

A Matter of Time? Temporal Framing, Race, and the Perception of Anti-Black and Anti-White Discrimination

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Abstract

When asked to rate anti-Black and anti-White discrimination across six decades (the 50s – 00s), research suggests that Whites (but not Blacks) see discrimination as a zero-sum game that they have been losing since the 2000s (Norton & Sommers, 2011). However, data from other work suggests that White people do not believe Whites are discriminated against more than Blacks when rating perceived discrimination occurring today and in the future (Craig & Richeson, 2017). To investigate these discrepant findings, across two studies I examined how temporal framing, race, and other factors influence perceptions of anti-White and anti-Black discrimination. In Study 1 I found that temporal framing did not affect perceptions of discrimination. Also, although mean scores converge, Whites perceived more anti-Black than anti-White discrimination occurring today. Blacks also perceived higher levels of anti-Black than anti-White discrimination today, but to a greater extent than Whites. In Study 2 I found that the domain in which discrimination is considered (e.g., education and employment, criminal justice) affects Whites' perceptions of anti-Black and anti-White discrimination today, with greater perception of rising anti-White and declining anti-Black discrimination in the education and employment domain. However, across both studies, only White Republicans (and in Study 2, Whites endorsing system-legitimizing beliefs) reported that Whites are discriminated against more than Blacks. These findings provide a better understanding of who is likely to perceive that Whites as a group face more discrimination than Blacks, and when these perceptions are likely to occur.

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Introduction

Prejudice is defined as “a negative evaluation of a social group or a negative evaluation of an individual that is significantly based on the individual’s group membership” (Crandall & Eshleman, 2003, p. 414). This definition makes it clear that prejudice does not depend on any level of truth on which it is founded, and that any individual, regardless of group membership, can be prejudiced against any group and its members. This means that prejudice is not held or expressed by one particular group to another: Anybody from any group can be prejudiced, and express this prejudice, to any other group. Discrimination is typically conceptualized as biased behavior, “which includes not only actions that directly harm or disadvantage another group, but those that unfairly favor one’s own group (creating a relative disadvantage for other groups)” (Dovidio, Hewstone, Glick, & Esses, 2010, p. 4). By this definition as well, anybody can discriminate against outgroup members, regardless of their own group membership.

However, people seem more likely to label events as discriminatory when certain groups behave negatively toward other groups. There seems to be a stereotype of what constitutes discrimination. Commonly referred to as the “prototype of discrimination,” researchers have found that people are more likely to make attributions to discrimination when high-status group members (e.g., men) behave negatively toward low-status group members (e.g., women; Inman & Baron, 1996; Rodin, Price, Bryson, & Sanchez, 1990). In the context of racial discrimination, this means that people are more likely to see a White person targeting a racial minority as discriminatory than when the roles are reversed. Similarly, intragroup behaviors are not seen as discriminatory (Inman & Baron, 1996; Rodin et al., 1990). Since these initial studies, others have confirmed that people adhere to this prototype of discrimination (e.g., Avery, McKay, & Wilson,

2008; Brown, 2006; Flournoy, Prentice-Dunn, & Klinger, 2002; Mills & Gaia, 2012; Morera, Dupont, Leyens, & Desert, 2004).

Yet this prototype perspective appears to be at odds with recent findings by Norton and Sommers (2011). When asked to rate the extent to which they think that Blacks and Whites experienced discrimination in the United States from the 1950s to the 2000s, Whites indicated that their group began facing more discrimination than Blacks beginning in the 2000s. This suggests that Whites no longer adhere to the traditional prototype of discrimination; they see more discrimination directed at Whites than at Blacks. They also see racism as a zero-sum relationship, as anti-Black discrimination falls, anti-White discrimination rises.

These two lines of research are characterized by different methodologies. In research on the prototype of discrimination, participants read vignettes depicting behavioral interactions, and attributions to discrimination are rated or coded in open-ended responses. Norton and Sommers (2011) asked respondents about discrimination experienced by Blacks and Whites in the abstract. While this difference in methodologies is important in how I interpret the results, one should also consider that other researchers have found that Whites make similar attributions to discrimination, regardless of race of the actor and target (Simon, Kinias, O'Brien, Major, & Bivolaru, 2013). At the very least, these data challenge the idea that White Americans' prototype of discrimination is that Whites discriminate against Black individuals.

Why might Whites not adhere to the traditional prototype of discrimination?

White Americans' tendency to deny racial privilege may be related to perceiving themselves as discriminated against more than Blacks. Pointing out White privilege is threatening to meritocratic beliefs and to group-based morality; denying that one has racial privilege is one of the strategies Whites use to dispel those threats (Knowles, Lowery, Chow, &

Unzueta, 2014). Whites are motivated to deny racial privilege in order to sustain perceptions of themselves as deserving to be in positions of power that they hold (Knowles & Lowery, 2012; Lowery, Knowles, & Unzueta, 2007; Phillips & Lowery, 2018). In fact, when faced with threats to meritocracy, Whites are likely to respond with claims of personal hardship that they have faced (Phillips & Lowery, 2015). These claims allow Whites to maintain that they not only worked hard for their status, but that they achieved success *despite* experiencing potential setbacks. The reluctance to admit racial privilege likely serves as a way to deny racial inequities, reducing belief in the “White on Black” prototype of discrimination, and reducing support for racial equity-related policies and programs.

Researchers have found that White Americans are less supportive of policies that benefit racial minorities and other marginalized groups than minority group members themselves, and this lack of support is related to perceiving these policies as “reverse discrimination” (Fenelon & Brod, 2000; Harrison, Kravitz, Mayer, Leslie, & Lev-Arey, 2006). Negative perceptions of affirmative action policies are sometimes due to the belief that these include the use of racial quotas. Believing in quotas actually protects White men’s self-esteem, and White women’s self-image when women do not believe they are beneficiaries of these policies (Unzueta, Gutiérrez, & Ghavami, 2010; Unzueta, Lowery, & Knowles, 2008). Believing in quotas affords White men and women (who do not see themselves as benefiting from affirmative action) the ability to point to a policy as a reason why they were not selected for a position or promotion. Likewise, White men and women’s perception of the self should be bolstered when they are selected for a position or promotion when they believe institutions use quotas because they were chosen *despite* a quota system. Even though affirmative action policy implementation has not increased in recent years,

it may be that the salience of these policies increases Whites' sense of disadvantage to their group.

These feelings about affirmative action may contribute to a sense that racial minorities are making progress. A recent study found that Whites who endorse status-legitimizing beliefs (SLB; beliefs that the current status hierarchy in the United States is legitimate) perceive greater levels of *anti-White* discrimination when progress by racial minorities is made salient (Wilkins & Kaiser, 2014). Whites who endorse SLB see racial progress among minorities as due to preferential treatment, thus increasing anti-White discrimination claims. While the idea of Whites seeing racial progress as threatening is not completely new (e.g., Kluegel & Smith, 1982), policies such as affirmative action and changing demographics that heighten racial threat (Craig & Richeson, 2014, 2017) may explain why Whites see themselves as experiencing more discrimination than Blacks today.

Differences Between Blacks and Whites' Perceptions of Discrimination

It is important to note that only Whites appear to be changing their perceptions of who is the typical target of discrimination. In Norton and Sommers (2011) study, Whites' perceptions of anti-Black and anti-White discrimination converged over time (then diverged to the point that they saw Whites as discriminated against more than Blacks today). But Blacks' perceptions of anti-Black and anti-White discrimination stayed high and low, respectively, from the 1950s to the present. Other research has shown that perceptions of discrimination tend to vary depending on racial group membership (Carter & Murphy, 2015; Inman & Baron, 1996). Familiarity with discrimination, whether through personal experience (Crocker & Major, 1989; Pinel, 1999) or historical knowledge (Nelson, Adams, & Salter, 2013), leads people to perceive discrimination more than those who are less familiar with racial inequities. Because Blacks are more familiar

with discrimination, they may be more sensitive to and more likely than Whites to spot instances of racial injustice. Whites may also be less likely to perceive behaviors as discriminatory because they tend to have higher thresholds for perceiving discrimination (Barrett & Swim, 1998).

Whites are less likely to view ambiguous, subtle, as well structural forms of racism as discriminatory (Dovidio, Gaertner, Kawakami, & Hodson, 2002; Salvatore & Shelton, 2007; Sommers & Norton, 2006). The discrepancy between Whites' and Blacks' perceptions of discrimination may be based in group-protective motivational forces (e.g., denial of discrimination and privilege to protect White identity) as well as knowledge differences, that contribute to Whites using stricter inclusion criterion for what constitutes racism.

The Present Research

Norton and Sommers' (2011) findings with White participants may also have been an artifact of historical priming (i.e. asking to report perceived experienced discrimination for Blacks and Whites by decade from the 1950s to the 2000s). It is possible, even likely, that compared to the 1950s, Whites see anti-Black discrimination as decreasing and anti-White discrimination as increasing: The comparative time frame itself may have enhanced the likelihood of greater perceived anti-White discrimination. Data by Craig and Richeson (2017) support the idea that if discrimination questions are asked from an ahistorical perspective, Whites *do not* report experiencing more discrimination than Blacks today: Across four studies, Craig and Richeson (2017) found that Whites perceived more anti-Black than anti-White discrimination today and in the future.

One purpose of the current line of research is to directly investigate whether asking Whites to report perceptions of anti-Black and anti-White discrimination from a historical perspective (compared to an ahistorical perspective) causes them to report more anti-White than

anti-Black discrimination in the United States today. I operationalize the historical perspective as the paradigm used by Norton and Sommers (2011). That is, participants are asked to report the extent to which they perceive that Blacks and Whites experience(d) discrimination over the decades from the 1950s to the 2000s with the added time points of the 2010s, “today” and “in the future”. This research also explores whether the *domain* of discrimination being considered affects perceptions of anti-Black and anti-White discrimination. Similar to how different types of behavior (e.g., ambiguous vs. overt) result in different perceptions of discrimination (e.g., Sommers & Norton, 2006), I propose that the social context in which discrimination is considered (e.g., interpersonal interactions vs. employment related decisions) will affect how people perceive discrimination.

Study 1

Hypotheses

In Study 1, White and Black participants were asked to rate perceptions of anti-Black and anti-White discrimination from either a historical (decade by decade) or ahistorical (today and in the future) perspective. I hypothesize that Black participants will perceive higher levels of anti-Black discrimination and lower levels of anti-White discrimination than White participants, and that White participants, more than Black participants, will perceived that levels of anti-Black and anti-White discrimination are converging with time. I also predict that White participants in the “historical” condition, compared to those in the “ahistorical” condition (think of discrimination today) will perceive Whites as discriminated against more than Blacks today.

Method

Participants. Participants were recruited via Mechanical Turk Prime Panels, a service that recruits participants via various online survey platforms (e.g., Crowdfunder, Survey

Monkey), and allows for selective recruitment based on demographics. An email was sent to people who matched the desired demographics (Black and White Americans), and they chose whether or not to participate in the study. Three hundred sixty-three people were recruited through this method (183 Whites, 180 Blacks; 178 men, 184 women, 1 transgendered woman). The mean age was 44.75 years, with a standard deviation of 16.46 years. A summary of participant demographics by race appears in Table 1.

Design and Procedure. The study was a 2 (participant race: White/Black) x 2 (target race: White/Black) x 2 (perspective: historical/ahistorical) mixed design. Participant race and perspective were between-subjects factors, and target race was a within-subjects factor. The historical condition was modeled after procedures used by Norton and Sommers (2011). Participants in this condition were asked to indicate “*how much you think Whites (Blacks) were/are the victims of discrimination in the United States in each of the following decades.*” Seven decades were presented to participants; the 1950s through the 2010s. Participants then were asked to indicate how much they believed “Whites (Blacks) are the victims of discrimination in the United States today,” and in the future (“in the next few decades”). A 1 (*Not at All*) to 10 (*Very Much*) scale was used to measure perceived discrimination. Participants were also asked to indicate (via open response) “specific kinds, forms, or examples of discrimination Whites (Blacks) faced because of their race” for each decade. I counterbalanced the order in which participants judged perceived anti-Black and anti-White discrimination.

Participants in the ahistorical condition only answered the “today” and “future” perceived discrimination questions, again with target race presented in counterbalanced order. They also provided open-ended responses of examples of discrimination against each racial group.

After offering open-ended responses, participants in both conditions indicated “*how much you have personally been discriminated against because of your race,*” using the same 1-10 rating scale,¹ and were asked to offer free-response examples of discrimination they themselves face because of their race. Demographic information, including gender, race, age, and political party affiliation, was collected at the end of the experiment.

Results

Perceived discrimination across the decades. I first focus on participants in the historical condition, which reflects a replication of Norton and Sommers’ (2011) design. Perceived discrimination faced by Blacks and Whites across 9 time points (1950s, 1960s, 1970s, 1980s, 1990s, 2000s, 2010s, “today,” and in the future²) were submitted to a Participant Race (Black, White) by Target Race (Black, White) X Order (Black discrimination rated first, White discrimination rated first) X Decade (9 levels) mixed design, repeated measures ANOVA. Participant race and order were between-subjects factors; target race and decade were within-subjects.

ANOVA results are summarized in Table 2, and means by participant race, target race, and decade are presented in Figure 1, separately for each order. The four-way interaction was significant, along with several main effects and a number of 2- and 3-way interactions.

¹ I do not report the personal discrimination results in detail below, but Black participants ($M = 5.82, SD = 2.80$) reported more personal experience of race discrimination than White participants ($M = 3.06, SD = 2.34, F(1,367) = 107.20, p < .0001$), and those in the ahistorical condition ($M = 4.72, SD = 2.99$) reported more personal discrimination than those in the historical condition ($M = 4.22, SD = 2.84, F(1,367) = 4.07, p = .0443$). No effects of order and no interactions were significant. Consistent with past literature (Crosby, 1984; Taylor, Wright, Moghaddam & Lalonde, 1990), both Blacks and Whites showed evidence of the personal-group discrimination discrepancy (reporting more discrimination directed at one’s racial ingroup than against oneself personally), but the discrepancy was larger for Black participants, all $ps < .0001$.

² Norton and Sommers (2011) did not include a “future” rating, but we did so in this study and include it in the analyses. The repeated measures ANOVA results are very similar when “future” discrimination is excluded.

Several findings are visible in Figure 1: Perceived discrimination faced by Blacks generally fell across the decades whereas perceived discrimination faced by Whites generally increased, but this pattern was mainly true among Whites. Consistent with Norton and Sommers (2011), there was evidence that Whites viewed discrimination in zero-sum terms, but they did *not* perceive that Whites face significantly more discrimination than Blacks today, or that they will face more discrimination in the future (the single reversal in the W-B condition for “future” estimates was nonsignificant, $p = .2135$). Black participants perceived that Blacks face more discrimination than Whites across every decade and in both orders, $ps < .0001$. Among Whites, Blacks were perceived to face significantly more discrimination than Whites for the first six decades (from 1950 – 2000), regardless of order ($ps < .05$). But in 2010, today, and in the future, this difference was nonsignificant ($ps > .21$), with the exception of the “today” judgments by White participants in the Black-White order ($p = .0127$).

Furthermore, Black and White participants generally differed in their perceptions of discrimination faced by Blacks and Whites. Black participants perceived significantly more anti-Black discrimination than did Whites at all time points ($ps < .01$), with the exception of the 1950s when this difference was marginally significant ($p = .06$). Whites perceived more anti-White discrimination than Blacks from the 1980s forward (all $ps < .02$).

The order of administration seemed to have two influences: 1) Participants (both Black and White) who rated White discrimination first perceived higher levels of anti-Black discrimination from decade 2 (1960s) to decade 6 (2000s), main effect of order $ps < .04$; and 2) White participants who rated White discrimination first perceived more anti-White discrimination from decade 6 (2000s) into the future, Race X Order $ps < .04$. In other words, considering White discrimination first led White participants to show a steeper increase in

perceptions of White discrimination over time, and led all participants to increase their ratings of anti-Black discrimination (presumably because anti-White discrimination judgments anchored the rating scale).

Formal decomposition of the 4-way interaction indicated that the Participant Race X Order X Decade interaction was significant for judgments of anti-White discrimination, $F(8,1432) = 7.90, p < .0001$, but not for judgments of anti-Black discrimination, $F(8,1432) = 0.41, p = .9178$ (instead the order, race, and decade main effects were significant, $ps < .015$, as was the Participant Race X Decade interaction, $F(8,1432) = 26.09, p < .0001$). Additionally, among White participants, the Order X Target Race X Decade interaction was significant, $F(8,680) = 5.44, p < .0001$, but among Black participants, it was not, $F(8,752) = 1.24, p = .2702$ (of course the main effects of target race, decade, and the interaction between target race and decade were significant for Black participants, $ps < .0001$).

Effects of historical perspective on perceived discrimination today and in the future.

To address whether taking a historical perspective on discrimination influenced perceptions of discrimination today, I submitted perceived anti-White and anti-Black discrimination *today* as repeated measures in a Perspective (historical/ahistorical) X Participant Race X Order (W-B, B-W) X Target Race ANOVA, with target race as the repeated factor. There was a main effect of perspective, $F(1,367) = 11.91, p = .0006$, but no interactions involving this factor, $ps > .203$. Perceptions of discrimination were higher in the ahistorical condition ($M_{anti-Black} = 7.57, SD_{anti-Black} = 2.48; M_{anti-White} = 4.11, SD_{anti-White} = 2.64$) than in the historical condition condition ($M_{anti-Black} = 7.09, SD_{anti-Black} = 2.74; M_{anti-White} = 3.46, SD_{anti-White} = 2.87$), but participants perceived more anti-Black than anti-White discrimination in each perspective condition ($ps < .0001$). The Participant Race X Target Race interaction was significant, $F(1,367) = 145.97, p < .0001$, and is

depicted in Figure 2 (Panel A). Black and White participants both perceived more anti-Black than anti-White discrimination today ($ps < .0001$), but the difference was larger among Black participants. The participant race effect also held for both anti-Black and anti-White discrimination (anti-Black discrimination was rated more prevalent by Black than White participants; anti-White discrimination was rated more prevalent by White than Black participants, $ps < .0001$), but this participant race difference was larger in the case of anti-Black discrimination perceptions. Order emerged as a significant main effect and in interaction with participant race (White participants were more affected by order than Black participants, giving higher ratings overall in the W-B order, $F(1,367) = 6.99, p = .0085$), but the interaction with target race was not significant, $p = .083$. No three-way interactions were significant, nor was the 4-way interaction, $ps > .20$.

Very similar results emerged when I considered perceived discrimination faced by Blacks and Whites in the future. The ahistorical perspective generally increased discrimination perceptions overall, relative to the historical perspective, $p = .0005$, but did not modify the significant the Participant Race X Target Race interaction, $F(1,367) = 167.39, p < .0001$ (see Figure 2, Panel B). In the case of future predictions, White participants believed Whites and Blacks would face equal levels of discrimination ($p = .5083$) whereas Black participants continued to expect higher levels of anti-Black than anti-White discrimination, $ps < .0001$. The participant race effect was significant for perceptions of both anti-Black and anti-White future discrimination ($ps < .0001$), but the race effect was larger in the case of anti-Black discrimination perceptions.

Does any group of Whites show the Norton and Sommers (2011) cross-over effect?

Although I did not find that Whites see themselves as more discriminated against than Blacks in

recent years, I was interested in whether the Norton and Sommers' (2011) cross-over effect occurred for particular subgroups of Whites. In particular, I examined how political party affiliation affected Whites' perceptions of anti-White and anti-Black discrimination. Participants had been asked to indicate their political party affiliation. Among White participants, 67 (36.61%) identified as Republicans, 59 (32.24% as Democrats), and 50 (27.32 %) as Independents.³ I conducted a Political Party (Republican, Democrat, Independent) X Time (Today, Future) X Target Race X Condition mixed design, repeated measures ANOVA, with party and condition as between-subjects factors. There was a significant Target Race X Political Party interaction (see Figure 3) such that Republicans perceived: higher anti-White discrimination ($M_{today} = 5.48, SD = 2.94; M_{future} = 5.96, SD = 3.09$) than Democrats ($M_{today} = 3.90, SD = 2.27; M_{future} = 4.03, SD = 2.44$) and Independents ($M_{today} = 4.60, SD = 2.66; M_{future} = 5.38, SD = 2.83$) and less anti-Black discrimination ($M_{today} = 5.00, SD = 2.51; M_{future} = 4.57, SD = 2.32$) than Democrats ($M_{today} = 6.84, SD = 2.26; M_{future} = 6.12, SD = 2.39$) and Independents ($M_{today} = 6.00, SD = 2.60; M_{future} = 5.34, SD = 2.72$). Republicans perceived higher levels of anti-White than anti-Black discrimination at both time points, though this difference was only significant for expected discrimination in the future ($p < .01$). Democrats perceived higher levels of anti-Black than anti-White discrimination at both time points ($ps < .001$). Independents perceived higher levels of anti-Black than anti-White discrimination today ($p = .019$), but did not expect a difference between discrimination against the two groups in the future ($p = .948$). The four-way interaction was non-significant, nor were all three-way interactions ($ps > .05$). In short, Republicans showed the Norton and Sommers (2011) cross-over effect (more perceived anti-White than anti-Black discrimination), particularly in the future.

³ An additional 7 (3.83%) identified as "Other", but this number was too low to be included in the analysis.

Another look at the zero-sum relationship between perceived anti-Black and anti-White discrimination: Correlational data. One way to operationalize a zero-sum relationship is by examining correlations; a zero-sum relationship between perceived anti-Black and perceived anti-White discrimination should produce a negative correlation. When examining these correlations within each racial group of respondents, and by condition and decade (see Table 3), several interesting patterns emerge. For White participants in the historical condition, there was a significant or marginally significant negative correlation between perceived anti-White and anti-Black discrimination for all time points except the 1950s. For Black participants in the historical condition, there was a significant negative correlation between perceived anti-White and anti-Black discrimination from the 1950s to the 1990s, but the correlations became non-significant beginning in the 2000s. These patterns support the claim that Whites see discrimination today and in the future as a zero-sum game whereas Blacks do not (though Blacks perceived a zero-sum relationship in earlier decades). Interestingly, however, when examining White and Black participants in the ahistorical condition the opposite was true. There was no relationship between perceived anti-White and anti-Black discrimination either today or in the future for Whites, but the correlations were negative for Blacks. Although the historical versus ahistorical manipulation did not affect Whites' and Blacks' mean level perceptions of discrimination, the ahistorical perspective reduced the zero-sum nature of Whites' perceptions but increased the zero-sum nature of Blacks' perceptions of discrimination today and in the future.

Open-ended descriptions of discrimination. I examined the open-ended descriptions of discrimination at each time point (minus the future time points) by coding word frequencies by target and participant race. I also examined reports of personal discrimination people faced

because of their race. Synonyms and related words were combined to create categories (e.g., jobs, work, workplace, hiring, and employment were labeled as one “employment” category). It should be noted that the coding was not extensive; every word was not coded into a category. Categories were only created for words and synonyms that appeared frequently and at noticeably high rates (e.g., police, jobs, education).

Across participant race, target race, and decade, there were several forms of discrimination that were consistently mentioned: “none” (indicating participants did not believe the target group experienced discrimination at this time point), “education” (e.g., schooling, college admissions), and “employment” (e.g., hiring decisions, pay rates, workplace discrimination). Figures 4 – 6 summarize the frequencies with which Black and White participants used words related to these categories to describe forms of discrimination experienced by Blacks and Whites across time.

Generally, for White participants, mentions of education- and employment- related words decreased over time when describing discrimination faced by Blacks, but increased over time when describing discrimination faced by Whites (see Figures 5 and 6). Black participants also consistently used words related to these categories when describing how Blacks are discriminated against. Most Black participants did not believe Whites experienced any forms of discrimination at most time points (see Figure 4), but when they did, it was typically in the form of education or employment (Figures 5 and 6). The frequency with which White participants described Whites as *not* experiencing discrimination decreased over time, but these frequencies increased when describing how Blacks are discriminated against (see Figure 4). This trend is consistent with White participants’ ratings of discrimination over the decades (see Figure 1). Education and employment were the two biggest categories of discrimination Whites experience

(behind none), with words related to these categories becoming more frequently mentioned in recent decades.

The only other category of words I noted were those relevant to criminal justice (e.g., policing, incarceration rates, sentence length). This was typically reserved for describing anti-Black discrimination for both White and Black participants. Generally, criminal justice was one of the most frequently mentioned categories for anti-Black discrimination among both Black and White participants across each decade (frequencies ranged from 6 – 49).

Black participants describing personally experienced discrimination. The top form of discrimination Black participants reported experiencing personally involved employment-related words (frequency = 53). This was followed by not experiencing discrimination at all (frequency = 31). Other notable forms of discrimination Black participants described experiencing were related to criminal justice (e.g., interactions with police), as well as interpersonal interactions (e.g., being followed in stores).

White participants describing personally experienced discrimination. The top form of discrimination White participants reported experiencing personally was “none” (frequency = 87). This was followed by mentions of employment (frequency = 36). Other notable forms of discrimination White participants described experiencing were related to being stereotyped (e.g., people assuming they are racist) and education.

Discussion

Study 1 was designed to examine whether temporal framing (thinking about discrimination over many past decades versus today alone) affects Black and White participants' perceptions of discrimination against White and Black Americans today. Contrary to the hypothesis that historical framing in Norton and Sommers (2011) may have contributed to

Whites perceiving more anti-White than anti-Black discrimination today, temporal framing did not have this effect. However, consistent with previous research and my hypotheses, Whites and Blacks perceived discrimination differently: Black participants clearly perceived more anti-Black than anti-White discrimination across decades, whereas Whites more strongly perceived declining anti-Black and rising anti-White discrimination with time. These results are not fully consistent with findings by Norton and Sommers (2011) in that I did not find a cross-over effect among White participants: they did not perceive Whites as discriminated against more than Blacks at any time point (with the exception of White Republicans' anticipation of discrimination in the future).

The failure to replicate the cross-over effect may be an artifact of history; Norton and Sommers collected their data during the Obama Administration, whereas my data were collected during the Trump Administration. This difference may be significant because of the contrast in identities and ideologies between the two presidents. Barack Obama was the first Black President of the United States. Previous research has shown that progress among racial minorities is seen to come at the expense of, as well as threaten, White Americans (e.g., Kluegel & Smith, 1982; Wilkins & Kaiser, 2014; Wilkins, Hirsch, Kaiser, & Inkles, 2017). With a Black President, racial progress was evident to many Americans. To Whites, this progress was likely seen to come at their expense. Thus, it makes sense that Norton and Sommers found a cross-over effect among White participants. My data, however, were collected with Donald Trump as president. President Trump ran a campaign that negatively targeted a number of disadvantaged groups. After he was elected, the acceptability of prejudice toward the groups Trump targeted (e.g., Mexicans, Muslims, Asian Americans) increased (Crandall, Miller, & White, 2018). Although Blacks were not one of the directly-targeted groups during the Trump campaign, it is possible that there was

some “spillover” to Blacks. Whites might have recognized that prejudice towards certain groups is now seen as more acceptable than before, and that Blacks might be one of these groups. This may be why I did not see a cross-over effect: the election of Donald Trump may have led Whites to believe that Blacks experience more discrimination today than when Obama was in office. To this point, when collapsed across order, the means of Black and White discrimination converge more and more from the 1950s through the 2010s among White participants, but diverge a bit at the today time point. Thus, there may be an “Obama-Trump contrast effect.”

Study 1 revealed that Whites’ and Blacks’ open-ended descriptions of the types of discrimination faced by Blacks and Whites also differ. Whites perceive employment and education as domains that have been increasingly problematic for Whites, but in which Blacks are experiencing less discrimination. Whites’ perceptions that Blacks do not experience discrimination at all has increased over time, whereas perceptions that Whites do not experience discrimination has decreased over time. Whites reported employment opportunities as the most frequent form of personally experienced discrimination.

In contrast, Blacks generally do not believe Whites are discriminated against in any form at any time. Blacks consistently perceive their group as discriminated against in the domain of employment opportunities, and they perceive policing as a more prominent form of discrimination their group experiences in recent years. Similar to Whites, Blacks report employment opportunities as the most frequent way they have personally experienced discrimination. Blacks, however, also report experiencing interpersonal forms of discrimination, such as being followed in stores.

Study 1 demonstrated that Black and White Americans differ in their perceptions of discrimination. Temporal framing did not matter for these perceptions, except in the main effect

finding that more discrimination (across both groups and personal discrimination) were reported in the ahistorical condition. However, temporal framing did affect the relationship between anti-Black and anti-White discrimination variably by perceiver race. When rating discrimination without the context of history, Blacks (but not Whites) perceived a negative relationship between anti-Black and anti-White discrimination occurring today and in the future. When rating discrimination decade by decade, Whites (but not Blacks) perceived a negative relationship between anti-Black and anti-White discrimination occurring today and in the future. It is unclear what to make of this effect, but it has implications for understanding whether and for whom discrimination is perceived as a zero-sum game. I will return to this issue later in the paper.

The open-ended data from Study 1 also raise the possibility that differences between Black and White Americans in their perceptions of discrimination may stem from different conceptualizations of the domains and ways in which anti-Black and anti-White discrimination are experienced. In Study 2, I manipulate domain of discrimination to be considered, and examine White participants' perceptions of anti-Black and anti-White discrimination over time in that domain.

Study 2

Study 1 provided evidence that Whites see anti-Black and anti-White discrimination as converging in frequency today, but did not replicate the finding that Whites believe they are discriminated more than Blacks. And while an ahistorical perspective heightened perceptions of discrimination overall (relative to the historical perspective), there was no evidence that a historical perspective prompted a narrowing or reversal of the discrimination prototype among Whites.

The purpose of Study 2 is to examine whether the pattern of perceived declining anti-Black and increasing anti-White discrimination by Whites is strengthened or weakened depending on the domain of discrimination being considered. Open-ended responses from the first study suggested that when Whites gave examples of anti-White discrimination today, they tended to mention education (school admission and scholarship) and hiring practices that disfavor Whites. This suggests that a focus on the educational/job domain may prompt the perception of greater anti-White than anti-Black discrimination among Whites, whereas a focus on other domains (e.g., police and the criminal justice system; everyday interpersonal interactions) may maintain the perception of more anti-Black than anti-White discrimination. By manipulating the domain of discrimination, I hope to provide a clearer view of whether Whites truly believe Blacks and Whites experience the same amount of discrimination today (as reported in the historical condition in Study 1), or if the domain in which discrimination is expressed affects the relative rating of and relationship between perceived anti-White and anti-Black discrimination.

Hypotheses

I predict that perceptions that anti-White discrimination is rising while anti-Black discrimination is falling are driven by Whites thinking about the specific domains of education and employment. Thus, I predict decreasing anti-Black and increasing anti-White discrimination will be perceived from the 1950s to the present when Whites rate perceived discrimination within these two domains. More specifically, I predict that perceived anti-Black discrimination will be higher in the 1950s than perceived anti-White discrimination within the domains of education and employment. However, perceived anti-White education and employment discrimination will be perceived as occurring more today than anti-Black discrimination within

these domains. I do not expect this pattern to be found when Whites are asked to rate discrimination experienced by Whites and Blacks in the domains of criminal justice and interpersonal interactions, two domains in which Black participants reported experiencing discrimination. When considering these latter two domains, I predict that Whites will perceive higher levels of anti-Black discrimination than anti-White discrimination across all time points, since the 1950s.

Method

Participants. Participants were recruited via Amazon Mechanical Turk Prime. 604 MTurk workers responded to the HIT “Perceptions of Discrimination”. Because I was interested in Whites’ perceptions of discrimination by domain, I removed all non-White participants from my analyses. This left a final sample of 455 (258 men, 196 women, 1 transgendered woman). The mean age was 35.32 years, with a standard deviation of 10.57. Participants were compensated one dollar for responding to the HIT.

Design and Procedure. The design was a 2 (target race: White/Black) X 4 (domain: education and employment/criminal justice/interpersonal interactions/discrimination in general [control]) mixed design. Target race was a within-subjects factor and domain was a between-subjects factor. Although in Study 1 there was a main effect for temporal framing such that levels of perceived discrimination were higher in the ahistorical condition, there were no interactions involving temporal framing. Given this, I decided to model the procedure for Study 2 after the historical condition from Study 1, as this replicated Norton and Sommers’ (2011) procedure and provides more time points to assess White respondents’ perceptions of the trends of discrimination against Blacks and Whites over time.

Participants in the education and employment condition were told to indicate *how much you think Blacks [Whites] were/are the victims of discrimination related to education and employment (e.g., college admissions decisions, scholarship distributions, hiring decisions, raises, promotions etc.) in the United States in each of the following decades using the scale below*. In the criminal justice condition, participants were told to indicate discrimination related to *criminal justice (e.g., incarceration rates, traffic stops, police brutality, severity/length of sentences, etc.)*, and in the interpersonal interactions condition to consider discrimination related to *interpersonal interactions (e.g., being called racial slurs, being negatively stereotyped, being socially excluded or treated unkindly because of race, etc.)*. The control condition was worded exactly as the historical condition in Study 1. After rating perceived discrimination in each decade, participants rated discrimination occurring today and in the future. I counterbalanced the order in which participants judged perceived anti-Black and anti-White discrimination. The same 1-10 scale used in Study 1 was used to measure perceived discrimination.

After completing ratings of perceived anti-Black and anti-White discrimination, participants indicated the level of personal discrimination (based on race) they experience today and expect to experience in the future using the same 1-10 scale. For these ratings, participants were asked to focus on the same domain they had considered when rating anti-Black and anti-White discrimination (e.g., participants who rated criminal justice-related discrimination for Blacks and Whites also rated how much they think they personally are and will be discriminated against in the domain of criminal justice)⁴.

There were no effects of condition/domain on perceived personal discrimination today and in the future ($ps > .05$). Similar to Study 1, Whites showed evidence of the personal-group discrimination discrepancy today and in the future across all conditions, $ps < .0001$. There was a main effect for time, such that Whites expect to be personally discriminated more in the future ($M = 2.62, SD = 2.67$) than today ($M = 2.27, SD = 2.13$), $F(1,451) = 32.70, p < .001$.

After participants completed ratings of perceived personal discrimination, they responded to items measuring their racial identity and status-legitimizing beliefs. Racial identity was measured with the four-item identity subscale of Luhtanen and Crocker's (1992) Collective Self-Esteem Scale, adapted to measure racial identity ($\alpha = .875$). Items included "*The racial group I belong to is an important reflection of who I am,*" and "*Overall, my racial group membership has very little to do with how I feel about myself*" (reverse coded). Responses were made on a Likert-type scale of 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). A 12-item measure by Levin, Sidanius, Rabinowitz, and Federico (1998) was used to assess status legitimizing beliefs ($\alpha = .912$). These items spanned three dimensions: system legitimacy (e.g., "*Differences in status between ethnic groups are fair*"), system permeability (e.g., "*America is an open society where individuals of any ethnicity can achieve higher status*"), and Protestant work ethic (e.g., "*If people work hard they almost always get what they want*"). Items were measured on a 1 (*Strongly disagree*) to 7 (*Strongly agree*) Likert-type scale. The average of all 12 items was created (O'Brien & Major, 2005) to make a single measure assessing status legitimizing beliefs.

Results

Perceived discrimination by domain. Perceived discrimination faced by Blacks and Whites across 9 time points (1950s, 1960s, 1970s, 1980s, 1990s, 2000s, 2010s, "today," and in the future) were submitted to a Domain (Education and Employment, Criminal Justice, Interpersonal, General) by Target Race (Black, White) X Order (Black discrimination rated first, White discrimination rated first) X Decade (9 levels) mixed design, repeated measures ANOVA. Domain and order were between-subjects factors; target race and decade were within-subjects.

ANOVA results are summarized in Table 4, and means by domain, target race, and decade are presented in Figures 7 – 10. The four-way interaction was not significant. However,

several main effects and a number of 2- and 3-way interactions were, including the most theoretically interesting Domain X Target Race X Decade interaction (see Table 4), which is represented in Figure 11.

Several findings are visible in Figures 7 – 10: Perceived discrimination faced by Blacks generally fell across the decades whereas perceived discrimination faced by Whites generally increased, regardless of domain. However, Whites did *not* perceive that Whites face significantly more discrimination than Blacks today, or that they will face more discrimination in the future within any domain. In fact, at all time points, within each domain (with one exception discussed below), Blacks were perceived to be discriminated against more than Whites ($ps < .05$). Similar to White participants in the historical condition in Study 1, there was an Order X Decade X Target Race interaction among participants in the control condition, $F(8,816) = 2.092, p = .034$, where rating White discrimination first led participants to report higher levels of Black and White discrimination over the years, compared to those who rated Black discrimination first. However, unlike participants in the historical condition in Study 1, the only nonsignificant difference between White and Black discrimination was at the future time point, for those who rated Black discrimination first.

The Domain X Target Race X Decade interaction suggests that although Blacks were perceived to face more discrimination than Whites in nearly all cases, the size of that difference varied by decade and domain. To examine whether the magnitude of the difference between perceived Black and White discrimination varied by domain at each time point, I conducted nine one-way ANOVAs with a discrimination index (Black discrimination minus White discrimination) as the dependent variable. These analyses revealed that there were only two time points where the difference in perceived Black and White discrimination varied by domain: the

1950s and the future. In the 1950s, the difference in perceived Black and White discrimination was greater among those rating interpersonal discrimination compared to those rating criminal justice-related discrimination, $t(451) = 2.81, p = .031$. In the future, the difference in perceived Black and White discrimination was greater among those rating criminal justice-related discrimination compared to those rating education and employment-related discrimination, $t(451) = -3.12, p = .0011$ (see Figure 11). A Holm p-value adjustment was used in my analyses to provide a more conservative estimate to avoid spurious effects.

Examining the role of racial identity and status legitimizing beliefs. To examine the effects of racial identity and status legitimizing beliefs (SLB) on perceived discrimination, I first examined correlations between these two variables and perceptions of Black and White discrimination today and in the future. These correlations appear in Table 5. Racial identity and SLB were positively correlated with each other ($r = .34, p < .001$), and both were positively correlated with perceived anti-White discrimination and negatively correlated with perceived anti-Black discrimination.

Next, I conducted a series of multiple regressions predicting the difference between perceived Black and White discrimination today and in the future.⁵ The discrimination index (perceived Black minus White discrimination today) was regressed on domain (entered as three dummy variables), racial identity, and SLB, as well as the Domain X Racial Identity and Domain X SLB interactions. This model explained a significant amount of variance in the difference between perceived Black and White discrimination today, adjusted $R^2 = .462, F(11,443) = 36.43$,

⁵ I conducted a series of analyses with the Domain X Racial Identity and Domain X SLB interactions in separate models. These analyses revealed a main effect for racial identity when SLB was not entered in the model such that the higher one's racial identification, the less difference perceived between Black and White discrimination today and in the future. However, this main effect was nonsignificant when SLB were entered in the model, as my reported analyses suggest.

$p < .001$. In this model there was a main effect of SLB such that people with higher SLB perceived less of a difference between Black and White discrimination today, $b = -2.01$, $p < .001$ (see Figure 12)⁶. There were no other significant effects.

A second regression used the same predictors as the first, but the dependent variable was the discrimination index for the future. This model explained a significant amount of variance in the difference in perceived Black and White discrimination in the future, adjusted $R^2 = .422$, $F(11,443) = 31.11$, $p < .001$. Once again, there was a main effect of SLB such that people with higher levels of SLB expected less difference between discrimination against Blacks and Whites in the future, $b = -2.28$, $p < .001$. There was also a main effect of domain such that participants in the Criminal Justice condition expected a greater difference in Black and White discrimination in the future compared to those in the control condition controlling for racial identity and SLB, $b = 1.15$, $p = .011$.

Examining political differences. To examine how political party affiliation affected perceptions of Black and White discrimination by decade and domain, I conducted a Domain X Target Race X Decade X Political Party (Republicans, Democrats, Independents) mixed design, repeated measures ANOVA. In this sample of White respondents, 108 (23.74%) identified as Republicans, 199 (43.74%) as Democrats, and 139 (30.55%) as Independents. The four-way interaction was significant, $F(48,3472) = 1.42$, $p = .031$. To probe this interaction, I conducted multiple analyses within each domain to examine differences between political parties.

General discrimination domain (control). I began my analyses by examining whether the difference between perceived Black and White discrimination was significant for each decade, for each political party. Republicans in the control condition ($N = 18$) perceived Blacks

⁶ SLB predicts anti-White and anti-Black discrimination positively and negatively, respectively, for both today and in the future, $ps < .001$.

as discriminated against more than Whites from the 1950s through the 1990s ($ps < .01$). In the 2000s, 2010s, and today, Republicans did not perceive a difference in general discrimination against Blacks and Whites, and they expected Whites to be discriminated against more than Blacks in the future, $t(34) = 3.42, p < .01$. The significant reversal for the future replicates findings for Republicans in Study 1. Democrats in the control condition ($N = 50$) perceived Blacks as being discriminated against more than Whites at all time points ($ps < .001$). Independents in the control condition ($N = 34$) perceived Blacks as discriminated against more than Whites from the 1950s through to today ($ps < .01$), but expected Whites and Blacks to be discriminated against similarly in the future ($p = .35$).

I submitted the discrimination index (Black – White discrimination) to a Political Party X Decade repeated measures factorial ANOVA to assess whether there was a difference between political parties' perceptions of discrimination across decades. The main effects of party and decade were significant ($ps < .001$) and were qualified by a significant Party X Decade interaction, $F(16,792) = 5.99, p < .001$. I decomposed this interaction by conducting a series of one-way (political party) ANOVAs for each decade (see Table 6 for mean comparisons). From the 1950s through the 1980s, Democrats and Independents perceived a greater difference in discrimination against Blacks relative to Whites than Republicans. From the 1990s into the future, the difference score differed across all three political parties: Democrats perceived the greatest disparity between discrimination faced by Blacks compared to Whites, followed by Independents, with Republicans perceiving the least disparity across these decades (reversing in the future).

Education and employment domain. Republicans in the education and employment condition ($N = 27$) perceived Blacks to be discriminated more than Whites from the 1950s

through the 1990s ($ps < .05$); in the 2000s and today, they saw no differences in discrimination faced by Blacks versus Whites in the education and employment domains ($ps > .21$). However, Republicans did perceive Whites as being discriminated against more than Blacks in this domain in the 2010s ($p = .05$), and expected Whites to be discriminated in this domain more than Blacks in the future ($p < .01$). Democrats in the education and employment condition ($N = 52$) perceived Blacks as discriminated against more than Whites at all time points ($ps < .001$). Independents in the education and employment condition ($N = 38$) perceived Blacks as discriminated against more than Whites from the 1950s through today ($ps < .01$), but did not expect a difference in discrimination between Whites and Blacks in the future.

The Political Party X Decade analysis of the discrimination index (Black – White discrimination) in the education and employment domain indicated main effects of party and decade ($ps < .001$), as well as a significant Party X Decade interaction, $F(16,912) = 7.17, p < .001$. A series of one-way (political party) ANOVAs for each decade (see Table 7) indicated that from the 1950s to the 1970s, the perceived Black-White difference in education and employment-related discrimination was greater for Democrats than Republicans. This was also true in the 1980s and 1990s, but in these decades, Independents also perceived a greater disparity in discrimination against Blacks versus Whites than Republicans and were similar to Democrats. From the 2000s into the future, all three political parties perceived the difference in Black versus White discrimination at varying levels; Democrats perceived the greatest disparity between discrimination faced by Blacks and Whites, followed by Independents, with Republicans perceiving the least disparity across these decades.

Criminal justice domain. Republicans in the criminal justice condition ($N = 31$) perceived Blacks as discriminated against more than Whites from the 1950s through the 2000s,

and today ($ps < .05$), but did not perceive a difference in discrimination in the 2010s, or expect a difference a difference in discrimination in the future. Democrats in the criminal justice condition ($N = 48$) perceived that Blacks were more discriminated against than Whites at all time points ($ps < .001$), as did Independents in the criminal justice condition ($N = 35$, $ps < .01$).

The Political Party X Decade ANOVA again produced main effects of party and decade ($ps < .001$), as well as a significant interaction, $F(16,888) = 6.46$, $p < .001$. I conducted follow-up one-way (political party) ANOVAs for each decade (see Table 8). In the 1950s, there was no difference based on political party in the level of perceived anti-Black – anti-White discrimination ($ps > .08$). In the 1960s, Democrats perceived a greater disparity in Blacks versus White discrimination than Independents (but not more so than Republicans); from the 1970s through the 2000s, as well as today, Democrats perceived a greater disparity in discrimination levels faced by Blacks versus Whites than both Republicans and Independents. In the 2010s and in the future, all three political parties perceived the difference in Black and White discrimination at varying levels: Democrats perceived the greatest disparity between discrimination faced by Blacks and Whites, followed by Independents, with Republicans perceiving the least disparity across these decades.

Interpersonal interactions domain. Republicans in the interpersonal interactions condition ($N = 32$) perceived Blacks as discriminated against more than Whites from the 1950s through the 1990s ($ps < .01$), but did not perceive a difference in discrimination faced by Whites and Blacks in the 2000s, today, or the future ($ps > .15$). In the 2010s, Republicans perceived that Whites experienced more interpersonal discrimination more than Blacks ($p = .049$). Democrats in the interpersonal condition ($N = 49$) perceived that Blacks were discriminated against more than Whites at all time points ($ps < .001$). Independents in the interpersonal condition perceived

Blacks as discriminated against more than Whites from the 1950s through the 2000s, and today ($ps < .05$), but did not perceive a difference in discrimination in the 2010s or expect a difference in discrimination in the future ($ps > .75$).

The Political Party X Decade ANOVA on the interpersonal discrimination index (Black – White discrimination) again indicated significant main effects of party and decade ($ps < .001$) as well as the interaction, $F(16,880) = 12.96, p < .001$. Follow-up Party ANOVAS (see Table 9) indicated that party differences began to emerge in the 1960s: Democrats perceived a greater Black-White difference in interpersonal discrimination than Republicans. In the 1970s and 1980s Democrats and Independents perceived a greater Black-White difference than Republicans. In the 1990s, Democrats perceived the greatest disparity in discrimination faced by Blacks versus Whites, followed by Independents, then Republicans, and from the 2000s into the future Democrats perceived a greater disparity than both Republicans and Independents.

Examining correlational data. To consider the nature of the relationship between anti-White and anti-Black discrimination beyond means, I analyzed correlations between the two at each decade within each domain (see Table 10). Within the control, criminal justice, and interpersonal conditions, there were negative correlations between perceived anti-Black and anti-White discrimination at each decade (though these were only marginal for the 2000s and future in the criminal justice condition). In the education and employment condition, there were negative correlations between anti-Black and anti-White discrimination in the 1950s, and from the 2000s through the future (though the correlation in the 2000s was marginal). There was no relationship from the 1960s through the 1990s. These correlations provide some evidence that Whites perceive discrimination as a zero-sum game in recent years across various domains.

Discussion

The goal of Study 2 was to examine whether the domain of discrimination that is considered influences Whites' perceptions of anti-White and anti-Black discrimination. It was the case that Whites' perceptions of Black and White discrimination differed depending on domain, but contrary to my predictions, Whites' perceptions of anti-White and anti-Black discrimination converged in each domain, and never produced the reversal documented by Norton and Sommers (2011). In Figure 11, I present an overlay of Figures 7-10, where one can see that trends were in the predicted direction: Thinking about employment and education produced the steepest pattern of perceived increasing anti-White/decreasing anti-Black discrimination, and thinking about criminal justice produced the weakest pattern. But the domain of consideration did not matter as strongly as I predicted.

Similar to Study 1, Blacks were perceived to be discriminated against more than Whites at almost every time point. Likewise, cross-over effects were only found among Republicans, in in every domain except criminal justice, and consistently occurred in the 2010s and the future (a cross-over for the today time point only occurred in the general discrimination domain). Democrats perceived Blacks as discriminated against more than Whites in every domain, across all decades. Independents, similar to Democrats, mostly perceived higher anti-Black than anti-White discrimination, but not always; Independents expected Blacks and Whites to experience discrimination similarly in the future in all domains except criminal justice. Consistent with previous research (Wilkins & Kaiser, 2014), I found that believing that the status hierarchy in the United States is legitimate predicted less perceived discrepancy between anti-Black and anti-White discrimination.

Study 2 provides more correlational evidence that Whites perceive discrimination as a zero-sum game, at least when they consider discrimination across the decades. However, these

correlations were weakest in the education and employment condition. This is puzzling because the education and employment domain captures discrimination related to the allocation of limited resources (i.e. jobs, scholarships), a domain that has a zero-sum relationship by nature, and in which I expected (and found) the strongest pattern of increasing anti-White and decreasing anti-Black discrimination. Additional research will be necessary to better understand this pattern.

General Discussion

I was interested in examining whether Whites' prototype of discrimination has shifted, or if findings that Whites perceive themselves as discriminated against more than Blacks (Norton & Sommers, 2011) were an artifact of temporal framing. Across two studies I examined how people perceive discrimination against White and Black Americans, and how factors such as temporal framing, perceiver race, and the domain in which discrimination is considered affect these perceptions. I found that Whites and Blacks differ in their perceptions of discrimination (Blacks perceive a greater disparity in anti-Black and anti-White discrimination than Whites), and that temporal framing does not influence these perceptions. Through open-ended responses, I also found that both Black and White Americans perceive themselves as being discriminated against in terms of employment. However, beyond employment, Blacks and Whites differ in reported experienced discrimination: Blacks see themselves as discriminated against when it comes to policing and interpersonal interactions, whereas Whites see themselves as experiencing education-related discrimination.

Consistent with previous research (Norton & Sommers, 2011), I found that Whites perceive anti-Black as decreasing over time and anti-White discrimination as increasing over time. This was true across multiple domains, even those in which Whites did not spontaneously report experiencing discrimination (e.g., criminal justice domain). Importantly, although Whites

perceived that anti-White discrimination was increasing over time and anti-Black discrimination was decreasing, they generally did not perceive Whites as being discriminated against more than Blacks, even in a domain where Whites seem perceive themselves as most likely to face discrimination in (education and employment). White Republicans and those who see the status hierarchy in the United States as fair were the only people to perceive Whites as discriminated against more than Blacks in recent years, or expect this to be the case in the future.

What does perceiving anti-White and anti-Black discrimination as a zero-sum game really mean? Norton and Sommers take the converging means of anti-White and anti-Black discrimination over time (which diverge in the opposite direction after crossing over) as evidence that Whites perceive discrimination as a zero-sum game. However, one could argue that Blacks see discrimination as a zero-sum game as well, but their perceptions of anti-Black and anti-White discrimination remain high and low, respectively. Seeing something in zero-sum terms means that people believe that one group's gains are at the expense of another group's losses. Said differently, it is the belief that an increase for Group A results in a decrease in Group B: a negative correlation.

If a zero-sum relationship is thought of in terms of a negative correlation, the current studies provide some evidence that both Blacks and Whites perceive discrimination as a zero-sum game, though the evidence is not overwhelming. In Study 1, there were negative correlations between perceived anti-Black and anti-White discrimination among Black Americans when rating discrimination at earlier, but not more recent decades. Correlations were also negative among Black participants in the ahistorical condition, who only rated perceived anti-Black and anti-White discrimination today and in the future; this was not the case in the historical condition. For White participants in the historical conditions (Studies 1 and 2),

perceived anti-Black and anti-White discrimination were negatively correlated at most time points across domains (although some decades revealed no relationship in the education and employment domain, Study 2). However, in contrast to Black participants in the ahistorical condition, anti-Black and anti-White discrimination today and in the future were uncorrelated for Whites in the ahistorical condition. Given these mixed results, I do not believe these data provide enough evidence to definitively say that Whites or Blacks do or do not perceive discrimination as a zero-sum game. Future work should examine this question more closely. It may be fruitful to include perceptions of other groups to see whether this strengthens or reduces perceptions of discrimination as a zero-sum relationship.

Limitations and future directions

In Study 1, White participants were older than Black participants by roughly 10 years. This difference in age may have exacerbated differences between Whites and Blacks' responses to perceived anti-Black and anti-White discrimination⁷. Also, although Study 1 used a more representative sample than the typical MTurk sample, I did not utilize a nationally representative sample. Thus, I am unable to generalize to the broader Black and White American populations. Likewise, Study 2 used an MTurk sample, and MTurk workers tend to be younger, more educated, and more liberal than the general United States population (Berinsky, Huber, & Lenz, 2012; Paolacci, Chandler, Ipeirotis, 2010; Shapiro, Chandler, & Mueller, 2013). These participants also tend to engage in other activities while taking surveys, which may harm the integrity of the data and generalizability of the findings (Chandler, Mueller, & Paolacci, 2013). Furthermore, Study 2 only included White participants. Future research should examine how Blacks' perceptions of anti-White and anti-Black discrimination differ by domain.

⁷ Controlling for age did not change patterns of perceived discrimination.

The current studies offer some insight into understanding Whites and Blacks' prototypes of discrimination, but I did not test people's prototypes of discrimination directly. That is, rating levels of perceived discrimination experienced by Blacks and Whites may be independent of believing that racial discrimination typically takes the form of Whites behaving negatively toward racial minorities. Future research should examine people's prototypes of discrimination more directly, perhaps by using vignette paradigms (e.g., Inman & Baron, 1996). Given that perceptions of anti-White and anti-Black discrimination differ, this research should investigate whether people have different prototypes of discrimination by target race; people may have a prototype of how Whites are discriminated against, which may look different than a prototype of how Blacks are discriminated against. Context and domain may determine the nature of these prototypes as well.

Because the Hispanic population in the United States is increasing, I believe that it is important for researchers to include Hispanic participants in studies of this sort, and to explore questions related to perceptions of anti-Hispanic discrimination. Thus, future research should examine whether Whites, Blacks, Latinx, and other groups perceive anti-Black, anti-Hispanic, and other group-based discrimination similarly or distinctly.

Recent research has treated the tendency to see discrimination as a zero-sum game as an individual difference (Wellman, Liu, & Wilkins, 2016; Wilkins, Wellman, Babbit, Toosi, & Schad, 2015). This work shows that the tendency for Whites to perceive anti-White and anti-Black discrimination as a zero-sum game is related to: perceiving higher levels of anti-White discrimination, supporting policies that benefit Whites, and not supporting policies that benefit racial minorities. Given that perceptions of discrimination differ by domain, future research should explore domain-specific zero-sum beliefs. Future work should also explore how

manipulating people's perception of racial progress as increasing or decreasing affects zero-sum beliefs. This work would add to our understanding of whether and why people perceive discrimination as a zero-sum relationship.

Lastly, to examine the proposed Obama-Trump contrast effect, researchers could examine the research literature during the Obama Administration and Trump Administration that explores perceptions of anti-Black and anti-White discrimination. This research could compare perceptions by administration to see if perceived anti-White discrimination has decreased as a function of the contrast between the two presidencies.

Conclusions

Despite previous research, the current studies suggest Whites perceive anti-Black discrimination as more prominent today than anti-White discrimination, across various domains, though at different magnitudes (e.g., highest in the criminal justice domain, least in the education/employment domain). The caveat to this is that White Republicans perceived Whites as discriminated against more than Blacks in recent decades across all domains except for criminal justice, and those with strong system justifying beliefs perceived higher levels of anti-White discrimination. Perception of discrimination is subjective, and this research continues to point to a racial divide in these perceptions. Future research should continue to examine the factors that reduce and exacerbate these differential perceptions.

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Table 1

Demographic information by participant race, Study 1

Variable	Black Ps	White Ps
Education (%)		
Some high school	0	1
High school graduate	22	14
Some college	29	25
College graduate	34	45
Graduate degree	13	13
Professional degree	1	2
Gender (%)		
Female	51	51
Male	49	49
Political party		
Democrat	65	32
Independent	27	27
Republican	4	37
Mean income (<i>SD</i>)	4.26 (3.08)	6.21 (4.08)
Mean age (<i>SD</i>)	39.18 (15.06)	50.22 (15.97)

Notes: Income was reported in discrete units, varying by \$10,000 increments, from 1 (< \$20,000) to 15 (\$150,000+). Using this scale, a mean of 4.26 indicates Black participants in my sample make between \$40,000-\$49,000 on average (with a SD of around \$30,000), whereas a mean of 6.21 indicates White participants in my sample make between \$60,000-\$69,000 on average (with a SD of around \$40,000).

Table 2

Summary of 4-way ANOVA results, with perceived discrimination faced by Blacks and Whites over 9 decades/time frames (1950s to the future); Study 1

Effect	Df	F	P
Participant Race (PR)	1,179	2.21	.1389
Order	1,179	5.58	.0192
Target Race (TR)	1,179	438.73	<.0001
Decade	8,1432	11.03	<.0001
PR X Order	1,179	1.87	.1736
PR X TR	1,179	49.94	<.0001
PR X Decade	8,1432	0.78	.6171
Order X TR	1,179	1.00	.3184
Order X Decade	8,1432	4.59	<.0001
TR X Decade	8,1432	147.73	<.0001
PR X Order X TR	1,179	0.98	.3245
PR X Order X Decade	8,1432	2.50	.0106
PR X TR X Decade	8,1432	49.41	<.0001
Order X TR X Decade	8,1432	3.56	.0004
PR X Order X TR X Decade	8,1432	5.16	<.0001

Table 3

Correlations between perceived anti-White and anti-Black discrimination, by decade and participant race, Study 1

Decade and Condition	Black Ps		White Ps	
	Historical <i>n</i> = 96	Ahistorical <i>n</i> = 96	Historical <i>n</i> = 87	Ahistorical <i>n</i> = 96
1950s	-.55*		-.13	
1960s	-.49*		-.20+	
1970s	-.41*		-.36*	
1980s	-.23*		-.29*	
1990s	-.22*		-.30*	
2000s	-.17		-.25*	
2010s	-.11		-.32*	
Today	-.09	-.33*	-.18+	-.01
Future	.01	-.28*	-.23*	-.05

Notes: * $p < .05$, + $p < .09$

Table 4

Summary of 4-way ANOVA results, with perceived discrimination faced by Blacks and Whites over 9 decades/time frames (1950s to the future) by domain, Study 2

Effect	Df	F	P
Domain	3,447	1.716	.1629
Order	1,447	8.56	.0036
Target Race (TR)	1,447	1042.72	<.0001
Decade	8,3576	124.56	<.0001
Domain X Order	3,447	1.98	.1163
Domain X TR	3,447	.48	.698
Domain X Decade	24,3576	1.23	.205
Order X TR	1,447	1.10	.295
Order X Decade	8,3576	13.30	<.0001
TR X Decade	8,3576	503.48	<.0001
Domain X Order X TR	3,447	0.12	.949
Domain X Order X Decade	24,3576	.86	.665
Domain X TR X Decade	24,3576	4.02	<.0001
Order X TR X Decade	8,3576	2.85	.0037
Domain X Order X TR X Decade	24,3576	.70	.8572

Table 5

Correlations between racial identity, SLB, political orientation, and perceived anti-White and anti-Black discrimination today and in the future (Study 2)

	SLB	RID	PO	Today(B)	Future(W)	Today(W)	Future(W)	Today
RID	.34	-						
PO	-.63	-.34	-					
Today(B)	-.57	-.18	.44	-				
Future(B)	-.49	-.12	.37	.86	-			
Today(W)	.51	.30	-.44	-.32	-.18	-		
Future(W)	.53	.32	-.48	-.35	-.29	.89	-	
Today	-.67	-.30	.54	.82	.65	-.80	-.76	-
Future	-.64	-.28	.53	.74	.79	-.68	-.81	.88

Notes: All $ps < .01$; SLB = Status Legitimizing Beliefs, RID = Racial Identity, PO = Political Orientation [a composite of two Likert-type scales: the first (capturing political views) ranging from *(1 Very Conservative to 5 Very Liberal)*, the second (capturing party affiliation) ranging from *(1 Very Republican to 5 Very Democrat)*], Today(B) = perceived anti-Black discrimination today, Future(B) = perceived anti-Black discrimination in the future, Today(W) = perceived anti-White discrimination today, Future(W) = perceived anti-White discrimination in the future, Today = perceived anti-Black discrimination minus anti-White discrimination today, Future = perceived anti-Black discrimination minus anti-White discrimination in the future.

Table 6

Means of perceived general discrimination (control condition) by target race, decade, and party affiliation (Study 2)

Decade	Democrats			Independents			Republicans		
	Black	White	Dif.	Black	White	Dif.	Black	White	Dif.
1950s	9.26	1.5	7.72* _a	9.65	1.6	8.03* _a	8.94	2.8	6.11* _b
1960s	9.24	1.6	7.64* _a	9.29	1.7	7.56* _a	7.83	2.6	5.22* _b
1970s	8.58	1.7	6.92* _a	8.24	1.9	6.32* _a	6.83	2.8	4* _b
1980s	7.94	1.7	6.24* _a	7.26	2.2	5.12* _a	6	2.8	3.17* _b
1990s	7.4	1.7	5.7* _a	6.21	2.2	4* _b	4.78	3	1.78* _c
2000s	6.82	1.9	4.88* _a	5.47	2.7	2.74* _b	4	3.4	0.61 _c
2010s	6.58	2.2	4.4* _a	4.91	3.2	1.74* _b	3.44	4.5	-1.06 _c
Today	6.8	2.2	4.6* _a	5.21	3	2.21* _b	4.06	5.4	-1.33 _c
Future	5.86	2.6	3.22* _a	4.29	3.7	0.6 _b	3.39	6.3	-2.94* _c

*Notes: * p < .05. Subscripts indicate differences among political parties for the Black-White discrimination index within each decade*

Table 7

Means of perceived education and employment discrimination by target race, decade, and party affiliation (Study 2)

Decade	Democrats			Independents			Republicans		
	Black	White	Dif.	Black	White	Dif.	Black	White	Dif.
1950s	9.31	1.6	7.71* _a	9.29	1.74	7.55* _{ab}	8.56	2.22	6.33* _b
1960s	8.96	1.65	7.38* _a	8.87	1.87	7* _{ab}	7.96	2.26	5.7* _b
1970s	8.46	1.65	6.81* _a	8.05	1.89	6.16* _{ab}	7.19	2.48	4.7* _b
1980s	7.67	1.73	5.94* _a	7.32	2.16	5.16* _a	5.7	2.81	2.89* _b
1990s	7.04	1.88	5.15* _a	6.5	2.24	4.26* _a	4.89	3.33	1.56* _b
2000s	6.5	2.15	4.35* _a	5.63	2.87	2.76* _b	4.04	4.26	-0.22 _c
2010s	6.27	2.38	3.88* _a	5.21	3.47	1.74* _b	3.59	5.19	-1.59* _c
Today	6.73	2.46	4.27* _a	5.13	3.37	1.76* _b	4.04	5	-.96 _c
Future	5.67	2.87	2.81* _a	4.34	4.26	0.08 _b	3.41	5.93	-2.52* _c

Notes: * $p < .05$. Subscripts indicate differences among political parties for the Black-White discrimination index within each decade

Table 8

Means of perceived criminal justice discrimination by target race, decade, and party affiliation (Study 2)

Decade	Democrats			Independents			Republicans		
	Black	White	Dif.	Black	White	Dif.	Black	White	Dif.
1950s	9.35	1.77	7.58* _a	8.6	2.37	6.23* _a	8.74	2.74	6* _a
1960s	9.04	1.71	7.33* _a	8.23	2.63	5.6* _b	8.71	2.45	6.26* _{ab}
1970s	8.62	1.88	6.75* _a	7.66	2.66	5* _b	7.68	2.55	5.13* _b
1980s	8.35	1.81	6.54* _a	7.2	2.71	4.49* _b	6.94	2.77	4.16* _b
1990s	7.77	1.88	5.9* _a	6.51	2.74	3.77* _b	6.06	2.9	3.16* _b
2000s	7.31	1.98	5.33* _a	5.83	3.14	2.69* _b	5	3.68	1.32* _b
2010s	7.1	2.19	4.92* _a	5.57	3.43	2.14* _b	4.52	4.74	-.23 _c
Today	7.77	2.4	5.38* _a	6.09	3.31	2.77* _b	5.87	4.29	1.58* _b
Future	7.06	2.33	4.73* _a	5.26	3.57	1.69* _b	5.19	5.32	-.13 _c

*Notes: * p < .05. Subscripts indicate differences among political parties for the Black-White discrimination index within each decade*

Table 9

Means of perceived interpersonal discrimination by target race, decade, and party affiliation (Study 2)

Decade	Democrats			Independents			Republicans		
	Black	White	Dif.	Black	White	Dif.	Black	White	Dif.
1950s	9.45	1.55	7.9* _a	9.62	1.47	8.16* _a	8.66	1.75	6.91* _a
1960s	9.37	1.51	7.86* _a	9.28	1.72	7.56* _{ab}	8.41	2	6.41* _b
1970s	8.82	1.51	7.31* _a	8.59	1.94	6.66* _a	7.41	2.34	5.06* _b
1980s	8.29	1.55	6.73* _a	7.53	2	5.53* _a	6.06	3	3.06* _b
1990s	7.65	1.59	6.06* _a	6.25	2.5	3.75* _b	5.22	3.31	1.91* _c
2000s	7.06	1.69	5.37* _a	5.31	3.59	1.72* _b	4.56	3.72	.84 _b
2010s	6.65	1.73	4.92* _a	4.97	4.75	.22 _b	3.88	5.06	-1.19* _b
Today	7.35	1.92	5.43* _a	5.84	4.47	1.38* _b	4.81	4.53	.28 _b
Future	6.41	2.24	4.16* _a	5.03	5.03	0 _b	4.28	5.41	-1.12 _b

*Notes: * p < .05. Subscripts indicate differences among political parties for the Black-White discrimination index within each decade*

Table 10

Correlations between perceived anti-White and anti-Black discrimination, by decade and condition, Study 2

Decade	Condition			
	Control <i>n</i> = 104	Edu. & Emp. <i>n</i> = 119	Criminal Justice <i>n</i> = 115	Interpersonal <i>n</i> = 117
1950s	-.39*	-.24*	-.36*	-.39*
1960s	-.39*	-.07	-.33*	-.41*
1970s	-.46*	-.04	-.32*	-.24*
1980s	-.35*	.01	-.26*	-.40*
1990s	-.36*	-.02	-.23*	-.25*
2000s	-.37*	-.18+	-.17+	-.41*
2010s	-.46*	-.25*	-.21*	-.56*
Today	-.42*	-.22*	-.22 *	-.44*
Future	-.37*	-.20*	-.16 +	-.41*

Notes: * $p < .05$, + $p < .09$

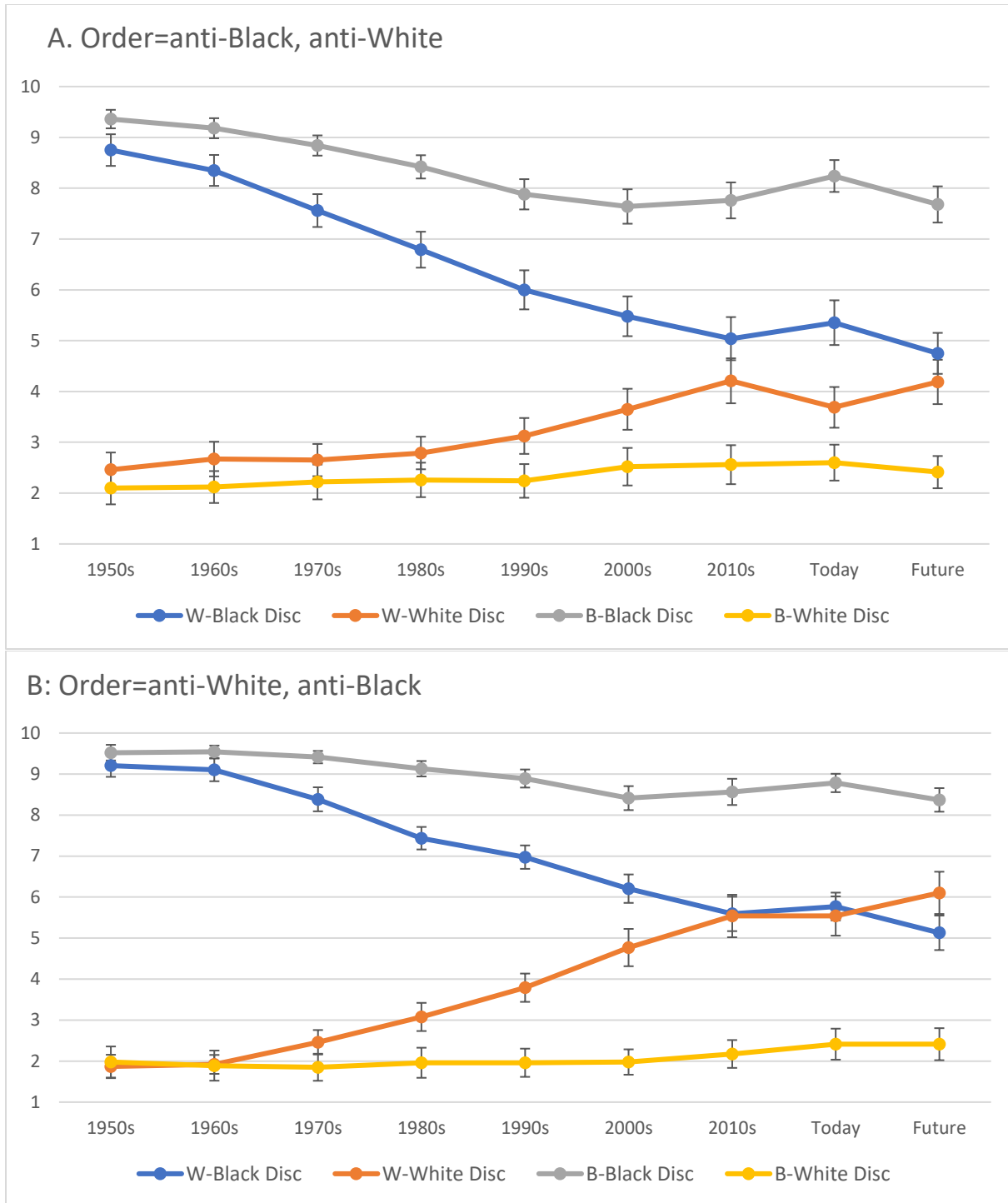


Figure 1. Means of perceived discrimination in the Historical condition (Study 1) by participant race, target race, and decade, separated by participants who first rated Black discrimination, then White (panel A), and participants who first rated White discrimination, then Black (Panel B). Error bars represent standard errors.

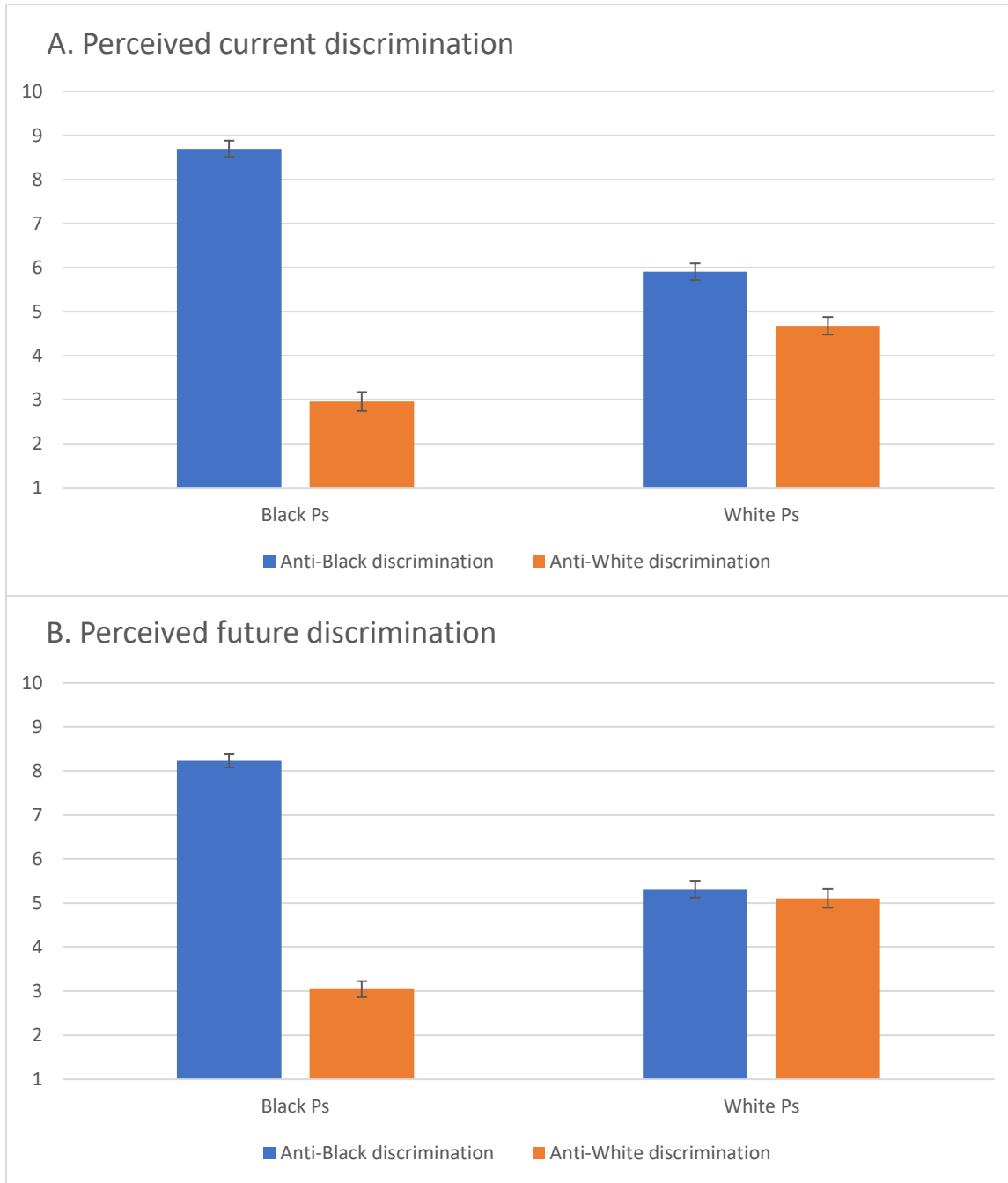


Figure 2. Perceived anti-Black and anti-White discrimination today (Panel A) and in the future (Panel B), by participant race, collapsed across order and perspective (historical v. ahistorical). Error bars represent standard errors.

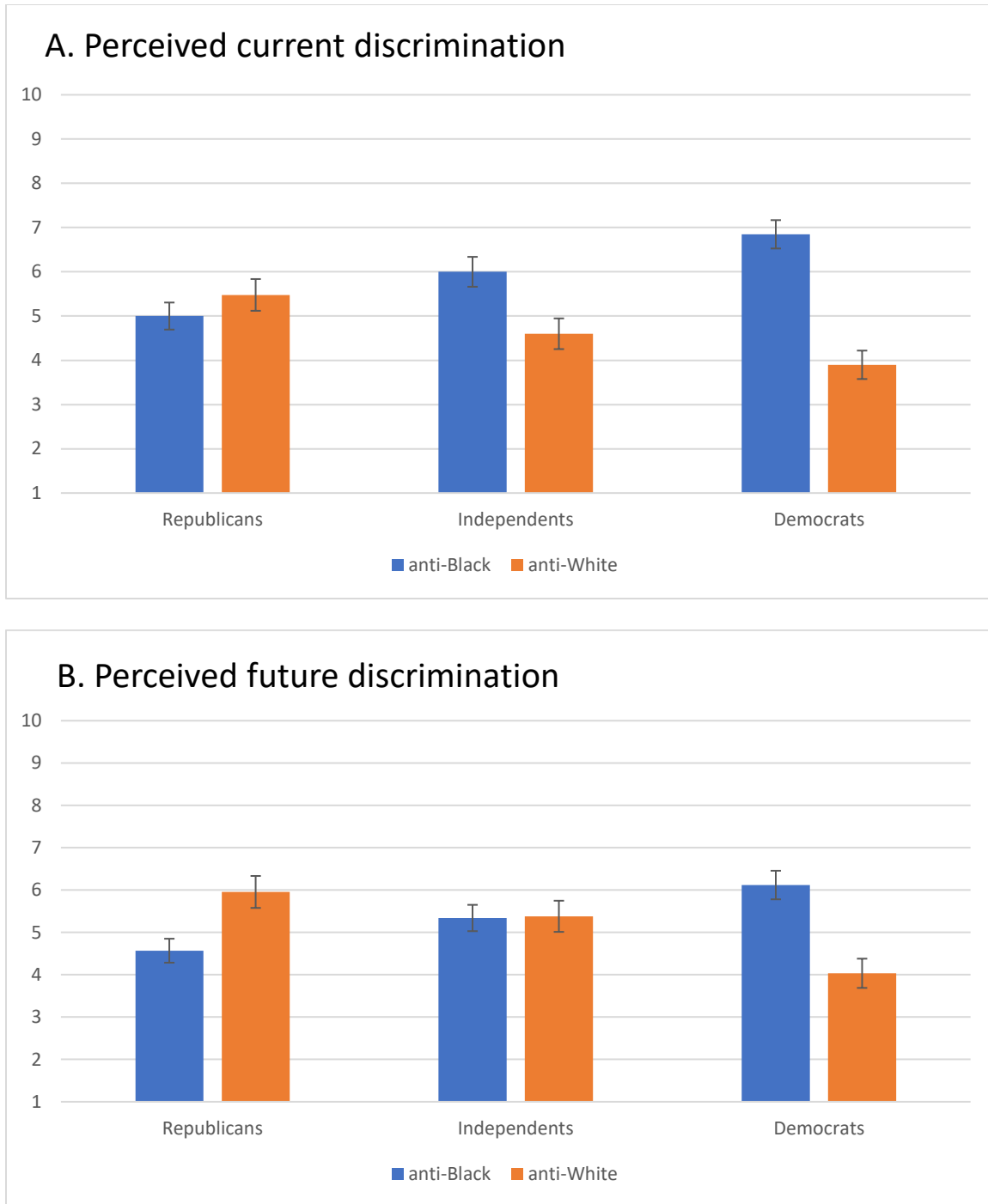


Figure 3. Perceived anti-Black and anti-White discrimination, today (top panel) and in the future (bottom panel), by political party, White participants only.

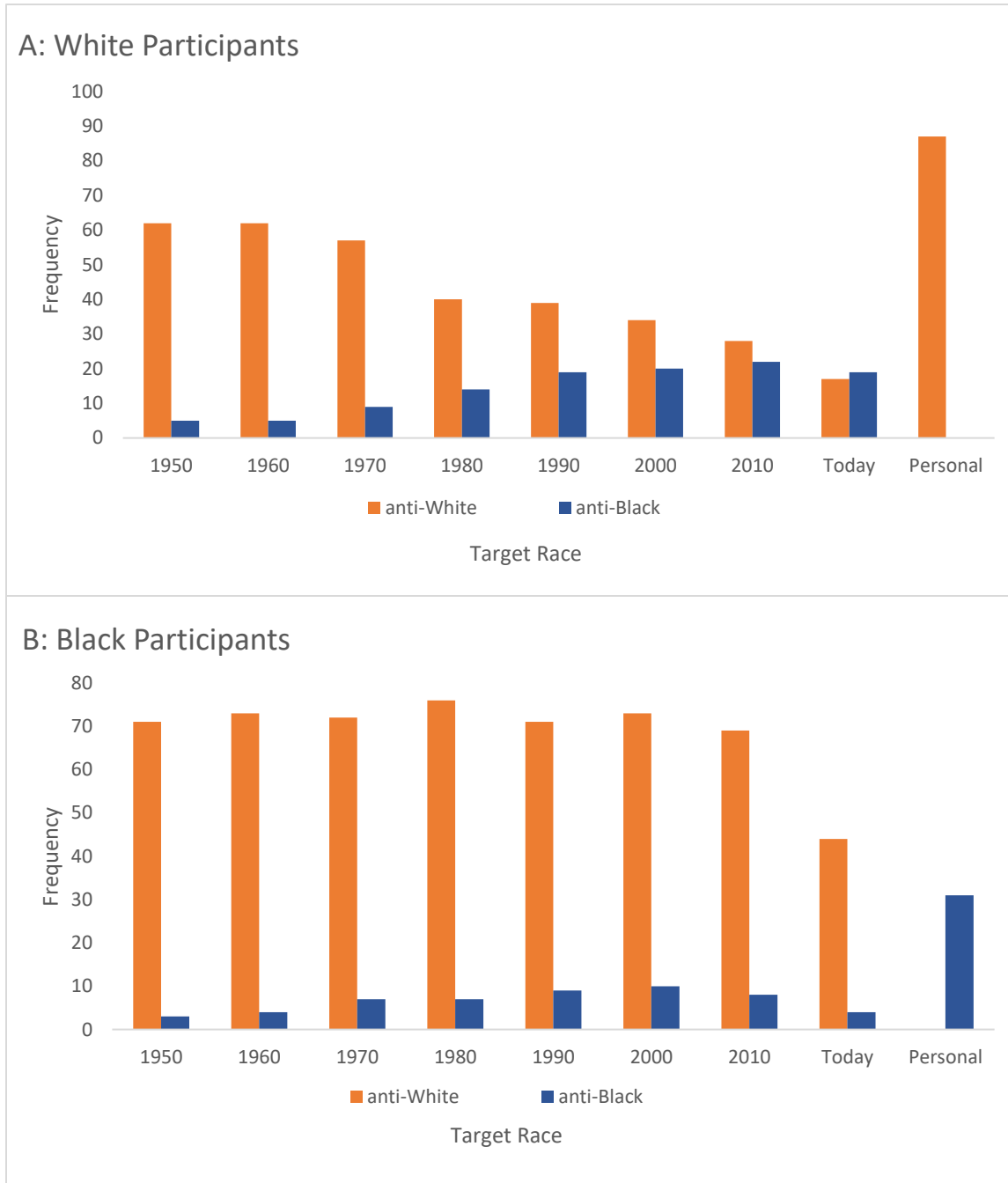


Figure 4. Frequency of White participants (Panel A) and Black participants (Panel B) responding that Whites and Blacks do not experience discrimination by decade.

Notes: The today time point only includes participants in the Ahistorical condition. Counts are raw frequencies, but do not necessarily reflect numbers of respondents (i.e., respondents could have provided more than one mention of a category)

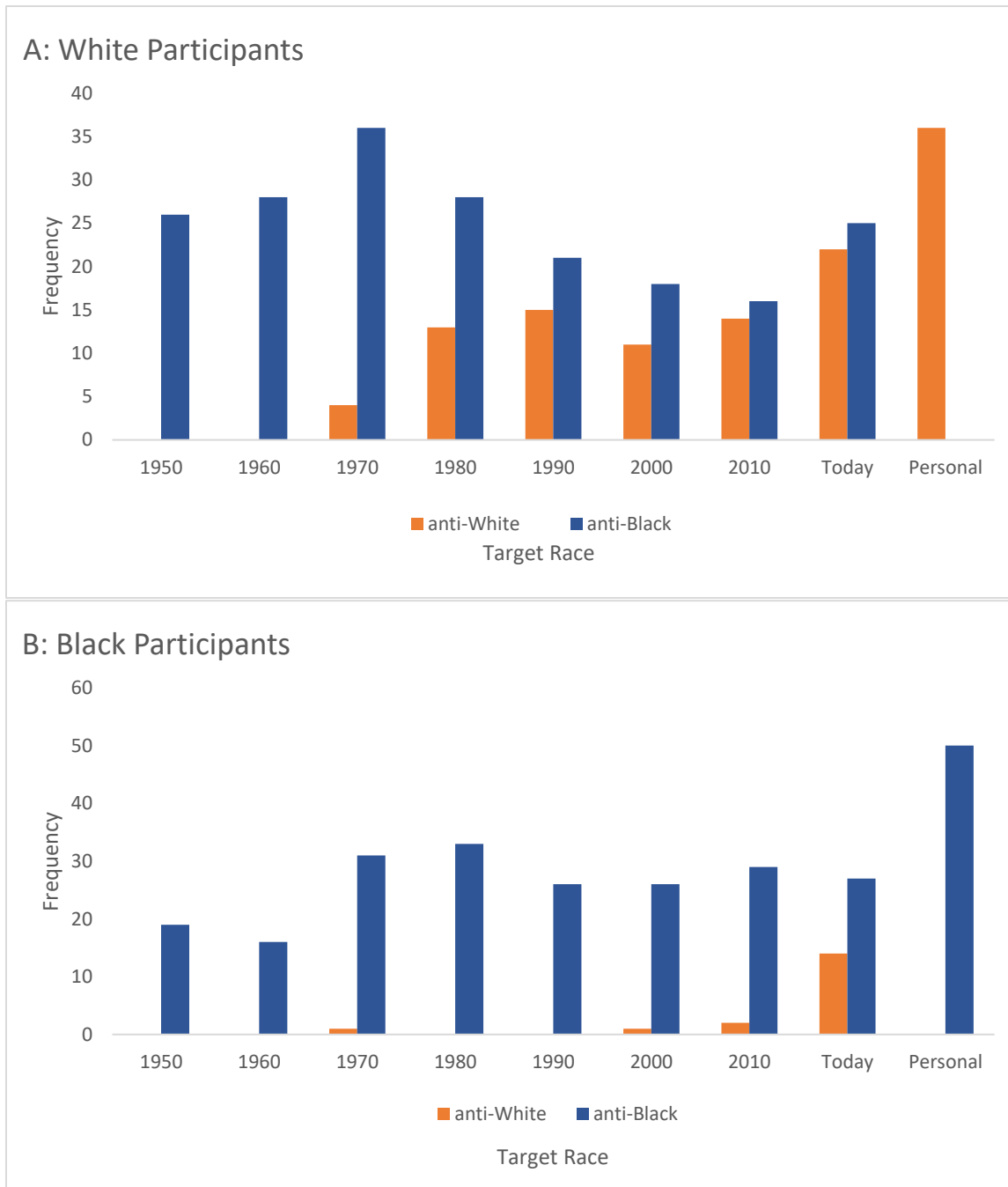


Figure 5. Frequency of White participants (Panel A) and Black participants (Panel B) responding that Whites and Blacks experience employment-related discrimination by decade.

Notes: The today time point only includes participants in the Ahistorical condition. Counts are raw frequencies, but do not necessarily reflect numbers of respondents (i.e., respondents could have provided more than one mention of a category)

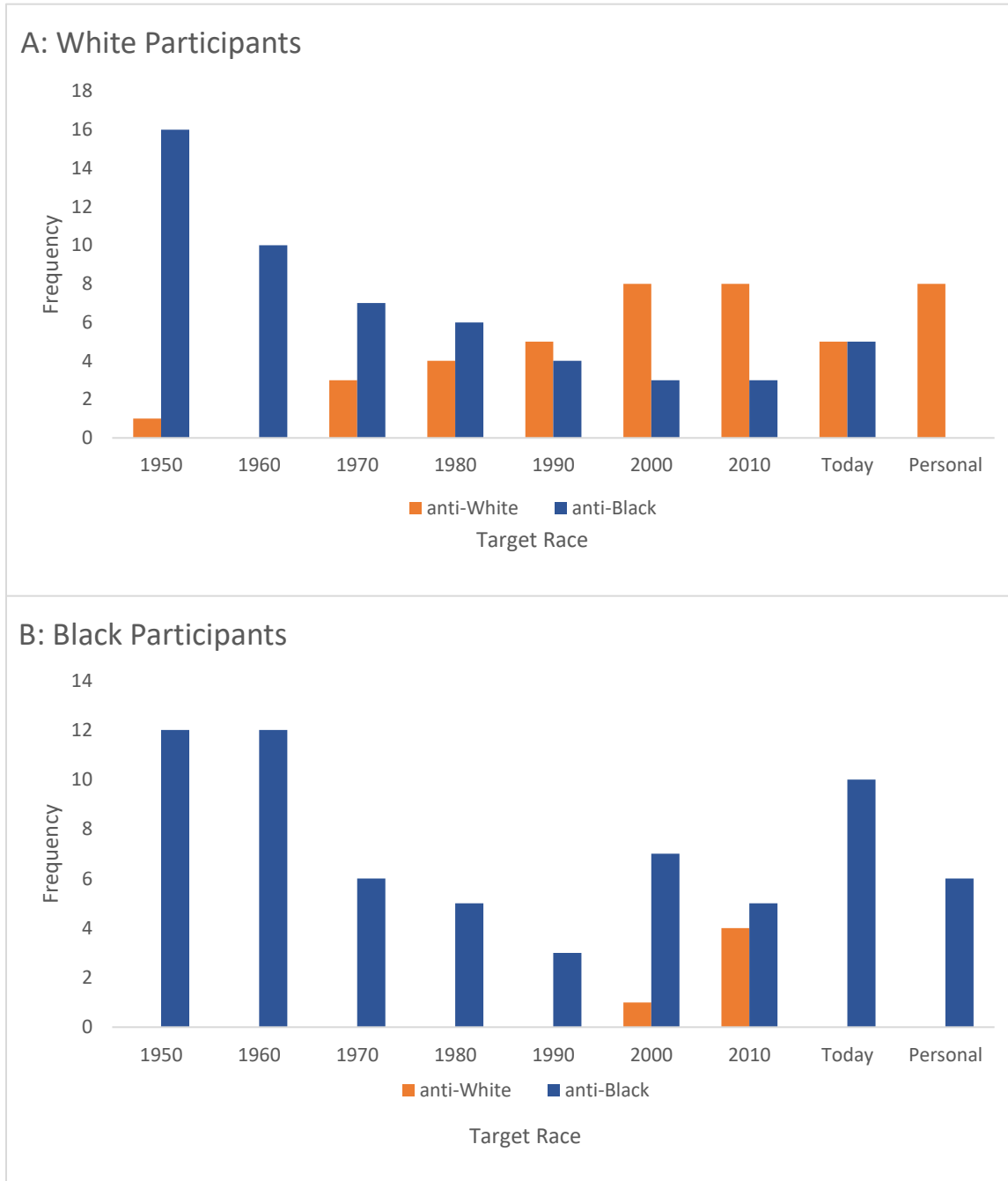


Figure 6. Frequency of White participants (Panel A) and Black participants (Panel B) responding that Whites and Blacks experience education-related discrimination by decade.

Notes: The today time point only includes participants in the Ahistorical condition. Counts are raw frequencies, but do not necessarily reflect numbers of respondents (i.e., respondents could have provided more than one mention of a category)

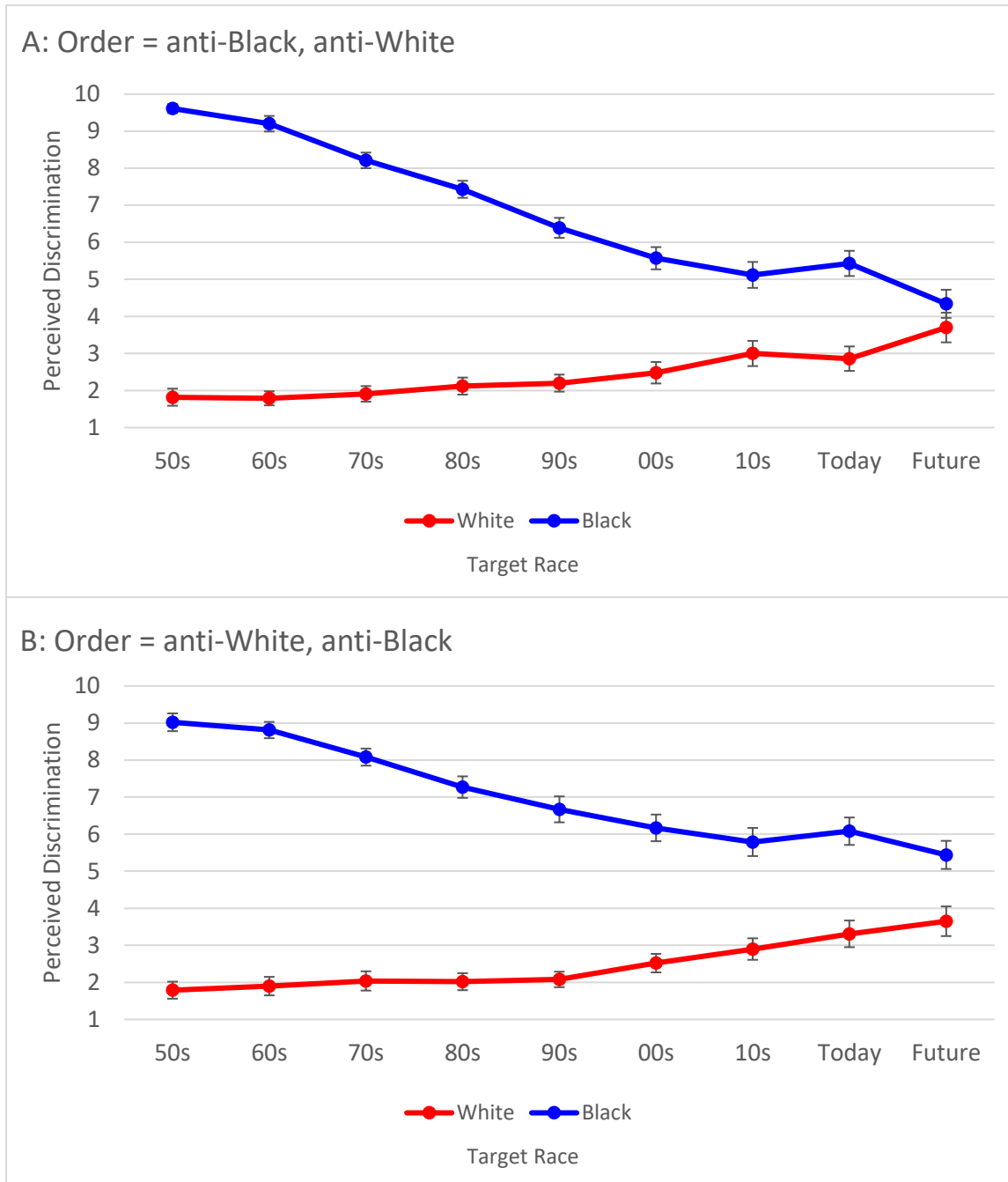


Figure 7. Means of perceived general discrimination (Control condition; Study 2) by target race, and decade, separated by participants who first rated Black discrimination, then White (panel A), and participants who first rated White discrimination, then Black (Panel B). Error bars represent standard errors.

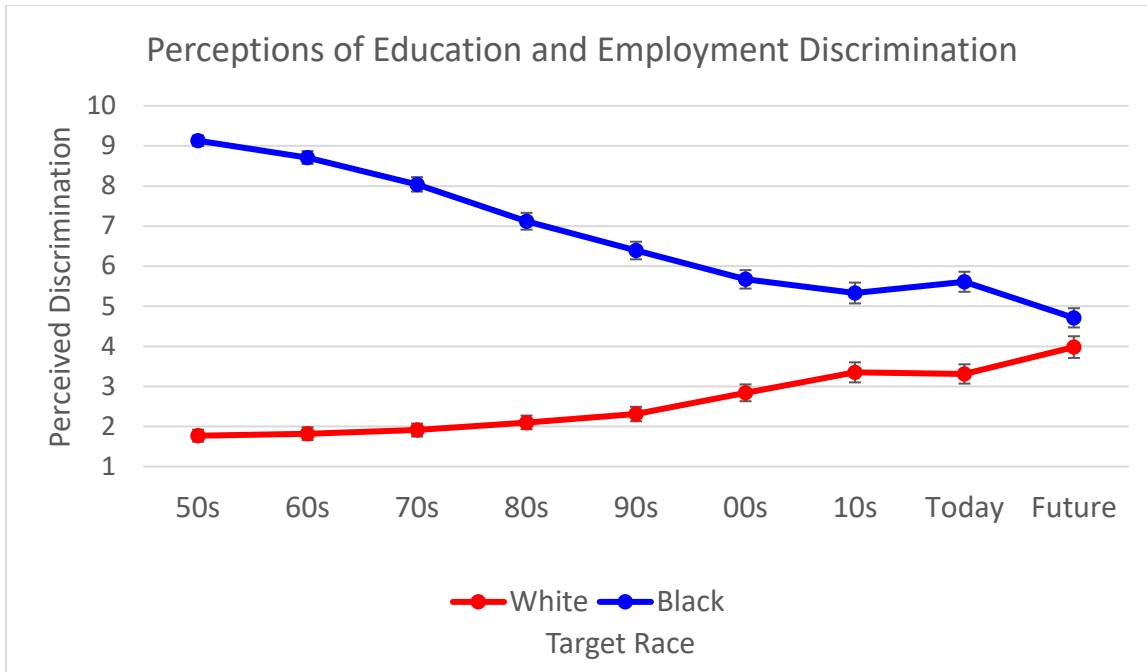


Figure 8. Means of perceived education and employment discrimination (Study 2) by target race, and decade. Error bars represent standard errors.

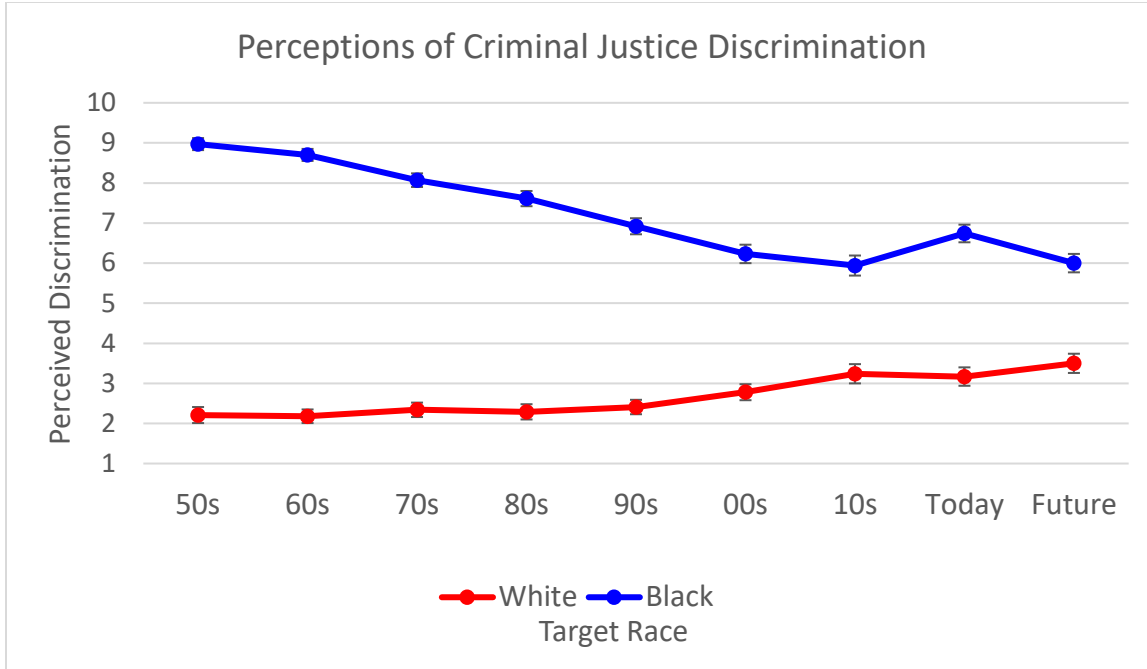


Figure 9. Means of perceived criminal justice discrimination (Study 2) by target race, and decade. Error bars represent standard errors.

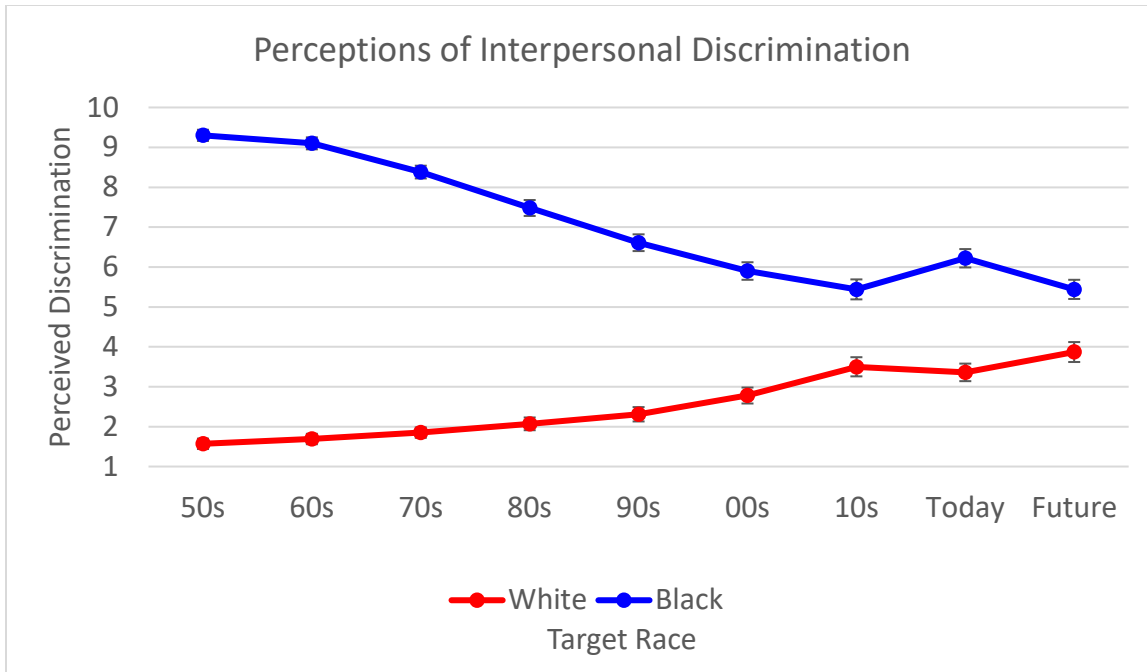


Figure 10. Means of perceived criminal justice discrimination (Study 2) by target race, and decade. Error bars represent standard errors.

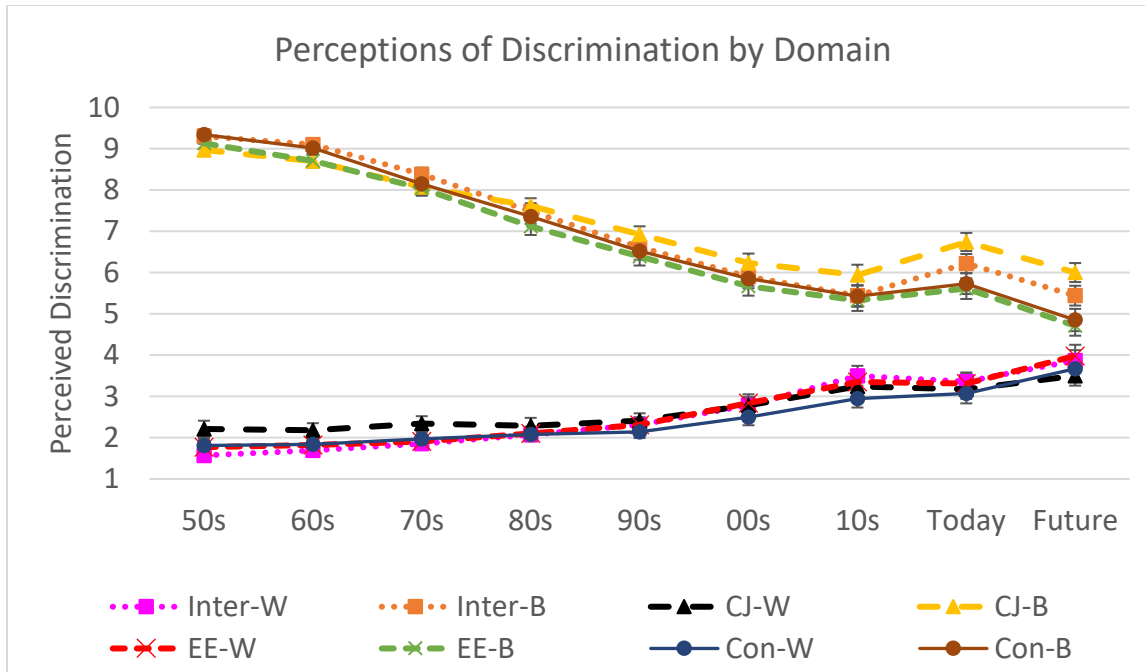


Figure 11. Means of perceived discrimination (Study 2) by condition, target race, and decade. Error bars represent standard errors.

Notes: Inter = interpersonal interactions condition, CJ = criminal justice condition, EE = education and employment condition, Con = control condition. Target race: W = White, B = Black.

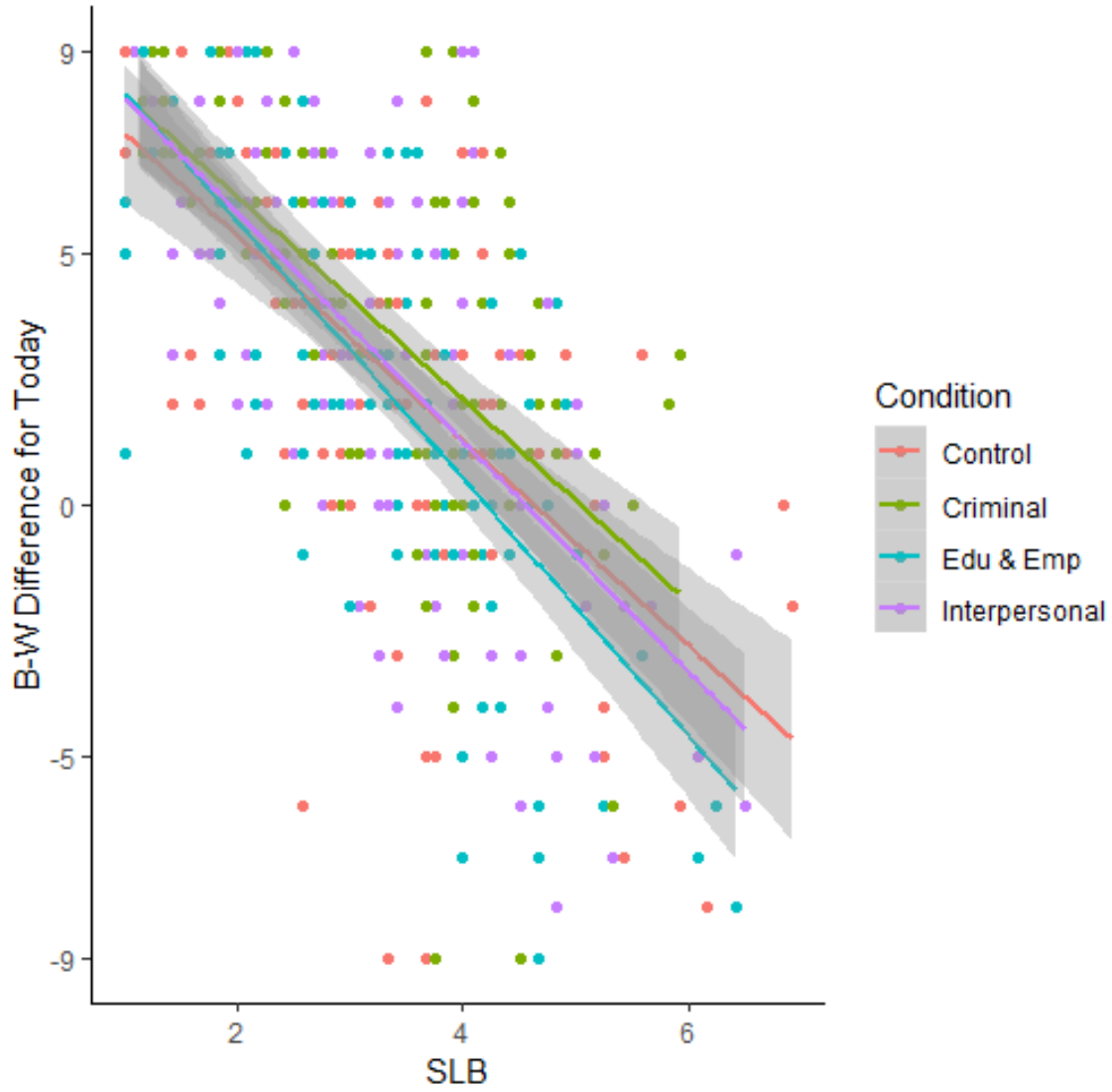


Figure 12. Status Legitimizing Beliefs predicting the difference between anti-Black and anti-White discrimination today by condition.