rated as less offensive when the perpetrator was 82 years old ($M = 3.58$, $SE = 0.21$) than 62 years old ($M = 4.63$, $SE = 0.21$), $p < .001$, $d = 0.71$, or 42 years old ($M = 4.57$, $SE = 0.22$), $p = .002$, $d = 0.65$. Ratings for the 62- and 42-year-olds did not significantly differ, $p = .838$, $d = 0.04$.

The ANCOVA for intent to offend revealed significant effects of prejudice condition, perpetrator age, and significant interaction. Examining the interaction revealed no effect of perpetrator age in the high prejudice condition, $F(2,295) = 0.06$, $p = .940$, $d = 0.06$, but an effect of perpetrator age in the low prejudice condition, $F(2,295) = 7.18$, $p < .001$, $d = 0.44$. In the low prejudice condition, the 82-year-old's behavior was seen as less intentional ($M = 2.80$, $SE = 0.22$) than the 62-year-old's ($M = 3.83$, $SE = 0.21$), $p < .001$, $d = 0.45$, and the 42-year-old's ($M = 3.82$, $SE = 0.23$), $p = .001$, $d = 0.46$. Ratings for the 42- and 62-year-olds did not significantly differ, $p = .978$, $d = 0.02$.

*Confrontation.* The ANCOVA for should John be confronted revealed only a main effect of prejudice condition. Participants more strongly indicated John should be confronted in the high ($M = 4.43$, $SE = 0.15$) than the low prejudice condition ($M = 2.88$, $SE = 0.15$).

The ANCOVA for would participants confront John revealed the main effects of prejudice condition and perpetrator age and no significant interaction. Participants indicated a greater likelihood of confronting the high-prejudice perpetrator ($M = 3.28$, $SE = 0.13$) than the low-prejudice perpetrator ($M = 2.28$, $SE = 0.13$). Participants reported a lower likelihood of confronting the 82- than the 62-year-old, $p = .016$, $d = 0.33$, and 42-year-old, $p = .007$, $d = 0.39$. Confronting rates did not significantly differ between the 62- and the 42-year-old, $p = .760$, $d = 0.06$.

*Costs and Benefits.* The ANCOVA for costs of confronting revealed no main effects or significant interactions. The ANCOVA for benefits of confronting revealed the main effects of prejudice condition and perpetrator age, and no significant interaction. Participants reported greater benefits to confront the high ($M = 3.53$, $SE = 0.11$) than the low prejudice perpetrator ($M = 2.86$, $SE = 0.10$). In addition, participants reported fewer perceived benefits to confronting the 82-year-old than the 62-year-old, $p = .001$, $d = 0.46$, and the 42-year-old, $p = .008$, $d = 0.37$. Benefits for confronting the 62- and 42-year-old did not significantly differ, $p = .547$, $d = 0.06$.

*Malleable.* The 2 × 3 ANCOVA for malleability revealed only a main effect of perpetrator age. Participants perceived the 42-year-old as more malleable than the 82-year-old, $p = .006$, $d = 0.38$, but not the 62-year-old, $p = .081$, $d = 0.24$. The 82- and 62-year-olds did not significantly differ, $p = .302$, $d = 0.14$.

*Bias Awareness.* The ANCOVA of bias awareness revealed only a main effect of perpetrator age. Participants viewed the 42-year-old as more aware of prejudice norms than the 62-year-old, $p < .001$, $d = 0.57$, and 82-year-old, $p < .001$, $d = 0.82$. Participants also rated the 62-year-old as more aware of prejudiced norms than the 82-year-old, $p = .018$, $d = 0.34$.

*Mediation.* A path model was conducted in MPlus (Muthén & Muthén, 1998–2017) examining the effect of perpetrator age condition (Contrast 1: 62 vs. 82; Contrast 2: 42 vs. 82) on confrontation intentions via perpetrator malleability, bias awareness, intend to offend, and confronting benefits while controlling for prejudice level and participant age (Figure 2). The model indicated good fit, $\chi^2(2) = 0.61$, $p = .738$, comparative fit index (CFI) = 1.00, standardized root mean square residual (SRMR) = 0.01, root mean square error of approximation (RMSEA) = .001. This model offers competing mechanisms regarding biases of 82-year-olds: Lower perceived malleability and intention to offend led to less likelihood of confronting, while lower perceived awareness of bias led to greater likelihood of confronting, compared

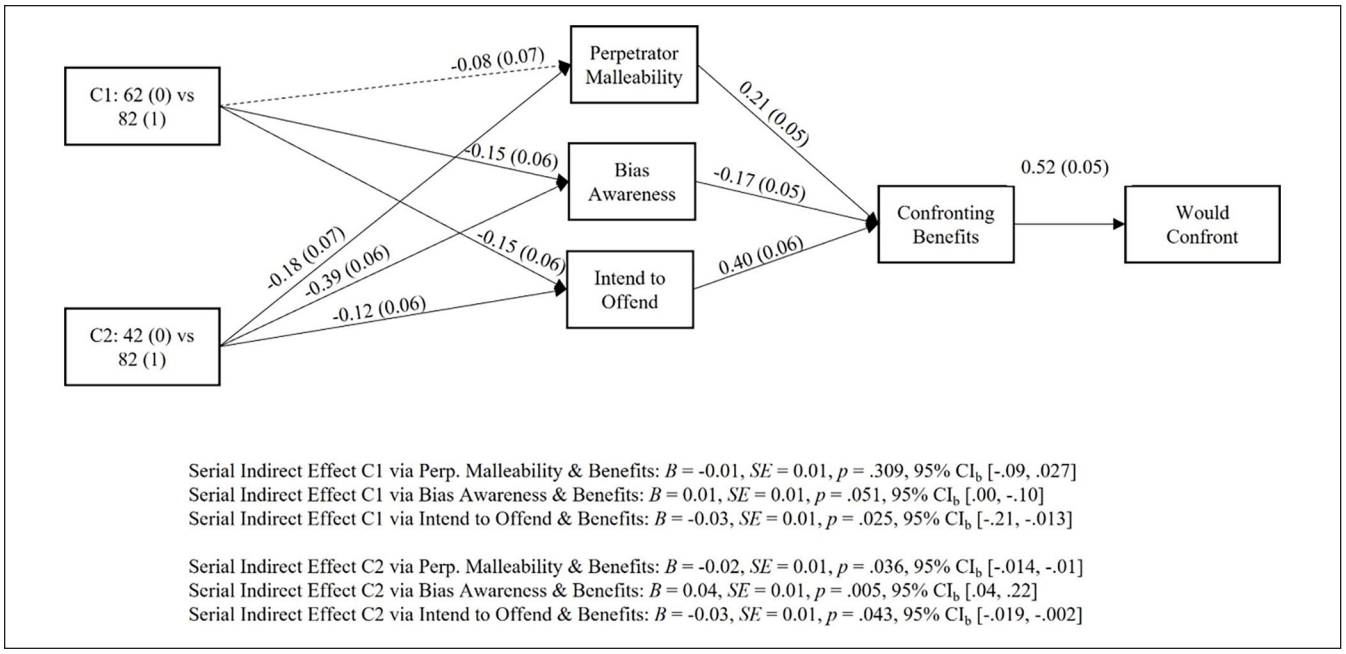


**Figure 2.** Study 2 Mediation Model Examining Effect of Perpetrator Age on If Participants Would Confront.
*Note.* Standardized model results presented.

with a 42-year-old. Examining only indirect effects, only lower perceived intention to offend predicted lower confrontation rates of an 82-year-old compared with a 62-year-old. Note, intent to offend and awareness of bias were not significantly correlated (see Supplement).

### *Discussion*

Study 2 offered the strongest evidence yet that people are less likely to confront an 82-year-old due, in part, to lower perceived malleability and thus fewer benefits to confronting compared with a 42-year-old. Note, participants generally viewed the 82- and 62-year-old in significantly different ways. While the 62- and 82-year-old did not significantly differ in ratings of malleability, participants indicated fewer benefits to confronting, lower intentions to confront, lower awareness of bias, and less intention to offend for the 82- compared with the 62-year-old. These findings demonstrate the importance of applying nuance to discussions of perceptions of older adults.

Counter to our hypothesis, however, these effects emerged in both the low *and* the high prejudice scenario, suggesting the powerful impact of beliefs about older adults on prejudice confrontations. Prejudice level did, however, interact with perpetrator age on offensiveness and perceived intent to offend such that perpetrator age had no effect in the high prejudice scenario but did in the low prejudice scenario. Participants in the low prejudice scenario viewed the behavior as less offensive and less intentionally offending the Black family in the 82-year-old compared with the 42- and 62-year-old conditions. In addition, main effects of prejudice level were in hypothesized directions for the remaining variables, demonstrating more blatant acts of prejudice are more likely to be confronted, due in part to greater perceived benefits.

Study 2 also offered an initial demonstration of the competing ways beliefs about older adults (lower malleability, awareness of bias, intention to offend) can impact decisions to confront prejudice. While lower malleability of 82-year-olds was related to fewer benefits, lower awareness of bias was related to greater benefits to confronting. These findings suggest that ageist beliefs about older adults as less malleable and less socially aware could create divergent outcomes, although malleability beliefs appear to be stronger. Finally, unlike in Study 1, intention to offend significantly varied by perpetrator age and significantly mediated the effects of perpetrator age on confronting intentions such that the 82-year-old was seen as less intentionally causing offense compared with the 62- and 42-year-old, leading to fewer perceived benefits to confronting, and ultimately lower confrontation intentions. Note, while related concepts, we conceptualize intention to offend and awareness of bias as distinct mechanisms with opposing influences on confrontation intentions, such that intention to offend should imply blame (Simon et al., 2019), while awareness of bias implies knowledge of norms. Given this nuanced distinction, we further explore this finding in Study 3.

## Study 3

Study 3 provides a pre-registered (https://osf.io/dct5k) replication of Study 2, focusing only on the low prejudice

**Table 6.** Descriptive Statistics by Perpetrator Age, Study 3.

| Outcome | 42-year-old, *M* (*SE*) | 62-year-old, *M* (*SE*) | 82-year-old, *M* (*SE*) |
|---|---|---|---|
| Offensive | 5.31 (0.12)a | 5.35 (0.13)a | 4.83 (0.12)b |
| Intend to offend | 3.98 (0.13)a | 3.66 (0.13)a | 3.29 (0.12)b |
| Should confront | 4.33 (0.14)a | 4.33 (0.14)a | 3.95 (0.14)a |
| Would confront | 2.84 (0.12)a | 2.78 (0.12)a | 2.40 (0.12)b |
| Costs | 3.29 (0.13)a | 2.97 (0.13)a | 2.97 (0.12)a |
| Benefits | 4.03 (0.11)ab | 4.10 (0.11)a | 3.76 (0.11)b |
| Malleable | 4.77 (0.11)a | 4.80 (0.11)a | 4.38 (0.10)b |
| Bias awareness | 5.14 (0.10)a | 5.16 (0.10)a | 4.79 (0.10)b |

*Note*. 42 year-old condition $n = 132$ (64 male perpetrator); 62-year-old condition $n = 133$ (65 male perpetrator); 82-year-old condition $n = 138$ (63 male perpetrator). Descriptive statistics presented here collapse across perpetrator gender condition. *SE* = standard error.

scenario. In doing so, we aimed to replicate the competing effects of beliefs about malleability and awareness of bias on perceived benefits to confronting and the nuanced effects of age among older adults (82 vs. 62). Given the null effect of intention to offend in Study 1, this variable was again included in an exploratory fashion. Finally, Study 3 examined the intersectional effect of age and gender on biases toward older adults in an exploratory fashion. That is, a secondary goal of Study 3 was to determine if beliefs that older women are warmer and less competent than older men (e.g., DeArmond et al., 2006) might impact confrontation rates and perceived benefits of confronting older adult women compared with men.

## Method

*Participants.* A preregistered, a priori power analysis conducted in G*Power for a 3 × 2 between-subjects ANOVA indicated a desired sample size of 394 to detect a small-medium effect ($d = 0.35$) with 90% power. This effect size reflected the Study 2 condition effect on would participants confront. Anticipating high rates of exclusions, 451 undergraduate participants who did not identify as Black during a pre-screen were recruited. However, 28 were excluded for identifying as Black or Black Multiracial in the survey, and 19 were excluded for failing all instructional attention checks, leaving a final analytic sample of 404 ($M_{age} = 18.82$, $SD = 1.08$, range: 18–27). The sample was predominately women (287 women, 110 men, seven non-binary) and White (273 White, 71 Asian, 42 Latino/Hispanic, 16 Multiracial, one Native American, and one Arab/Middle Eastern).

*Procedure.* Study 3 was nearly identical to Study 2 except for the following changes. First, all participants saw the low prejudice condition (Study 2) with a 42-, 62-, or 82-year-old perpetrator. Participants were randomly assigned to learn whether the perpetrator was John (as in Study 2) or Sarah to manipulate the perpetrator gender, resulting in a 3 (perpetrator age) × 2 (perpetrator gender) between-subjects design. Participants then completed the single-item measures of offense, intent to offend, should confront, and would confront, followed by cost ($\alpha = .83$) and benefits ($\alpha = .70$) of confronting measures (all from previous studies). Next, participants completed the measures of malleability (Studies 1–2; $\alpha = .92$), stereotypes of the perpetrator (see Supplement), and the Study 2 measure of bias awareness ($\alpha = .64$). After completing individual difference measures (reported in Supplement) and demographics, participants completed a final check on perpetrator age and gender before being debriefed.

## Results

Analyses were conducted as 2 × 3 between-subjects ANCOVA controlling for participant age. LSD post hoc tests were employed to examine significant main effects. Descriptive statistics by perpetrator age are reported in Table 6, and ANCOVA results are reported in Table 7.[5]

*Offensive.* The ANCOVA for how offensive the behavior was revealed only a main effect of perpetrator age. Participants rated the 82-year-old as less offensive than the 62-year-old, $p = .003$, $d = 0.35$, and the 42-year-old, $p = .006$, $d = 0.35$. The 42- and 62-year-old did not significantly differ, $p = .832$, $d = 0.02$.

The ANCOVA for intent to offend revealed only a main effect of perpetrator age. Participants rated the 82-year-old as less intentionally offending than the 62-year-old, $p = .036$, $d = 0.25$, and 42-year-old, $p < .001$, $d = 0.49$. The 42- and 62-year-old did not significantly differ, $p = .079$, $d = 0.22$.

*Confrontation.* There were main effects of perpetrator age and perpetrator gender, and no significant interaction for if participants *would* confront. Participants indicated they would be less likely to confront the 82-year-old than the 62-year-old, $p = .031$, $d = 0.28$, and 42-year-old, $p = .009$, $d = 0.34$. The 42- and 62-year-old did not significantly differ, $p = .726$, $d = 0.04$. Participants indicated they would be more likely to confront the woman ($M = 2.85$, standard error [*SE*] = 0.09) than the man ($M = 2.51$, $SE = 0.10$). Perpetrator age and gender did not affect beliefs that the perpetrator *should* be confronted.

**Table 7.** Study 3 ANCOVA Result Controlling for Participant Age.

| | Perpetrator age Main effect | | | Perpetrator gender Main effect | | | Interaction | | |
|---|---|---|---|---|---|---|---|---|---|
| Outcome | *F*(2, 397) | *p* | *d* | *F*(1, 397) | *p* | *d* | *F*(2, 397) | *P* | *d* |
| Offensive | 5.54 | .004 | 0.33 | 0.09 | .765 | 0.05 | 0.55 | .576 | 0.11 |
| Intend to offend | 7.53 | <.001 | 0.39 | 0.06 | . 801 | 0.04 | 0.44 | .645 | 0.09 |
| Should confront | 2.41 | .090 | 0.22 | 2.12 | .146 | 0.15 | 0.30 | .744 | 0.06 |
| Would confront | 4.10 | .017 | 0.29 | 6.14 | .014 | 0.25 | 1.02 | .363 | 0.14 |
| Costs | 2.12 | .121 | 0.20 | 9.26 | .002 | 0.31 | 0.64 | .527 | 0.20 |
| Benefits | 2.93 | .055 | 0.25 | 1.35 | .344 | 0.09 | 0.99 | .371 | 0.14 |
| Malleable | 5.11 | .006 | 0.32 | 1.14 | .286 | 0.11 | 0.76 | .467 | 0.13 |
| Bias awareness | 4.57 | .011 | 0.30 | 0.63 | .429 | 0.09 | 1.55 | .213 | 0.18 |

*Note.* When not controlling for participant age, the only significant change in findings is a significant main effect of perpetrator age on benefits to confront, $p = .049$. ANCOVA = analysis of covariance.

*Costs and Benefits of Confronting.* For costs of confronting, there was only a main effect of perpetrator gender. Participants reported greater costs to confront the man ($M = 3.29$, $SE = 0.10$) than the woman ($M = 2.86$, $SE = 0.10$).

For benefits of confronting, there was a marginal main effect of perpetrator age. Given the centrality of this measure to our broader hypotheses, post hoc tests were conducted. Participants perceived fewer benefits to confronting the 82-year-old compared with the 62-year-old, $p = .022$, $d = 0.30$, but not the 42-year-old, $p = .074$, $d = 0.22$. There was no significant difference between the 42- and 62-year-olds, $p = .618$, $d = 0.07$.

*Malleable.* The ANCOVA revealed only a main effect of perpetrator age. Participants rated the 82-year-old as less malleable than the 62-year-old, $p = .004$, $d = 0.35$, and 42-year-old, $p = .008$, $d = 0.31$. The 42- and 62-year-old did not significantly differ, $p = .843$, $d = 0.09$.

*Bias Awareness.* The ANCOVA revealed only a main effect of perpetrator age. Participants perceived the 82-year-old as less aware of bias norms than the 62-year-old, $p = .007$, $d = 0.28$, and 42-year-old, $p = .012$, $d = 0.32$. The 42- and 62-year-olds did not differ, $p = .876$, $d = 0.03$.

*Mediation.* The preregistration only included perpetrator malleability and bias awareness as first-order mediators. However, keeping in line with Study 2, a path model was conducted controlling for perpetrator gender and participant age with malleability, bias awareness, and intend to offend included. The model demonstrated good fit, $\chi^2(2) = 0.30$, $p = .862$, CFI = 1.00, RMSEA = 0.01, SRMR = 0.003 (Figure 3). Perpetrator malleability, bias awareness, and intend to offend all mediated the effects of the perpetrator on benefits to confronting, such that the 82-year-old was seen as less malleable, less aware of bias, and less intentionally causing offense compared with the 62- and 42-year-old, which all contributed to fewer perceived benefits and less confronting intentions for the 82-year-old relative to the 62- and 42-year-olds. Thus, counter to Study 2 and its hypotheses, greater awareness of bias was associated with *greater* benefits to confronting. Thus, in Study 3, intention to offend and awareness of bias impacted confrontation benefits in similar ways, were significantly, positively correlated with each other (see Supplement), and each contributed unique variance predicting confronting benefits.

### *Discussion*

Replicating Study 2 and in line with hypotheses, the 82-year-old was seen as significantly less malleable, leading to fewer perceived benefits of confronting and lower likelihood that participants would confront compared with the 62- and 42-year-olds. Furthermore, the 82-year-old was rated as less aware of bias, but unlike in Study 2, lower awareness of bias was associated with fewer perceived confrontation benefits. Instead, the 82-year-old was seen as less intentionally causing offense and less aware of bias, which was both *positively* related to the benefits of confronting. This is an unexpected flip in the relationship between bias awareness and confronting benefits from Study 2 that should be explored further in future research. Notably, perpetrator gender only impacted confrontation intentions and perceived costs, with participants indicating greater intent and fewer costs to confront the woman than the man.

## Study 4

Given the reversal of the effect of awareness of bias on confrontation (Studies 2–3) and findings of null versus significant effects of intent to offend (Studies 1–3), perpetrator malleability was our sole focus in Study 4 as it was the only consistent mechanism predicting changes in prejudice confrontation intentions by perpetrator age across studies. In addition, Studies 1 to 3 employed the same vignette across all studies. While this afforded the opportunity to

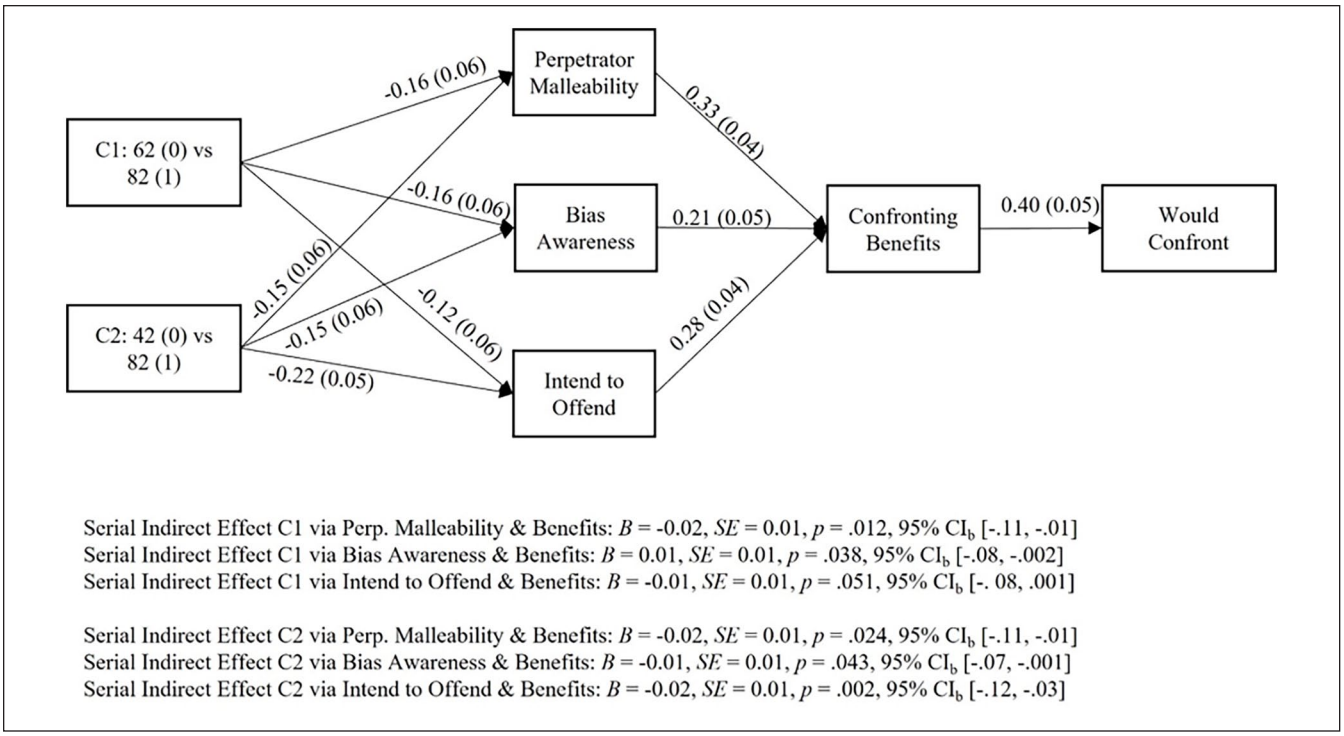


**Figure 3.** Study 3 Mediation Model Examining Effect of Perpetrator Age on If Participants Would Confront.
*Note.* Standardized model results are presented. Model controlled for perpetrator gender.

demonstrate replication and examine potential moderators (participant age, prejudice level, perpetrator gender) in a systematic way, this limited the generalizability of the findings. Thus, Study 4 employed a new scenario. This study was preregistered: https://osf.io/sg93a.

## Method

*Participants.* An a priori power analysis for a three-cell between-subjects design indicated a desired sample size of 432 to detect with 80% power a small-medium effect ($d$ = 0.29) based on the Study 4 perpetrator age condition main effect on confrontation. A data collection stop point was set at 440 U.S. participants recruited via Prolific who did not identify as Black. Ultimately, eight were excluded for failing manipulation check questions on the perpetrator's age (four 82-year-old, three 62-year-old, three 42-year-old) leaving an analytic sample of 432 ($M_{age}$ = 35.93, $SD$ = 12.59, range: 18–75). The sample was predominately White (321 White, 52 Asian American, 39 Latinx, 16 multiracial, and four Native American) and relatively gender-balanced (219 men, 205 women, seven nonbinary, and one other identity).

*Procedure.* After consenting, participants were presented with a scenario that described the target character, John, leaving a check-out line at a grocery store when a Black cashier took over, and moving to a longer check-out line (full scenario presented in Supplement). Participants were randomly assigned to read that John was a 42-, 62-, or 82-year-old White man. After reading the scenario, participants completed an open-ended question asking why they believed John changed lines, followed by the Study 1 to 3 measures of offensiveness, would participants confront, perceived costs ($\alpha$ = .81) and benefits ($\alpha$ = .92) to confronting John, and John's malleability ($\alpha$ =.70). After, participants completed a manipulation check on John's age, were debriefed, and compensated.

## Results and Discussion

All analyses were conducted as three-cell ANCOVAs with perpetrator age as a between-subject factor, controlling for participant age. LSD post hoc tests examined significant main effects. Findings do not significantly change when not controlling for participant age. Results and descriptive statistics are presented in Table 8.

*Offensive.* There was no main effect of perpetrator age on perceived offensiveness.

*Confrontation.* The main effect of perpetrator age on if participants would confront was significant. Participants were less likely to confront the 82-year-old compared with the 42-year-old, $p < .001$, $d$ = 0.54, and 62-year-old, $p$ = .034, $d$ = 0.32. Furthermore, the 42- and 62-year-old conditions did not significantly differ, $p$ = .064, $d$ = 0.18.

**Table 8.** ANCOVA results and descriptive statistics by perpetrator age condition, Study 4.

| Outcome | *F*(2,427) | *p* | *d* | 42-year-old, *M* (*SE*) | 62-year-old, *M* (*SE*) | 82-year-old, *M* (*SE*) |
|---|---|---|---|---|---|---|
| Offensive | 1.90 | .151 | 0.19 | 5.50 (0.14)a | 5.41 (0.13)a | 5.14 (0.14)a |
| Would confront | 7.88 | <.001 | 0.39 | 2.86 (0.12)a | 2.54 (0.12)a | 2.17 (0.12)b |
| Costs | 1.14 | .322 | 0.14 | 2.83 (0.12)a | 2.96 (0.12)a | 2.71 (0.12)a |
| Benefits | 3.95 | .020 | 0.27 | 3.34 (0.10)a | 3.16 (0.10)ab | 2.94 (0.10)a |
| Malleable | 7.58 | <.001 | 0.30 | 4.70 (0.13)a | 4.38 (0.12)a | 4.01 (0.13)b |

*Note.* For malleable, *F*(2,426) due to missing data. 82-year-old perp. ($n = 143$), 62-year-old perp. ($n = 143$), 42-year-old perp. ($n = 146$). *SE* = standard error.

*Costs and Benefits.* The main effect of perpetrator age on perceived benefits was significant. Participants perceived greater benefits in the 82- than 42-year-old condition, $p = .005$, $d = 0.38$, but not the 62-year-old conditions, $p = .115$, $d = 0.28$. The 42- and 62-year-old did not significantly differ, $p = .218$, $d = 0.11$. There was no effect of perpetrator age on perceived costs.

*Malleable.* The main effect of perpetrator age was significant. The 82-year-old was rated as significantly less malleable than the 42-year-old, $p < .001$, $d = 0.47$, and 62-year-old, $p = .037$, $d = 0.26$. The 42- and 62-year-old did not significantly differ, $p = .071$, $d = 0.21$.

*Mediation.* A serial mediation analysis was conducted examining the effect of perpetrator age on whether participants confront via perpetrator malleability and perceived benefits to confronting (Figure 4). The indirect effect was significant when contrasting the 82- and 42- year-old conditions and the 82- and 62-year-old conditions. Study 4 therefore replicated findings in a new scenario, demonstrating older adults are perceived as less malleable, leading to fewer perceived benefits of confronting, and less intention to confront.

## General Discussion

Across four experiments, the present research examined how beliefs about perpetrator age may mitigate confrontation intentions of anti-Black racism. Older adults were viewed as less malleable (Studies 1–4) than middle-aged and young adults. Moreover, older adults were rated as less aware of what is considered prejudiced (Studies 2–3), and the same behavior by an older adult was, at times, rated as less offensive and less intentionally offensive, compared with a middle-aged adult (Studies 2–4). Ultimately, participants intended to confront the older adult at lower rates (Studies 1–4) compared with a middle-aged perpetrator (Studies 1–4). These effects were greatest for an 82-year-old compared with a 62-year-old older adult (Studies 2–4) and occurred across two scenarios, regardless of the intensity of the discriminatory behavior (Study 2) and perpetrator gender (Study 3).

These studies provide initial evidence of the role of perpetrator age in discrimination attributions and intention to confront prejudice among non-targets and demonstrate that beliefs about the malleability of older adults may mitigate confrontations. By integrating past research on lay theories of prejudice (Rattan & Dweck, 2010), beliefs about older adults (Neel & Lassetter, 2015), and prejudice confrontation (Czopp et al., 2006), the present research demonstrates the importance of examining perpetrators' identities. Despite being one of the first identity dimensions to be immediately processed when categorizing someone (e.g., George & Hole, 1995; Sidanius & Pratto, 1999), age has often been overlooked as an identity that impacts intergroup relations. By incorporating age into paradigms of prejudice confrontations, the present research affords greater insights into how beliefs about perpetrators impact outcomes of discrimination. By recognizing stereotypical views of older adults as less capable of change, unaware of norms about bias, or less intentionally causing offense, the present findings demonstrate that ageism could be a barrier to combating anti-Black racism. Future research should consider how interventions to mitigate stereotype endorsement of older adults as fixed and less capable of change may increase confrontations of older adult perpetrators (Neel & Lassetter, 2015) and examine how perceptions of other social groups as more or less flexible (i.e., political orientation; Lassetter & Neel, 2019) may similarly impact confrontation intentions.

While the present studies aimed to demonstrate the effect of perpetrator age on prejudice confrontation intentions, Study 1 offers evidence of the role of observer age on prejudice confrontations. Young adults (18- to 29-year-olds) were more likely to report that the perpetrator should be confronted, that they would confront, and that there were more benefits to confronting compared with middle-aged and older adults. These findings may reflect more racial egalitarianism among younger adults, but as young adults only differed from middle-aged adults in ratings of offensiveness, these findings may suggest a generational difference in confrontational norms such that young adults may more strongly support personally speaking out against anti-Black racism. We encourage future research to examine how confronters' age impacts confrontation decisions and outcomes.

In addition, should perpetrators be confronted was only affected by participant age (Study 1) and prejudice level (Study 2; cf. Supplemental Study 1), while *would* participants

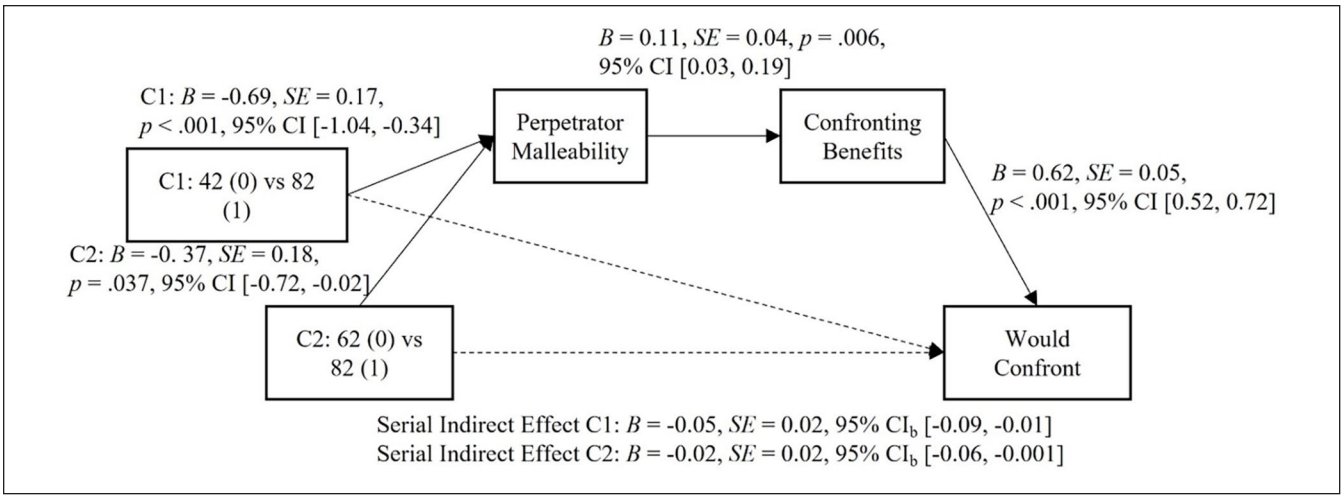


**Figure 4.** Study 4 Serial Mediation Model Examining Effect of Perpetrator Age on If Participants Would Confront.
*Note.* Standardized model results are presented. The model controlled for participant age.

confront was consistently affected by perpetrator age as well as participant age, prejudice level, and perpetrator gender. This inconsistency across confrontation questions assessing intentions versus need to address bias likely reflects whether participants would confront is a product of individual-level assessments regarding perceived benefits of confronting (Good et al., 2012) while need to address bias is not. Future research should continue to assess factors that create disparities between should and would behaviors (Monteith & Mark, 2005) and examine these outcomes in actual confrontation, rather than hypothetical scenarios. Indeed, people may be more likely to say they would confront than to confront in person (Woodzicka & LaFrance, 2001).

Furthermore, views that older adults need to step aside to free up opportunities for younger generations are greater among people who endorse egalitarianism and favorable attitudes toward Black Americans (Martin & North, 2021). Thus, in scenarios of older adults perpetrating against Black Americans in the workplace or in contexts of growing industrialization, people may confront older adult perpetrators at higher rates, especially if they view older adults as blocking opportunities (succession-based ageism; Martin & North, 2021). While the present studies found no effect of hostile or benevolent ageism on confrontation intentions or ratings of offensiveness (see Supplement), the context was not related to blocking opportunities and succession beliefs were not assessed. We encourage future research to examine when succession-based ageism may actually act to *increase* confrontations of bias espoused by older adults. Furthermore, in future research examining the role of ageist beliefs on prejudice confrontations and attributions to discrimination, it will be critical to recognize age differences in expressions of prejudice (Firebaugh & Davis, 1988) and that difficulty inhibiting stereotype use among older adults (Radvansky et al., 2010) may contribute to these differences. Recognition of these age differences may further shift confrontation intentions and afford an important area of future research.

The present studies were not without limitations. While Studies 1 to 3 utilized the same instance of discrimination: someone moving away from a Black family on a bus, Study 4 employed a new scenario involving someone inconveniencing themselves by selecting a longer checkout line to avoid a Black cashier. Furthermore, Study 2 introduced a factor of prejudice level by adding a verbal statement of discrimination. The primary interpersonal discrimination scenario (Studies 1–3) was selected from past research (Brown et al., 2021) as it offered an ambiguous situation that affords variability in confrontation responses based on beliefs about the perpetrator. We encourage future research to examine the effects of age in alternative scenarios of not only anti-Black discrimination, but also other forms of discrimination.

Finally, the present research examined *only* nontargets (i.e., did not recruit Black participants). While this mitigated effects of participants' identity, future research should explore whether perpetrator age similarly impacts the confrontation intentions of targets. Targets may not demonstrate the same pattern of effects because beliefs about combating anti-Black discrimination may override beliefs about the perpetrator, although the effects of Study 2's high-prejudice condition suggest the powerful impact of perpetrator age on confrontation intentions. Nevertheless, exploring when beliefs about perpetrators, including beliefs that may mitigate perceived benefits (i.e., malleability) or increase perceived costs (i.e., likely to aggress back), should be explored with target confronters.

## Conclusion

Across four studies, we demonstrate that beliefs older adults are less capable of change impede confrontations of

anti-Black prejudice committed by older adults. These effects were greatest among more prototypical older adults (82-year-old) and among young adult perceivers and occurred regardless of the intensity of prejudice and gender of the perpetrator. By integrating research on lay theories of prejudice and prejudice confrontations, the present studies demonstrate that ageist beliefs about older adults as fixed may stand as a barrier to educating older adults when they discriminate against members of marginalized groups.

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## Supplemental Material

Supplemental material is available online with this article.

## Notes

1. Respect and perceived societal influence were also explored as alternative mechanisms that may mitigate confrontations of older adult perpetrators. Hypotheses and findings are presented in the Supplement.
2. At the end of the survey, participants completed several individual difference measures regarding attitudes toward older adults and Black Americans (ambivalent ageism measure; Cary et al., 2017; Social Dominance Orientation; Ho et al., 2015; feeling thermometer attitude measures toward older adults and Black Americans; measure of perceived awareness of bias and norms among older adults; egalitarian motivations). These measures were included in Studies 1 to 3 and exploratory moderations are reported in the Supplement as are analyses of the open-ended response and a Study 1 measure of generational respect and influence.
3. The decision was made a priori to examine participant age categorically by age cohorts. Analyses examining participant age as a continuous factor are presented in the Supplement.
4. Exploratory moderation analyses were conducted examining if individual difference variables (attitudes toward Black Americans, egalitarian motivations) moderated the effect of perpetrator age on perceived offensiveness and if attitudes toward older adults moderated the effect of perpetrator age on perceived perpetrator malleability, all reported in the Supplement. In addition, participant age did not moderate the serial mediation on either the a or the b path.
5. Participant age was not included as a covariate in the preregistered plans but was included in the main manuscript upon further consideration. Analyses without the covariate are reported in the Supplement.

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