



But Affirmative Action hurts *Us!* Race-related beliefs shape perceptions of White disadvantage and policy unfairness

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ABSTRACT

Drawing on social identity theory, we examine how Whites' race-related beliefs drive their reactions to race-based Affirmative Action Policies (AAPs). Across laboratory and field settings, we find that Whites with relatively high modern racism (MR) or collective relative deprivation (CRD) beliefs perceive greater White disadvantage in organizations that have race-based AAPs, than in organizations that do not. Alternatively, race-based AAPs do not lead to perceptions of White disadvantage among Whites with relatively low MR and CRD beliefs. We also find that White disadvantage mediates the relationship between the combined effects of race-based AAPs, MR beliefs, and CRD beliefs and the perceived fairness of the organization's selection and promotion policies. Our findings suggest that race-based AAPs do not necessarily lead to perceptions of White disadvantage, but are contingent upon the interpretive lens of Whites' MR and CRD beliefs, and also offer practical insights for preventing negative reactions to race-based AAPs.

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Introduction

Decades of research converge on the conclusion that many Whites are opposed to race-based Affirmative Action Policies (AAPs), defined as organizational policies designed to improve employment outcomes for racial minorities in particular (Bobo & Kluegel, 1993; Harrison, Kravitz, Mayer, Leslie, & Lev-Arey, 2006; Kinder, 1986; McConahay, 1982; Myrdal, 1944; Sniderman & Tetlock, 1986). Opponents of race-based AAPs reject the notion that such policies counteract ongoing discrimination against racial minorities, arguing instead that race-based AAPs severely and unfairly disadvantage non-beneficiaries (i.e., Whites). For instance, in the 2003 United States Supreme Court case *Grutter vs. Bollinger*, Chief Justice William Rehnquist opposed the race-based AAP used by the University of Michigan, arguing that race-based AAPs fail to consider the individual rights of non-beneficiaries. Similarly, Justice Antonin Scalia noted facetiously that “the non-minority individuals who are deprived of a legal education, a civil service job, or any job at all by reason of their skin color will surely understand” (539 US 306, 2003, p. 348). Both objections to race-based AAPs seem to be driven by the perception that race-based AAPs disadvantage Whites and are therefore unfair. Indeed, the notion that race-based AAPs greatly hurt

non-beneficiaries' chances of getting a job, promotion, or admission to a university is widespread, as evidenced by the multitude of lawsuits filed on the basis of “reverse discrimination” (Kravitz et al., 1997).

The above anecdotes suggest that Whites oppose race-based AAPs in organizations and universities because they tend to associate race-based AAPs with *perceptions of White disadvantage* – the assumption that organizational decision-making processes are biased against Whites. The notion that perceptions of White disadvantage explain why Whites oppose AAPs is also supported by empirical research. For example, evidence suggests that Whites react negatively to an AAP when they believe that it hurts their group's chances of receiving favorable outcomes, such as being hired or promoted (Harrison et al., 2006; Kravitz, Bludau, & Klineberg, 2008; Lowery, Unzueta, Knowles, & Goff, 2006). Perceptions of White disadvantage play a prominent role in the public discourse on Affirmative Action (e.g., Lynch, 1992) and have received some attention in the academic literature (e.g., Crosby, 2004), yet little is known regarding the psychological processes that lead Whites to associate race-based AAPs with perceptions of White disadvantage. We therefore examine how chronic race-related beliefs serve as an interpretive lens through which Whites connect race-based AAPs with perceptions of White disadvantage, as well as more distal organizational consequences.

We focus our attention on two race-related beliefs: modern racism (MR), defined as the belief that racial minorities are no

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longer discriminated against and instead receive undeserved special treatment in society (Kinder, 1986; McConahay, 1986), and collective relative deprivation (CRD), defined as the belief that Whites are disadvantaged relative to racial minorities in society (Crosby, 1976; Runciman, 1966; Tougas & Veilleux, 1988). Although the MR account of Whites' reactions to race-based AAPs has been the topic of much research, the CRD account has received less attention. Moreover, scholars have yet to examine how MR and CRD operate in concert. Drawing on social identity theory (e.g., Tajfel & Turner, 1986), we answer calls for greater integration made by a number of scholars (e.g., Bobocel, Hing, Davey, Stanley, & Zanna, 1998; James, Brief, Dietz, & Cohen, 2001; Kravitz, 1995) and consider how MR and CRD beliefs jointly shape Whites' reactions to race-based AAPs. In particular, we theorize that race-based AAPs activate MR and CRD beliefs, and that Whites who are relatively high on either MR or CRD therefore form perceptions of White disadvantage in organizations with race-based AAPs. Alternatively, in organizations that have race-neutral equal employment opportunity (EEO) policies (i.e., policies that ensure non-discrimination without targeting a specific group) or lack race-based AAPs, Whites' MR and CRD beliefs remain dormant and are therefore unlikely to drive perceptions of White disadvantage.

Moreover, whereas much research has documented that Whites react negatively to race-based AAPs, surprisingly little research has investigated if race-based AAPs influence assessments of other organizational policies (for notable exceptions see Avery (2003), James et al. (2001), and Parker, Baltes, and Christiansen (1997)). Research suggests that perceptions of organizational policies—including the perceived fairness of selection and promotion policies—is a potent driver of behavior at work, including theft, turnover, and productivity (e.g., Greenberg & Cropanzano, 2001; Leck, Saunders, & Charbonneau, 1996). Examining the antecedents of policy fairness perceptions is therefore an important step in building knowledge that is useful for organizational and public governance. As such, we examine how the presence of a race-based AAP interacts with Whites' MR and CRD beliefs to predict the perceived fairness of the organization's selection and promotion policies, and whether perceptions of White disadvantage mediate this effect.

In summary, this research extends the Affirmative Action literature in two ways. First, we offer and test a conceptualization of Whites' reactions to race-based AAPs that integrates two race-related beliefs: MR and CRD. Second, we advance and evaluate a model in which perceptions of White disadvantage are the mechanism that explains why Whites' with relatively high MR or CRD beliefs perceive selection and promotion policies as unfair in organizations with race-based AAPs. To provide a stringent test of our framework, which is depicted in Fig. 1, we test these predictions in both the laboratory (Study 1) and the field (Study 2).

Background literature

A considerable amount of research suggests that Whites react negatively to race-based AAPs (i.e., AAPs that target racial minorities). Yet why this occurs is relatively unclear and, indeed, is still hotly debated (Crosby, Iyer, & Sincharoen, 2006). Race-related beliefs have emerged as one likely explanation for Whites' AAP reactions. Extant scholarship, however, has focused on Whites' beliefs regarding racial outgroups, including MR, and has given less attention to Whites' beliefs regarding their racial in-group, namely CRD. In what follows, we first review research on MR and CRD as explanations for Whites' reactions to race-based AAPs. Although Whites' tend to oppose AAPs that target a range of minorities (Wilson, Moore, McKay, & Avery, 2008), we focus our review on AAPs that

target Blacks because this group has been the focus of research on MR, and to a lesser extent CRD. We then draw from social identity theory and build an integrative model for how MR and CRD operate in concert to shape perceptions of White disadvantage in organizations with race-based AAPs.

Modern racism (MR)—the belief that Blacks are no longer subject to discrimination and instead receive unfair advantages in contemporary society (Kinder, 1986; McConahay, 1986)—is a subtle form of racial prejudice that has long been used to explain negative reactions to race-based AAPs. Indeed, meta-analytic evidence supports that Whites who hold MR beliefs are more likely to oppose race-based AAPs than Whites who do not (Harrison et al., 2006). To the extent that racial prejudice accounts for Whites' AAP reactions, Whites who hold MR beliefs should react negatively to AAPs that target racial minorities, but not to EEO policies that promote non-discrimination without targeting a particular racial group. Some studies find that MR and other types of racial prejudice uniquely account for negative reactions to race-based AAPs, but not to race-neutral EEO policies (James et al., 2001; Walker et al., 2007), whereas others do not (Bobocel et al., 1998; Evans, 2003). Inconsistent findings may suggest that Whites' reactions to race-based AAPs are not driven by MR beliefs alone, and that other race-related beliefs may play an explanatory role.

Like MR beliefs, *collective relative deprivation (CRD)* beliefs have also been used to understand reactions to AAPs (Tougas, Brown, Beaton, & St-Pierre, 1999; Tougas & Veilleux, 1988; Veilleux & Tougas, 1989). In contrast to Whites' MR beliefs, which are beliefs regarding the extent to which an outgroup (i.e., Blacks) is chronically *advantaged* in society, Whites' CRD beliefs are beliefs regarding the extent to which their in-group is chronically *disadvantaged* in society.¹ To date, research on race-based AAPs has largely focused on beliefs regarding the CRD of groups targeted by AAPs (e.g., minorities, women), and finds that individuals are more likely to support race-based AAPs if they believe that the group targeted by the AAP experiences disadvantage and discrimination (Harrison et al., 2006). At least one study investigated Whites' CRD beliefs and found that Whites who believe their in-group is chronically disadvantaged in society oppose government efforts to help Blacks, although CRD beliefs were unrelated to attitudes toward efforts to give Blacks special treatment in selection and promotion (Williams et al., 1999). Researchers have similarly investigated the role of CRD in reactions to gender-based AAPs and found that men who hold CRD beliefs, and therefore believe their in-group is disadvantaged, oppose AAPs that target women (Veilleux & Tougas, 1989). Thus, like research on MR, research on CRD has produced mixed findings. Moreover, scholars have yet to provide a strong test of whether CRD beliefs drive Whites' AAP reactions, by investigating if Whites' who hold CRD beliefs react negatively to race-based AAPs, but not race-neutral EEO policies.

One could argue that MR and CRD beliefs are two sides of the same coin, in that a belief in Black advantage in society is the same as a belief in White disadvantage in society. Although there is likely a moderate relationship between MR and CRD, there is good reason to maintain a conceptual distinction between these constructs. In particular, equating Black advantage with White disadvantage requires a view of society akin to a zero-sum competition, where the interests of the parties are perfectly opposed. Some may hold

¹ Collective self-interest (CSI) is another construct that is both an antecedent to AAP reactions and similar to CRD in some ways. Although similar, scholars agree that CSI and CRD are distinct (cf. Harrison et al., 2006; Kravitz, 1995). CRD represents beliefs about the extent to which a group is disadvantaged in the broader society, whereas CSI represents beliefs about the extent to which a specific AAP will have a negative impact on a group's outcomes. We focus our attention on CRD instead of CSI due to similarities between CRD and MR, both of which reflect beliefs about the (dis)advantage a group faces in the broader society, not the impact of a particular AAP on group outcomes.

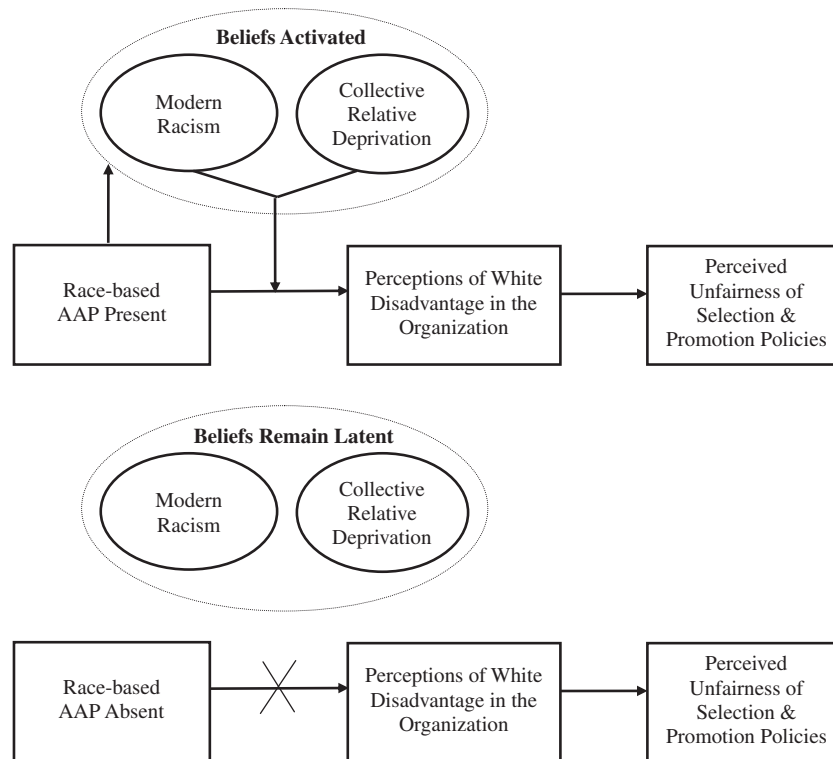


Fig. 1. General theoretical model.

such a view of society, yet an individual can believe that there are unfair advantages for Blacks but at the same time feel little concern for the status of Whites. Indeed, the necessity of a distinction between in-group and out-group attitudes has long permeated social psychology, and evidence supports that out-group hate does not necessarily imply in-group love (Allport, 1954; Brewer, 1999). This is not to say that perceptions of Black gain do not lead to perceptions of White loss and vice versa, only that these beliefs are not one in the same. Consistent with this conclusion, scholars have long regarded attitudes towards AAP beneficiaries and non-beneficiaries as related, but ultimately separable, and evidence supports that attitudes toward the in-group and the out-group have independent effects on individuals' reactions to AAPs (Harrison et al., 2006; Lowery et al., 2006).

Race-based AAPs, MR, and CRD: a social identity integration

Theory and research support that MR and CRD are distinct constructs, which suggests that integrating the MR and CRD accounts has the potential to provide new insights into why Whites oppose race-based AAPs. We therefore propose that MR and CRD beliefs can be regarded as out-group and in-group beliefs that are *concurrently* activated by race-based AAPs (see Fig. 1 for conceptual model). Although some researchers have shown that Whites' MR beliefs predict opposition to race-based AAPs (e.g., James et al., 2001) and others have shown that Whites' CRD beliefs predict opposition to government effort to help Blacks (e.g., Williams et al., 1999), prior work has not considered the possibility that Whites' MR and CRD beliefs are jointly activated by race-based AAPs. To the extent that MR and CRD beliefs operate in concert to drive Whites' reactions to race-based AAPs, an integrative framework has the potential to paint a more nuanced and accurate portrait of reactions to AAPs, identify which individuals are most likely to view race-based AAPs as a source of White disadvantage, and reconcile inconsistent findings in the extant literature.

Social identity theory provides insight into why race-based AAPs activate both MR and CRD beliefs, which in turn shape how AAPs are perceived. According to social identity theory (Tajfel & Turner, 1986), individuals define the self in terms of the social groups to which they belong and in turn are motivated to protect the value of the groups with which they identify (Tajfel, 1981). By protecting the worth of their in-group identity, individuals also protect their own self worth by proxy (Tajfel & Turner, 1986). Concern for achieving and protecting a favorable in-group identity is most prominent when beliefs that threaten in-group esteem are activated (Tajfel & Turner, 1986). Race-based AAPs target racial minorities and are therefore likely to activate both the out-group belief that Blacks are advantaged (e.g., higher MR) and the in-group belief that Whites are disadvantaged (e.g., higher CRD). Both beliefs increase concern for in-group status or worth in the organization, with the result that both MR and CRD beliefs are likely to drive Whites to react to race-based AAPs in ways that protect in-group status.

MR beliefs capture the extent to which individuals believe that Blacks have received undeserved special treatment. Accordingly, individuals with relatively high MR beliefs are unlikely to see a race-based AAP as a remedy for past discrimination, but rather as a reflection of an organization-wide effort to further assist Blacks at the expense of reducing White outcomes. Although perceptions of out-group gain are not equivalent to perceptions of in-group loss, out-group gain can *imply* in-group loss in highly competitive situations, including the employment context, with the result that MR lead to perceived White disadvantage in organizations with race-based AAPs. Similarly, CRD beliefs capture the extent to which Whites believe that they have been disadvantaged in society relative to racial minorities. Whites with relatively high CRD beliefs are unlikely to interpret race-based AAPs as policies that reduce White privilege, but rather as policies that further diminish Whites' outcomes in the organization. Put differently, Whites are likely to interpret race-based AAPs through the interpretive lens of their

beliefs about how both Blacks and Whites are treated generally in society, with the result that Whites' MR and CRD beliefs drive perceptions of White disadvantage in organizations with race-based AAPs.

The co-activation of MR and CRD beliefs by race-based AAPs implies that even among Whites with relatively low MR beliefs, concern for in-group outcomes will not be mitigated if those individuals hold relatively high CRD beliefs. Likewise, among Whites with relatively low CRD beliefs, concern for in-group outcomes will not be mitigated if those individuals hold relatively high MR beliefs. As a result, we predict that Whites with relatively high MR or CRD beliefs will perceive White disadvantage in organizations with race-based AAPs. In organizations with EEO policies that do not target specific racial groups, however, race-related beliefs remain dormant and Whites with relatively high MR or CRD beliefs will therefore be unlikely to perceive White disadvantage. Finally, only Whites who are relatively low on both MR and CRD will not form perceptions of White disadvantage, regardless of policy type.

Hypothesis 1. The three-way interaction among employment policy type, MR, and CRD will predict perceptions of White disadvantage. Among Whites with relatively high MR or CRD beliefs, perceptions of White disadvantage will be greater in organizations with race-based AAPs, as compared to race-neutral EEO policies. Among Whites with relatively low MR and CRD beliefs, perceptions of White disadvantage will be comparatively low and will not differ in organizations with race-based AAPs versus race-neutral EEO policies.

Research overview

In Study 1, we used a laboratory methodology in which we used a recruitment letter to manipulate whether the organization had a race-neutral EEO policy or a race-based AAP and measured participants' MR and CRD beliefs several weeks prior to the experiment. In Study 2, we gathered field data from employees of multiple organizations, and asked them to report on the extent to which their organization uses a race-based AAP, as well as their MR and CRD beliefs. We used multiple methodologies to bolster the internal and external validity of our findings.

Study 1

Method

Participants

Ninety-nine students from a large, public university in the mid-Atlantic United States participated in exchange for course credit. The student body at the university was reasonably diverse (55% White, 11% Black, 5% Hispanic, 12% Asian, 9% Foreign, 8% Unknown), but we were interested exclusively in Whites' reactions to race-based AAPs and therefore limited participation to students who identified themselves as White. The participants were 52% female and ranged in age from 18 to 41 years ($M = 19.1$, $SD = 2.01$).

Procedure

One month before the experiment, we collected pre-test measures, including MR and CRD, from students enrolled in an introductory psychology course. We included the measures in a larger packet of questionnaires that contained measures for unrelated studies. We invited all self-identified Whites who completed the pre-test measures to participate in a study of the effectiveness of recruitment letters and offered course credit in exchange for participation.

When participants arrived for the experiment, we informed them that they would be evaluating recruitment materials for an internship position with an "actual" company, Peak Consulting. We asked participants to play the role of a student interested in an internship and to critically evaluate the materials. The materials consisted of a one-page letter, modeled after recruitment letters used in the consulting industry, that included details about the firm (e.g., premier business consulting firm) and desired applicants (e.g., well-rounded, broadly-educated, creative). To enhance realism, the materials were printed on company letterhead and were signed by the CEO of the company. We instructed participants to carefully read the recruitment letter and answer a number of questions about Peak Consulting. The sample and the task were well-matched, given that college students are frequently targeted in organizational recruitment efforts.

Policy manipulation

Participants randomly received one of two versions of the recruitment letter. One version indicated that Peak Consulting had a race-based AAP, while the other version indicated that Peak Consulting had a race-neutral EEO policy. The inclusion of the race-neutral EEO policy condition allowed us to test if MR and CRD predict Whites' AAP reactions due to the policy's racial content. If MR and CRD beliefs predicted reactions to both race-based AAPs and race-neutral EEO policies our results could be interpreted as evidence that the MR and CRD measures capture negative affect, which in turn influences reactions to employment policies, regardless of their racial content.

Consistent with previous research on the effects of AAP and EEO policies on applicant attraction (e.g., James et al., 2001; Walker et al., 2007), we manipulated policy type by including relatively short statements in the recruitment letters. The statements included few details regarding how the EEO policy or AAP was implemented, yet were a realistic representation of the type of information applicants are likely to have access to regarding a company's employment policy. The race-based AAP manipulation we used was developed by James and colleagues (2001) and was modeled after AAP statements found in the recruitment materials of Fortune 500 companies. The statement indicated that:

Peak Consulting is an Affirmative Action employer and our programs produce results. For example, just last year, 31% of all open internship positions were filled by people of color, 30% of last year's promotions were awarded to minorities and over 25% of our Board of Directors are African Americans and other people of color.

The race-neutral EEO policy manipulation indicated that the company was an equal opportunity employer, but did not mention race. Like the race-based AAP manipulation, the race-neutral EEO policy manipulation has been used in prior research and is consistent with EEO statements used by organizations in recruitment materials (James et al., 2001; Walker et al., 2007). The manipulation stated that:

Also, Peak Consulting is an Equal Employment Opportunity employer and our programs produce results; all employees are afforded an equal chance to succeed.

Pre-test measures

To measure MR, we used McConahay's (1986) 7-item scale, which is the most widely used measure of direct racial prejudice in the social sciences (Olson, 2009). Research demonstrates that McConahay's scale predicts a wide range of race-related behaviors, including voting for Black candidates, assigning guilty verdicts to Black defendants, and subtle aggression against Blacks. Sample

items include “It is easy to understand the anger of Black people in America (reverse coded),” “Discrimination against Blacks is no longer a problem in the United States,” and “Over the past few years Blacks have gotten more economically than they deserve.” Participants responded to items on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The reliability of the scale was $\alpha = .83$ ($M = 2.19$, $SD = .80$).

To measure CRD, we used Veilleux and Tougas' (1989) scale. The scale is unique in that it captures collective, as opposed to personal, relative deprivation and was therefore well-suited to our purposes. The scale has been used previously to capture perceptions of group deprivation among women and men (Beaton & Tougas, 1997; Tougas & Veilleux, 1988; Veilleux & Tougas, 1989), and we adapted the scale for use with Whites. Although the original scale contains both cognitive and affective items, we used only the cognitive items due to conceptual and mathematical problems associated with combining the two item types (Kravitz et al., 1997). The CRD items include, “Compared to minorities, White people are disadvantaged when they are looking for work” and “Compared to minorities, White people are disadvantaged when they apply for a promotion at work.” Participants responded to the items on a 9-point scale that ranged from 1 (*strongly disagree*) to 9 (*strongly agree*). The reliability of the CRD scale was $\alpha = .87$ ($M = 4.12$, $SD = 1.94$).

Post-test measures

We measured perceptions of White disadvantage in the organization with two items developed for this study, specifically: “Being of Caucasian background would put a job candidate at a great disadvantage when applying to Peak Consulting,” and “Being of Caucasian background would put an employee at a great disadvantage when applying for a promotion within Peak Consulting (1 = *strongly disagree* to 9 = *strongly agree*).” The reliability of the perceived White disadvantage scale was $\alpha = .86$ ($M = 4.09$, $SD = 1.96$).

As a manipulation check, we asked participants to respond to the item “At Peak Consulting, employee characteristics such as race do not matter,” which we adapted from the manipulation check used by James and colleagues (2001). Participants responded to the item on a scale that ranged from 1 (*strongly disagree*) to 9 (*strongly agree*).

Discriminant validity

We used confirmatory factor analysis (CFA) to assess the discriminant validity of the study measures, including MR, CRD, and White disadvantage. We allowed latent factors to covary in all models. A three-factor model in which the items for each of the three constructs loaded on separate latent factors fit the data well [$\chi^2(41) = 53.22$; CFI = .97; RMSEA = .06; SRMR = .05]. Moreover, the three-factor model fit the data better than a two-factor model, in which the MR and CRD items indicated one latent factor and the White disadvantage items indicated a second latent factor [$\chi^2(42) = 111.71$; CFI = .66; RMSEA = .13; SRMR = .09; $\Delta\chi^2(1) = 58.49$, $p = .00$], and also better than a one-factor model in which all items loaded on a single latent factor [$\chi^2(44) = 241.61$; CFI = .59; RMSEA = .22; SRMR = .13; $\Delta\chi^2(3) = 188.39$, $p = .00$]. The CFA results support that the study measures assess distinct constructs.

We conducted several additional analyses to further test the discriminant validity of MR and CRD. Our framework suggests that Whites can be relatively high on one race-related belief but relatively low on the other. We split the sample by the mean of MR and CRD and found that 34% of participants had mixed race-related beliefs (i.e., higher MR/lower CRD or lower MR/higher CRD). Also, the correlation between MR and CRD was .43, which means that only 18% of the variance in Whites' MR beliefs is explained by their CRD beliefs and vice versa.

Results

Table 1 presents the means, standard deviations, and correlations for the study variables.

We regressed the manipulation check item on all predictors (policy type, MR, CRD), as well as all two- and three-way interactions among the predictors. As expected, only the policy type manipulation (race-based = 1; race-neutral = -1) had a significant relationship with the manipulation check item [$b = -1.69$, $t(97) = -9.20$, $p = .00$, $\Delta R^2 = .46$]. Consistent with our intended manipulation, participants perceived that race mattered more in the race-based AAP condition ($M = 6.50$, $SD = 2.03$) than in the race-neutral EEO policy condition ($M = 3.12$, $SD = 1.64$).

We used hierarchical ordinary least squares (OLS) regression to test Hypothesis 1, which states that Whites with relatively high MR or CRD beliefs, but not Whites with relatively low MR and CRD beliefs, will perceive more White disadvantage in organizations with race-based AAPs, as compared to race-neutral EEO policies. We mean-centered MR and CRD in the analysis to ease interpretation of the regression coefficients (Aiken & West, 1991). We also controlled for gender and political affiliation because research suggests these variables are related to AAP reactions (Kravitz et al., 1997; Harrison et al., 2006). The political affiliation variable had three categories, including republican (27.3%), democrat (33.3%), and other (39.4%), and we therefore used two dummy variables to control for political affiliation (republican: 1 = yes, 0 = no; democrat: 1 = yes, 0 = no). We entered gender and the political affiliation dummy variables in step 1; the main effects of the policy type manipulation, MR, and CRD in step 2; all two-way interactions among the predictors in step 3; and the three-way interaction in step 4. As shown in Table 2, in step 2 policy type was significant [$b = .82$, $t(92) = 4.55$, $p < .01$], but MR and CRD were not. Participants in the race-based AAP condition ($M = 4.90$, $SD = 1.82$) perceived greater White disadvantage than participants in the race-neutral EEO policy condition ($M = 3.29$, $SD = 1.78$). In step 3, no two-way interaction was significant, but in step 4 the predicted three-way interaction was significant [$b = -.28$, $t(88) = -2.54$, $\Delta R^2 = .05$, $p < .05$].

To determine if the three-way interaction supported Hypothesis 1, we graphed the interaction at one standard deviation above and below the means of MR and CRD and tested the simple effects of policy type for each combination of relatively low and high MR and CRD (Aiken & West, 1991). As shown in Fig. 2, perceptions of White disadvantage were greater in the race-based AAP condition than in the race-neutral EEO policy condition for lower MR, higher CRD Whites [$b = 1.24$, $t(88) = 2.78$, $p < .01$]; higher MR, lower CRD Whites [$b = 1.64$, $t(88) = 3.57$, $p < .01$]; and higher MR, higher CRD Whites [$b = .70$, $t(88) = 2.44$, $p < .05$]; but not for lower MR, lower CRD Whites [$b = .44$, $t(88) = 1.37$, $p = .17$]. Thus, Hypothesis 1 was supported.

Discussion

Drawing from social identity theory, we predicted that Whites' reactions to race-based AAPs are driven by out-group attitudes (i.e., MR) and in-group attitudes (i.e., CRD) working in concert. Consistent with our theory, we found a three-way interaction among policy type, MR, and CRD, such that individuals who hold relative high MR or CRD beliefs perceive greater White disadvantage in organizations with race-based AAPs, as compared to race-neutral EEO policies. This finding is consistent with our theory that race-based AAPs activate Whites' MR and CRD beliefs, which in turn shape their perceptions of White disadvantage in the organization. Alternatively, in organizations with race-neutral EEO policies, Whites' race-related beliefs remain dormant. Moreover, the magnitude of the three-way interaction, which explained 5% of the

Table 1
Descriptive statistics and correlations (Study 1).

	M	SD	1	2	3	4	5	6	7
1. Gender (−1 = male, 1 = female)	.03	1.00	–						
2. Republican (0 = no, 1 = yes)	.27	.48	−.18	–					
3. Democrat (0 = no, 1 = yes)	.33	.47	.04	−.43**	–				
4. Policy type (−1 = race-neutral, 1 = race-based)	−.01	1.00	.03	.07	−.10	–			
5. Modern racism (MR)	2.19	.80	−.33**	.37**	−.29**	−.07	.83		
6. Collective relative deprivation (CRD)	4.12	1.94	−.09	.19	−.16	−.06	.43**	.87	
7. White Disadvantage	4.08	1.96	.02	.16	−.17	−.41**	.16	.19	.86

Values below the diagonal are correlation coefficients and values on the diagonal are Cronbach's alpha coefficients. $N = 99$.

* $p < .05$.

** $p < .01$.

Table 2
Results of hierarchical regression analyses predicting perceptions of White disadvantage (Study 1).

	1	2	3	4
Gender (control)	.09	(.20)	.14	(.19)
Republican (control)	−.53	(.46)	−.24	(.43)
Democrat (control)	.49	(.50)	.20	(.46)
Policy type		.82	(.18)**	.82
Modern racism (MR)		.27	(.28)	.30
Collective relative deprivation (CRD)		.16	(.10)	.16
Policy type × MR			.13	(.26)
Policy type × CRD			−.04	(.11)
MR × CRD			−.03	(.11)
Policy type × MR × CRD				−.28
ΔR^2	.04	.20**	.00	.05*
Model R^2	.04	.24**	.24**	.30**
Adjusted R^2	.01	.19**	.17**	.22**

Parameter estimates are unstandardized. Standard errors are shown in parentheses. $N = 99$.

* $p < .05$.

** $p < .01$.

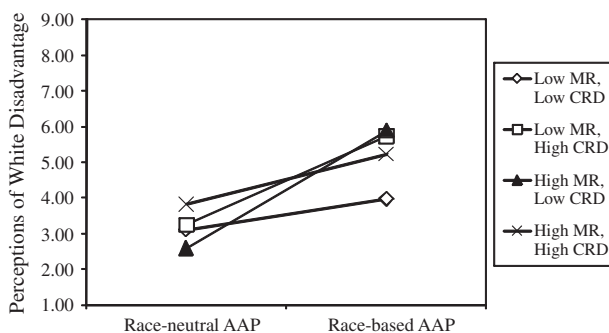


Fig. 2. Three-way interaction among policy type, MR, and CRD predicting perceptions of White disadvantage (Study 1).

variance in perceptions of White disadvantage, was larger than the magnitude of interactions typically found in organizational research (Aguinis, Beaty, Boik, & Pierce, 2005).²

We found a significant three-way interaction among policy type, MR, and CRD, but did not find significant two-way interactions between policy type and MR or policy type and CRD. The lack of significant two-way interactions substantiates our claim that it is critical to account for MR and CRD beliefs simultaneously, and that researchers who assess only one of these beliefs may come

to the faulty conclusion that race-related beliefs are unrelated to Whites' reactions to race-based AAPs. As such, our results provide insight into why some researchers have found a significant interaction between policy type and MR (e.g., James et al., 2001), whereas others have not (Bobocel et al., 1998; Evans, 2003), and suggest that failure to account for both race-related beliefs may explain the non-significant findings. Moreover, our results are consistent with the notion that Whites' reactions to race-based AAPs are multi-determined (Kravitz, 2009), and depend on several chronic beliefs.

Similarly, we did not find effects of MR, CRD, or their interaction on White disadvantage. The lack of findings for MR and CRD across the two policy conditions is consistent with our theory that race-related beliefs are activated by race-based AAPs, but remain dormant in the presence of race-neutral policies. Although non-significant, the correlation between MR and White disadvantage ($r = .16$, $p = .11$) was within the range of correlations reported in a meta-analysis of MR beliefs and attitudes toward AAPs ($.05 \leq r \leq .56$; Harrison et al., 2006). Given the lack of research on CRD beliefs and reactions to race-based AAPs among Whites, the typicality of the correlation is more difficult to determine.

The race-based AAP manipulation indicated that roughly 30% of several positions were filled by racial minorities. This level is higher than the percent of minorities typically found in management positions (e.g., Kalev et al., 2006), and therefore suggests that the race-based AAP was effective. It is important to be cautious, however, in generalizing these results to organizations composed of a higher or lower percentage of minorities. Consistent with classic work in sociology (e.g., Blalock, 1956), which suggests that prejudice and discrimination against Blacks in a given community increases with the percentage of Blacks residing in that community, recent evidence supports that Whites' attitudes become increasingly negative as the percentage of minorities in an

² Aguinis et al. (2005) report that the average effect size for categorical moderators of continuous predictors is $f^2 = .002$. The R^2 value for the three-way interaction among AAP type, MR, and CRD in Study 1 is .05, which corresponds to an f^2 value of .07. Although the f^2 for our three-way interaction is larger than the average f^2 value reported by Aguinis et al., it is important to note that the average effect size reported by Aguinis et al. is based on two-way interactions, whereas we find a significant three-way interaction.

organization increases (e.g., Brief et al., 2005). Thus, it is possible that even Whites who are relatively low on both MR and CRD will react negatively to race-based AAPs in organizations where more than 30% of employees are minorities.

The Study 1 methodology has both strengths and limitations. One strength was the measurement of MR and CRD beliefs a month prior to the AAP manipulation. This design helps bolster our argument that MR and CRD are causal drivers of Whites' reactions to race-based AAPs, and reduces the possibility that single-source bias provides an alternative explanation for our findings. Despite strong internal validity, one potential limitation of Study 1 is its limited external validity, given that we asked students to imagine that they were being recruited. Students are frequent targets of recruitment efforts, given that 1.5 million college students (US Department of Education, 2009) enter a job market saturated with recruitment letters each year. At the same time, our findings may have limited generalizability to the broader workforce. We therefore sought to replicate and extend our findings in a sample of working adults.

Study 2

In Study 2, we conducted a field study of working adults in which we sought to replicate and extend Study 1. Our first goal was to replicate the three-way interaction that emerged in Study 1, which suggests that MR and CRD beliefs jointly shape Whites' reactions to race-based AAPs. Instead of manipulating AAP type, in Study 2 we asked participants to report on the extent to which they believe their employing organizations use race-based AAPs. Consistent with Study 1, we expect that among Whites who are relatively high on MR or CRD, perceptions of White disadvantage will be positively related to the belief that one's employing organization has a race-based AAP. Alternatively, among Whites who are relatively low on MR and CRD, perceptions of White disadvantage will be relatively low and will be unrelated to the belief that one's employing organization has a race-based AAP (Hypothesis 1).

In addition to replicating the three-way interaction, we also extend Study 1 by examining if the combined effects of race-based AAPs, MR, and CRD have implications for perceptions of the fairness of other organizational policies, and specifically selection and promotion policies, through perceived White disadvantage (cf. Nacoste, 1987). Individuals tend to view their in-group as rightly deserving of positive outcomes (Pettigrew, 1979). As a result, individuals are likely to form impressions that an organization's policies are unfair if they believe that those policies systematically disadvantage their in-group (cf. Lowery et al., 2006). Moreover, the notion that organizational policies are biased against certain groups contradicts the principle of meritocracy (Bobocel et al., 1998), which similarly suggests that Whites will view policies that disadvantage their in-group as unfair. To the extent that race-based AAPs are salient organizational policies, employees' evaluations of race-based AAPs are likely to color their reactions to other policies within the organization. As a result, Whites who associate race-based AAPs with White disadvantage may come to believe not only that the AAP itself is unfair, but also form an overall impression that the selection and promotion policies used by the organization are unfair. We therefore predict that the three-way race-based AAP by MR by CRD interaction will predict the perceived fairness of the selection and promotion used by the organization, and that perceptions of White disadvantage will mediate this relationship. Notably, only Whites who are relatively high on MR or CRD are likely to form perceptions that an organization's policies are unfair in response to race-based AAPs. It follows that perceptions of White disadvantage will be a significant mediator for Whites who are relatively high on MR or CRD, but not for Whites who are relatively low on both MR and CRD.

Hypothesis 2. The three-way interaction among race-based AAPs, MR, and CRD will predict perceptions of selection and promotion policy unfairness. Among Whites with relatively high MR or CRD beliefs, perceptions of policy unfairness will be positively related to the belief that one's employing organization has a race-based AAP. Alternatively, among Whites with relatively low MR and CRD beliefs, perceptions of policy unfairness will be comparatively low and will be unrelated to the belief that one's employing organization has a race-based AAP.

Hypothesis 3. Perceptions of White disadvantage will mediate the relationship between race-based AAPs and selection and promotion policy unfairness among Whites with relatively high MR or CRD beliefs, but not among Whites with relatively low MR and CRD beliefs.

Method

Participants and procedure

We invited 402 business students from a university in the Southeast United States to take part in an online study. We limited the sample to individuals who were employed for at least 20 h a week. Unemployed individuals were asked to find a working adult (i.e., friend, relative, colleague) to participate in their place. Many scholars have previously used this recruiting approach and published the results in high-quality outlets (e.g., De Cremer et al., 2010; Grant & Mayer, 2009; Morgeson & Humphrey, 2006). The study measures were included in a longer survey that included measures for unrelated projects, and the participants were unaware of the topics covered in the survey when they decided to participate. Thus, it is unlikely that survey respondents were more interested in the topic of Study 2 than non-respondents, which suggests that the possibility that the Study 2 results were influenced by self-selection bias is minimal. All participants completed a consent form before participating.

A total of 177 individuals completed the survey (44% response rate), 118 of whom self-identified as White. The 118 White participants served as the sample for Study 2. The participants were 42% female, their average age was 24.47 years ($SD = 7.70$), and they had worked for their organizations for an average of 3.58 years ($SD = 4.19$). The sample's gender composition was comparable to the employed US population (46.5% female, US Census Bureau, 2007), although the participants were somewhat younger than US workforce (16–34 year olds represent 36% of the workforce; US Department of Labor, 2010).

Measures

To measure the presence of a race-based AAP we asked participants to indicate the extent to which they believe their organization uses a race-based AAP, and specifically a tiebreak AAP, which is defined as an AAP that gives preference to minority candidates only when the qualifications of the minority candidate are equal to those of any non-minority candidates (Harrison et al., 2006; Kovach, Kravitz, & Hughes, 2004). We measured of the presence of a tiebreak race-based AAP because we wanted to maximize the external validity of our findings by assessing a type of AAP that is likely to be used by organizations. Tiebreak AAPs are a relatively weak form of AAP that can be used legally by organizations, at least under certain circumstances (Evans, 2003; Kovach et al., 2004). The race-based AAP measure, which was developed for the purposes of this research, included two items, "Minority group candidates receive jobs over majority group candidates only when the minority group member has qualifications equal to that of the majority group member," and "Minority group candidates get promoted

over majority group candidates only when the minority group member has qualifications equal to that of the majority group member,” and a response scale that ranged from 1 (*strongly disagree*) to 7 (*strongly agree*) ($\alpha = .77$, $M = 3.27$, $SD = 1.69$).

We included the word “only” in the race-based AAP measure to ensure that we measured a legal AAP type (i.e., tiebreak). One potential limitation is that disagreement with the measure does not necessarily indicate the absence of a race-based AAP; individuals might disagree with the measure if they believe their organization has a stronger race-based AAP that allows less qualified minorities to be hired over more qualified Whites (i.e., strong preferential treatment; Harrison et al., 2006; Kovach et al., 2004). To assess this possibility, we also included a two-item strong preferential treatment AAP measure in Study 2. The items included, “Less qualified minority group candidates receive jobs over more qualified majority group candidates” and “Less qualified minority group candidates get promoted over more qualified majority group candidates” and the response scale ranged from 1 (*strongly disagree*) to 7 (*strongly agree*) ($\alpha = .88$, $M = 2.60$, $SD = 1.66$). Only two individuals in the Study 2 sample (<2%) disagreed that their organization had a tiebreak AAP (i.e., responded 1 = strongly disagree, 2 = disagree, or 3 = slightly disagree), but agreed that their organization had a strong preferential AAP (i.e., responded 5 = slightly agree, 6 = agree, or 7 = strongly agree), which suggests that disagreement with the tie AAP measure indicates the absence of a race-based AAP. We also reran the Study 2 analyses excluding these two individuals and found identical results (available upon request).³

MR and CRD were measured using the same items used in Study 1. Participants responded to all items on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The reliability of the MR and CRD scales was $\alpha = .75$ ($M = 3.10$, $SD = 1.15$) and $\alpha = .85$ ($M = 3.09$, $SD = 1.78$), respectively. We also measured perceptions of White disadvantage with the same items used in Study 1, except that the name “Peak Consulting” was replaced with “your company.” Participants responded to all items on a 7-point Likert-type scale that ranged from 1 (*strongly disagree*) to 7 (*strongly agree*) ($\alpha = .88$, $M = 2.61$, $SD = 1.66$). Finally, we used two items to measure perceptions of policy unfairness in the organization: “Selection policies at this company seem fair,” and “Promotions at this company are probably fair and equitable,” (1 = *strongly disagree*; 7 = *strongly agree*) ($\alpha = .80$, $M = 2.95$, $SD = 1.51$). The items were developed for this research project and were based on measures of general fairness (e.g., Lind, Kray, & Thompson, 1998). We reversed scored the items so that high scores indicated policy unfairness.

Discriminant validity

We used CFA to examine the discriminant validity of the race-based AAP measure, MR, CRD, White disadvantage, and selection and promotion policy unfairness. We allowed latent factors to covary in all models. A five-factor model, in which the items for each of the five constructs indicated a distinct latent factor, fit the data well [$\chi^2(67) = 87.07$; CFI = .97; RMSEA = .05; SRMR = .06]. In support of the discriminant validity of MR and CRD, the five-factor model fit the data better than a four-factor model, in which the MR and CRD items indicated the same latent factor [$\chi^2(71) = 172.69$; CFI = .83; RMSEA = .11; SRMR = .09; $\Delta\chi^2(4) = 85.62$, $p < .01$]. In addition, the five-factor model fit the data better than a three-factor model, in which the AAP items indicated the first latent factor, the

MR items and CRD items indicated the second latent factor, and the White disadvantage and policy unfairness items indicated the third latent factor [$\chi^2(74) = 235.00$; CFI = .73; RMSEA = .14; SRMR = .10; $\Delta\chi^2(7) = 147.93$, $p < .01$], and also fit the data better than a two-factor model in which the items for the independent variables (AAP, MR and CRD) indicated the first latent factor and the items for the dependent variables (White disadvantage, policy unfairness) indicated the second latent factor [$\chi^2(76) = 247.57$; CFI = .72; RMSEA = .14; SRMR = .11; $\Delta\chi^2(9) = 160.50$, $p < .01$]. Finally, the five-factor model fit the data better than a one-factor model in which all items indicated a single latent factor [$\chi^2(10) = 364.52$; CFI = .53; SRMR = .13; RMSEA = .18; $\Delta\chi^2(x) = 277.45$, $p < .01$]. The CFA results strongly support for the discriminant validity of the Study 2 constructs.

In further support of the discriminant validity of MR and CRD, we split the sample by the mean of MR and CRD and found that 42% of participants had mixed race-related beliefs (i.e., higher MR/lower CRD or lower MR/higher CRD). Moreover, the correlation between MR and CRD was .43, which means that only 18% of the variance in the two constructs was shared.

Results

Table 3 presents descriptive statistics and correlations for the Study 2 variables. We tested Hypothesis 1 and 2 with hierarchical regression. As in Study 1, we mean-centered the independent variables (race-based AAPs, MR, CRD) and controlled for gender in all analyses. We were not able to assess additional control variables in Study 2 (e.g., political affiliation) due to survey length restrictions. We entered gender in step 1, the main effects of race-based AAPs, MR, and CRD in step 2, all two-way interactions among the predictors in step 3, and the three-way interaction in step 4.

Hypothesis 1 predicts that Whites with relatively high MR or CRD beliefs, but not Whites with relatively low MR and CRD beliefs, will perceive greater White disadvantage in the presence of a race-based AAP than in the absence of such a policy. As shown in Table 4, the gender control was significant [$b = -.47$, $t(113) = -3.11$, $p < .01$], such that males perceived more White disadvantage than females ($\Delta R^2 = .08$). All three main effects were also positively associated with perceptions of White disadvantage [race-based AAP: $b = .29$, $t(110) = 3.53$, $p < .01$; MR: $b = .30$, $t(110) = 2.32$, $p < .05$; CRD: $b = .18$, $t(110) = 2.09$, $p < .05$]. In step 3, no two-way interaction was significant, but in step 4, the predicted three-way interaction was significant [$b = -.12$, $t(106) = -3.$, $\Delta R^2 = .06$, 3.27 , $p < .01$].

To determine if the shape of the three-way interaction supported Hypothesis 1, we graphed the interaction at one standard deviation above and below the mean of race-based AAPs, MR, and CRD and tested the significance of the simple slopes for the effect of race-based AAPs for each combination of relatively high and low MR and CRD. As shown in Fig. 3, the race-based AAP measure was positively related to perceptions of White disadvantage for lower MR, higher CRD Whites [$b = .56$, $t(110) = 2.81$, $p < .01$]; for higher MR, lower CRD Whites [$b = .76$, $t(110) = 3.41$, $p < .01$]; and for higher MR, higher CRD Whites [$b = .33$, $t(110) = 2.13$, $p < .05$]; but not for lower MR, lower CRD Whites [$b = .00$, $t(110) = .03$, $p = .98$]. In other words, Whites associated the presence of a race-based AAP with increased White disadvantage, unless they were relatively low on both MR and CRD. Thus, Hypothesis 1 was supported.

Hypothesis 2 predicts that Whites with relatively high MR or CRD beliefs, but not Whites with relatively low MR and CRD beliefs, will perceive greater selection and promotion policy unfairness in organizations that have race-based AAPs, but not in organizations that do not have such policies. There were no significant effects in step 1, 2, 3, or 4. Thus, Hypothesis 2 was not supported.

³ We also explored the impact of the strong preferential treatment (SPT) AAP measure on perceptions of White disadvantage, and found a main effect such that perceptions that one's organization used a SPT AAP were positively related to perceived White disadvantage ($r = .78$, $p < .01$). The three-way interaction among the SPT AAP Measure, MR, and CRD, however, was not significant, suggesting that most individuals perceive White disadvantage in organizations with SPT AAPs, regardless of their race-related beliefs.

Table 3
Descriptive statistics and correlations (Study 2).

	M	SD	1	2	3	4	5	6
1. Gender (−1 = male, 1 = female)	−.14	1.00	–					
2. Race-based Affirmative Action Policy (AAP)	3.27	1.69	.06	.77				
3. Modern racism (MR)	3.10	1.15	−.17	.02	.75			
4. Collective relative deprivation (CRD)	3.09	1.78	−.05	.29**	.43**	.85		
5. White disadvantage	2.61	1.66	−.28**	.34**	.34**	.38**	.88	
6. Selection and promotion policy unfairness	2.95	1.51	−.09	.02	.19*	.20*	.38*	.80

Values below the diagonal are correlation coefficients and values on the diagonal are Cronbach's alpha coefficients. $N = 119$ for all variables, except for the Tiebreak AAP variable ($N = 118$).

* $p < .05$.

** $p < .01$.

Table 4
Results of hierarchical regression analyses predicting perceptions of White disadvantage (Study 2).

	1	2	3	4
Gender (control)	−.47	(.15)**	−.43	(.14)**
Race-based Affirmative Action Policy (AAP)			.29	(.08)**
Modern racism (MR)		.30	(.13)*	.29
Collective relative deprivation (CRD)		.18	(.09)*	.16
Race-based AAP × MR			.11	(.09)
Race-based AAP × CRD			.00	(.05)
MR × CRD			−.01	(.07)
Race-based AAP × MR × CRD				−.12
ΔR^2	.08**	.23**	.01	.06**
Model R^2	.08**	.31**	.32**	.39**
Adjusted R^2	.07**	.28**	.28**	.34**

Parameter estimates are unstandardized. Standard errors are shown in parentheses. $N = 118$.

* $p < .05$.

** $p < .01$.

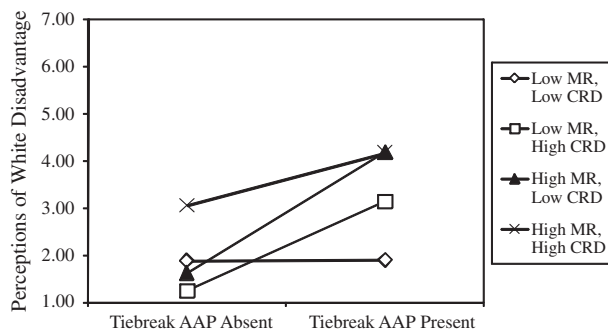


Fig. 3. Three-way interaction among race-based AAP presence, MR, and CRD predicting perceptions of White disadvantage (Study 2).

Hypothesis 3 predicts that perceptions of White disadvantage will mediate the effect of the race-based AAP by MR by CRD interaction on selection and promotion policy unfairness. The three-way interaction was not related to policy unfairness, but the lack of a significant direct effect does not preclude the possibility of mediation, particularly in field settings where effects are likely to be distal (Kenny, Kashy, & Bolger, 1998; Shrout & Bolger, 2002). Indeed, evidence of an A (race-based AAP by MR by CRD interaction) to C (policy unfairness) relationship is not required for establishing mediation (Kenny et al., 1998). Accordingly, we tested if the AAP by MR by CRD interaction had an indirect effect on policy unfairness through White disadvantage.

We predicted that MR and CRD would moderate the relationship between AAP type and White disadvantage, but not the relationship between White disadvantage and policy unfairness, and therefore tested for mediated moderation (Edwards & Lambert, 2007). The test of **Hypothesis 1** established the first criterion for mediation by providing evidence that the A (race-based AAP by

MR by CRD interaction) to B (White disadvantage) relationship was significant. We conducted an additional regression to establish the B (White disadvantage) to C (policy unfairness) relationship. We regressed policy unfairness on gender in step 1, race-based AAPs, MR, and CRD in step 2, all two-way interactions among race-based AAPs in step 3, and the three-way AAP by CRD interaction and White disadvantage in step 4. In step 4, White disadvantage predicted policy unfairness [$b = .39$, $t(89) = 3.90$, $p < .01$], and the three-way interaction remained non-significant [$b = .05$, $t(89) = 1.15$, $p = .25$].

This pattern of results provides initial evidence of mediation. When testing for mediated moderation, however, it is important to test the indirect effect of the independent variable (race-based AAP) on the dependent variable (policy unfairness) at different levels of the moderator variables (MR and CRD; Edwards & Lambert, 2007; MacKinnon, Lockwood, & Williams, 2004; Shrout & Bolger, 2002). Sobel (1982) tests provide one method for testing indirect effects, yet rely on tenuous statistical assumptions and may therefore produce biased results (Edwards & Lambert, 2007). Consistent with recent recommendations, we instead used moderated path analysis and bias-corrected bootstrapped confidence intervals to test the indirect effect of race-based AAPs on policy unfairness at lower and higher levels of MR and CRD.

We followed the procedure outlined by Edwards and Lambert (2007) to calculate the indirect effect of race-based AAPs on policy unfairness for each of the four combinations of relatively low and high MR and CRD. We first took the path coefficient (i.e., b) for the relationship between White disadvantage and policy unfairness ($b = .39$), and multiplied it by the path coefficient for the simple effect of race-based AAPs on White disadvantage, at each combination of relatively low and high MR and CRD (lower MR, higher CRD: $b = .56$; higher MR, lower CRD: $b = .76$; higher MR, higher CRD: $b = .33$; lower MR, lower CRD: $b = .00$). We then used bootstrapping to construct 95% bias-corrected confidence intervals

around the indirect effects. Specifically, we sampled with replacement to create 1000 bootstrap samples, and calculated the indirect effects of AAP type on policy unfairness for all four combinations of relatively low and high MR and CRD in each sample. We defined 95% confidence intervals as the 975th and 25th largest indirect effects. We corrected the confidence intervals for sample bias (Edwards & Lambert, 2007; MacKinnon et al., 2002; Stine, 1989) and interpreted indirect effects as statistically significant if the confidence interval (CI) did not include zero.

The indirect effect of race-based AAPs on policy unfairness was significant for lower MR, higher CRD Whites ($b = .22, p < .01$); higher MR, lower CRD Whites ($b = .30, p < .01$); and higher MR, higher CRD Whites ($b = .13, p < .05$); but not lower MR, lower CRD Whites ($b = .00, p > .05$). Thus, consistent with Hypothesis 3, the results support that the three-way interaction had an indirect effect on policy unfairness, through White disadvantage.

Discussion

The Study 2 results suggest that Whites' reactions to race-based AAPs are a function of the combined effects of their MR and CRD beliefs, and therefore replicate the Study 1 findings. As in Study 1, the three-way interaction among race-based AAPs, MR, and CRD was comparatively large, explaining 6% of the variance in perceptions of White disadvantage. In Study 2, we also extended Study 1 by predicting that race-based AAPs, MR and CRD combine to predict perceived selection and promotion policy unfairness, but we did not find a significant direct effect. Nevertheless, we did find that the three-way interaction influenced perceptions of policy unfairness indirectly, through perceived White disadvantage. Thus, the results support that the presence of a race-based AAP combines with Whites' MR and CRD beliefs to shape perceptions of the fairness of organizational policies, although the effect is indirect. The non-significant direct effect on selection and promotion policy unfairness, combined with the significant indirect effect through White disadvantage, suggests that the relationship between race-based AAPs and policy unfairness is distal. This conclusion is further supported by the non-significant correlation between the race-based AAP measure and policy unfairness that emerged ($r = .02, p > .05$). Evidence of a distal effect is not surprising, given that we asked participants to report on their perceptions of the fairness of their employers' selection and promotion policies in general, and these perceptions are likely to be a function of experiences with a number of different policies.

We also found that gender, MR beliefs, and CRD beliefs were related to perceptions of White disadvantage in Study 2, but not in Study 1. The divergent results may be due to the different samples used in Studies 1 and 2 (i.e., students versus employees), such that on-the-job experience drives stronger associations between White disadvantage and gender, MR beliefs, and CRD beliefs. Another possible explanation for the main effects of MR and CRD is that Whites construe race-based AAPs in ways that are consistent with their beliefs when the AAP is not clearly defined (cf. Harrison et al., 2006). To the extent that the Study 2 participants lacked full knowledge regarding how their organizations implement race-based AAPs, those with relatively high MR or CRD beliefs may perceive White disadvantage, regardless of the type of AAP present in the organization. Yet even if race-related beliefs did influence how participants construed their organizations' AAPs and, in turn, their perceptions of White disadvantage, the main effects of MR and CRD were not strong enough to override the three-way interaction among race-based AAPs, MR, and CRD.

One limitation of Study 2 is that we measured all variables at the same time and common method variance may therefore have influenced our findings. Several pieces of evidence suggest that common method variance is not a concern. First, the CFA results

clearly support the discriminant validity of the Study 2 constructs and suggest that participants' responses to the Study 2 measures were not driven by a common factor. Moreover, our main Study 2 finding was a three-way interaction and evidence documents that common method variance *reduces* statistical power for finding interactions (Siemsen, Roth, & Oliveira, 2010). Thus, even if common method variance was present, it would not provide an alternative explanation for the significant three-way interaction that emerged. A second potential limitation is that we were unable to control for political affiliation, a variable that has been shown to influence attitudes toward AAPs (Harrison et al., 2006); however, controlling for political affiliation had no impact on the Study 1 findings, and it is therefore unlikely that differences in political affiliation provide a plausible alternative explanation for the findings that emerged in Study 2.

General discussion

Whites' reactions to race-based AAPs are far from uniform, but rather depend on the chronic beliefs that are activated by race-based AAPs. In contrast to prior work, which has largely focused on MR or CRD in isolation, we find MR and CRD are best considered jointly when trying to understand why some Whites react negatively to race-based AAPs. Specifically, we theorized and found that race-based AAPs lead to perceptions of White disadvantage among Whites with relatively high MR or CRD beliefs, but not among Whites with relatively low MR and CRD beliefs (Studies 1 and 2), and that White disadvantage in turn breeds perceptions that the organization's selection and promotion policies are unfair (Study 2). Thus, the present research illuminates how two race-related beliefs work in concert to drive Whites' reactions to race-based AAPs, and supports that perceptions of White disadvantage are a common mechanism through which both MR and CRD beliefs drive fairness perceptions. Moreover, we found support for our hypothesized model in an experimental study of students and a correlational study of working adults, which suggests that the results generalize across different methodologies and populations.

Theoretical implications

Whites' concern with in-group outcomes (i.e., White disadvantage) in organizations with race-based AAPs has received some scholarly attention (e.g., Lowery et al., 2006), yet how chronic race-related beliefs drive such concerns has largely escaped investigation. Our results suggest that MR and CRD beliefs jointly shape perceptions of White disadvantage and policy fairness in organizations with race-based AAPs. Thus, viewed from an intra-individual perspective, MR and CRD should not be viewed as competitive accounts, but rather as co-determinants of Whites' reactions to race-based AAPs. This conclusion converges with recent theoretical models that call attention to the complex bases of Whites' AAP reactions (Kravitz, 2009), and further substantiates the importance of maintaining a conceptual and empirical distinction between out-group and in-group beliefs (cf. Allport, 1954; Brewer, 1999).

In addition, the present research has implications for the organizational justice account of Whites' resistance to race-based AAPs. Proponents of justice-based explanations for Whites' AAP reactions argue that race-based AAPs are perceived to violate cultural norms of meritocracy and are therefore seen as unfair (e.g., Bobocel et al., 1998; Sniderman & Piazza, 1993). Although we measured perceptions of selection and promotion policy fairness, not perceived violations of merit, reactions to race-based AAPs had an indirect effect on perceptions of policy unfairness through perceptions of White disadvantage in the organization. Accordingly, our results lend support to the notion that fairness objections to race-based AAPs

are a result of efforts to protect the outcomes of one's in-group (e.g., Lowery et al., 2006), rather than an objection to cultural norms of meritocracy. Still, it is possible that for Whites with high MR or CRD beliefs, race-based AAPs signify both in-group disadvantage, as well, violations of meritocracy. More definitive conclusions in regard to the justice-based account of AAP reactions must await future research on the relationship between perceived White disadvantage and assumed meritocracy violations.

We focused our attention on how out-groups beliefs regarding Blacks (i.e., MR) combine with CRD beliefs to shape Whites reactions to AAPs. The focus on Blacks is important, given that this group has experienced and continues to experience more extreme discrimination than other American racial minorities (e.g., McKay et al., 2007), and our findings therefore contribute to knowledge regarding the challenges inherent to efforts to improve Blacks' employment outcomes. At the same time, the US is composed of a number of different minority groups (e.g., Wilson et al., 2008). Thus, the relationship between Whites' beliefs regarding other minorities and Whites' AAPs reactions is an important avenue for future work.

Practical implications

In the United States, organizations frequently use race-based AAPs to promote a diverse workforce and evidence supports that AAPs are effective in achieving this goal (e.g., Kalev, Dobbin, & Kelly, 2006). Yet our results suggest that when faced with race-based AAPs, Whites who are relatively high on MR or CRD believe that Whites are disadvantaged and in turn perceive organizational policies as unfair. Thus, organizations seeking to attract and retain high quality White and non-White applicants face a difficult challenge. Our findings offer a number of concrete strategies for reducing Whites' negative reactions to race-based AAPs.

Consistent with evidence that race-related beliefs drive Whites' reactions to race-based AAPs, organizations may be able to avoid negative reactions through training programs aimed at changing Whites' MR and CRD beliefs. Diversity training programs are becoming increasingly common, but often focus on prejudice reduction under the assumption that prejudice-free work environments eliminate the possibility that diversity will result in negative outcomes (cf. Paluck & Green, 2009). We find that even in the absence of prejudice against an out-group (i.e., relatively low MR), Whites who believe that their in-group is disadvantaged in society (i.e., relatively high CRD) react negatively to race-based AAPs. Thus, our results suggest that training programs need to focus on reducing both MR and CRD to avoid backlash to race-based AAPs.

Designing training programs that successfully change employees' race-related beliefs is no easy task (cf. Paluck & Green, 2009), and some organizations may prefer a different approach for reducing negative reactions to AAPs. We found that although Whites who are relatively high on either MR or CRD form perceptions of White disadvantage in response to race-based AAPs, they do not form these perceptions in response to race-neutral EEO policies. Thus, use of race-neutral language that stresses giving all individuals an equal opportunity to succeed is also likely to reduce backlash to AAPs or EEO policies, at least in organizations with policies that can be described as race-neutral.

For organizations with AAPs or EEO policies that cannot be described as race-neutral, our results offer insight into additional strategies for reducing Whites' negative reactions to race-based policies. Specifically, we build on prior work by providing evidence that perceptions of White disadvantage are a common mechanism through which MR and CRD beliefs jointly influence perceptions of policy unfairness. As such, efforts to reduce perceptions of White disadvantage are likely to be an effective strategy for preventing Whites' negative reactions to race-based AAPs, regardless of whether those reactions are driven by MR or CRD beliefs. This could be achieved,

for example, by stressing that although the organization actively seeks minority applicants from one or more racial groups, hiring and promotion decisions are based on candidates' qualifications, not their race. From a legal standpoint, this strategy is feasible for most American organizations, given that AAPs dictating that less qualified minorities should be selected over more qualified Whites are largely illegal in the United States (Kovach et al., 2004).

In addition, organizations may be able to reduce perceptions of White disadvantage by implementing race-based AAPs in conjunction with other efforts to facilitate a climate in which diversity is valued and appreciated. AAPs increase organizational diversity (Kalev et al., 2006), yet whether diversity leads to enhanced employee well-being, performance, and other desirable outcomes is ultimately contingent upon the organization's diversity climate (cf. Ely & Thomas, 2001; Leslie & Gelfand, 2008). To the extent that organizations can create an atmosphere in which differences are viewed as a valuable resource, Whites are less likely to view AAPs as policies that disadvantage their in-group and more likely to view AAPs as policies that benefit everyone. Indeed, evidence supports that a climate for diversity facilitates positive job attitudes and improved retention for Whites and minorities alike (Gilbert & Ivancevich, 2001; McKay et al., 2007). Thus, implementing an AAP as part of a portfolio of diversity management strategies may help minimize backlash to race-based AAPs.

The strategies discussed above are likely to reduce perceptions of White disadvantage and, in turn, perceived selection and promotion policy unfairness. Organizational fairness perceptions are positively related to a range of favorable outcomes, including applicant attraction and employee retention and performance (e.g., Greenberg & Cropanzano, 2001; Truxillo & Bauer, 1999), which suggests that efforts to reduce perceptions of White disadvantage should ultimately facilitate organizational performance and health. In addition, perceptions that an organization has policies that disadvantage Whites opens the window for costly lawsuits against the organization based on claims of reverse discrimination (cf. Kravitz et al., 1997), and efforts to combat perceptions of White disadvantage are therefore likely to reduce legal liability.

Conclusions

Policies that target racial minorities will continue to be controversial, and competing explanations for Whites' negative reactions to such policies will persist. Instead of providing a singular explanation for Whites' reactions to race-based AAPs, our goal was to integrate conventionally disparate accounts of Whites' reactions to race-based AAPs and provide a more parsimonious theoretical model. Ultimately, we hope that greater comprehension of the factors that drive societal strife over group-based policies will hasten the resolution of a conflict that continues to divide the public and facilitate greater racial harmony in the American workplace.

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