DISCRIMINATION IN SELECTION DECISIONS: INTEGRATING STEREOTYPE FIT AND INTERDEPENDENCE THEORIES

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Discrimination in Selection Decisions: Integrating Stereotype Fit and Interdependence Theories

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Abstract

We integrate stereotype fit and interdependence theories to propose a model explaining how and why decision makers discriminate in selection decisions. Our model suggests that decision makers draw on stereotypes about members of different social groups to infer the degree to which candidates possess the specific ability required for the task. Decision makers perceive candidates having a greater ability required for the task as less (more) instrumental to their personal outcomes if they expect to compete (cooperate) with the candidate, and they discriminate in favor of candidates perceived as more instrumental to them. We tested our theory in the context of racial (Studies 1–3) and age (Study 4) discrimination in selection decisions with all male samples and found evidence consistent with our predictions. By explaining when and why decision makers discriminate in favor of but also against members of their own social group, this research may help explain the mixed support for the dominant view that decision makers exhibit favoritism toward candidates belonging to the same social group. In addition, our research demonstrates the importance of considering the largely overlooked role of interdependent relationships within the organization for understanding discrimination in organizations.

Discrimination, or the differential treatment based on membership in social groups such as race, age, religion, and gender (Lippert-Rasmussen, 2006), continues to be a major problem in organizations. For example, in the United States there were 38,221 race-based employment discrimination charges filed in 2011 alone (U.S. Equal Employment Opportunity Commission, 2011). Because discrimination involves treatment of individuals based on cues unrelated to work performance, it can lead to suboptimal organizational decisions such as the hiring of less qualified candidates (Bertrand & Mullainathan, 2003). Workplace discrimination also undermines broader societal goals of social justice and the equality of opportunity (Fassinger, 2008).

Discrimination in organizations begins with selection decisions, defined as decisions "aimed at choosing people for the fulfillment of jobs" (Roe, 1998: 5). Examples of selection decisions include recruitment decisions and decisions about the allocation of individuals to specific work tasks. Because selection decisions determine such a major outcome for candidates—getting versus not getting the job one is applying for—they are exceptionally consequential for individuals' career and pay progression (Boudreau, Boswell, & Judge, 2001; Gatewood, Feild, & Barrick, 2008). In this research, we seek to advance the understanding of this important phenomenon.

A large body of research has argued that decision makers exhibit favoritism toward candidates belonging to their own social group (e.g., candidates of the same race, gender, or age) when making selection decisions (Finkelstein, Burke, & Raju, 1995; Goldberg, 2005; Lin, Dobbins, & Farh, 1992; Pager & Shepherd, 2008; Prewett-Livingston, Feild, Veres III, & Lewis, 1996; Whitley & Kite, 2009). The racial discrimination literature is a good example of the use of this argument, such that decision makers are generally thought to discriminate in favor of candidates of their own race (Bertrand & Mullainathan, 2003; Goldberg, 2005; Lin et al., 1992; Pager, Western, & Bonikowski, 2009; Prewett-Livingston et al., 1996; Triandis,

1963). However, a close look at empirical studies reveals that the evidence for this theory of discrimination in selection decisions is mixed. Some studies find no racial preference (Lai & Babcock, 2012; Lewis & Sherman, 2003; McFarland, Ryan, Sacco, & Kriska, 2004; Sacco, Scheu, Ryan, & Schmitt, 2003; Stewart & Perlow, 2001), while others even find that decision makers prefer candidates of different races (King, Mendoza, Madera, Hebl, & Knight, 2006; Linville & Jones, 1980; McIntyre, Moberg, & Posner, 1980; Mullins, 1982; Terpstra & Larsen, 2011). The mixed body of evidence is not limited to racial discrimination. The literature on age discrimination is another example. Some studies find no age-based preference (Connor, Walsh, Litzelman, & Alvarez, 1978; Hitt & Barr, 1989) and others even find preference for candidates who belong to different age groups (Bell & Stanfield, 1973; Schwab & Heneman, 1978; Singer & Sewell, 1989).

How can these mixed findings be explained? In this paper, we integrate stereotype fit theory (Dipboye, 1985; Heilman, 1983) with interdependence theory (Deutsch, 1949) to provide a novel theoretical model of how and why decision makers discriminate when making selection decisions. Figure 1 contains an overview of our theoretical model. The key prediction of the model is that decision makers discriminate in favor of candidates perceived to be relatively more instrumental (i.e., helpful) to their personal outcomes in the organizational context marked by different *task requirements* and *expected decision maker–candidate interdependence*. We posit that decision makers draw on stereotypical beliefs about members of different social groups to infer the degree to which candidates possess the specific ability required for the task for which candidates are being considered (Heilman, 1983). In addition, we argue that decision makers take into account the type of expected interdependence with the candidate to judge how instrumental the candidate would be to their personal outcomes (Deutsch, 1949). If the decision maker expects to compete (cooperate) with the candidate, candidates stereotyped as having a greater ability required for the task are

perceived as less (more) instrumental to the decision maker as they represent more capable competitors (cooperators). Decision makers prefer the candidates perceived as more instrumental to them, which determines the pattern of discrimination in selection decisions.

Insert Figure 1 about here

We tested our theory across four studies: a lab experiment, a field experiment, and two online experiments among male employees. We began this research by testing our theory in the context of racial discrimination in Studies 1–3 because racial discrimination has traditionally been one of the core research contexts in the employment discrimination literature (Dovidio & Gaertner, 2000; Kraiger & Ford, 1985; McIntyre et al., 1980). Race is also one of the primary characteristics by which people categorize others (Macrae & Bodenhausen, 2000) and has served as the basis for some of the most widespread and egregious forms of discrimination, including discrimination at work (Fredrickson, 2002). In Study 4 we extended this research by testing our theory in the context of age discrimination. The purpose of this extension was to provide additional evidence for the generalizability of our theoretical model. Age discrimination is a timely context to test our theory given the ageing workforce in the United States and other industrial nations (Feyrer, 2007). The U.S. Census Bureau (2012) forecasts that by the year 2042, one in five Americans will be 65 or older, and more and more older workers are delaying retirement and remaining in the workforce (Employee Benefit Research Institute, 2013).

This paper makes two key contributions. First, the dominant theoretical paradigm underlying several decades of research on discrimination in selection decisions suggests that decision makers discriminate in favor of candidates belonging to their own social group (Allport, 1954; Pager & Shepherd, 2008; Whitley & Kite, 2009). But, as we noted previously, some research found no or even opposite discriminatory tendencies, highlighting the need for a theory that specifies conditions under which decision makers prefer candidates who belong

to the same social group, as well as conditions under which such candidates are discriminated against. This research proposes and tests such a theory.

Second, we contribute to research on discrimination in organizations by theoretically situating decision makers' behavior in the context of interdependent relationships within the organization and specifying how different types of interdependence between the decision maker and the candidate determine the pattern of discrimination in selection decisions. The majority of past explanations of discrimination in organizations assumed that decision makers expect no future relationship with the candidate (Brief, Dietz, Cohen, Pugh, & Vaslow, 2000). Yet, selection decisions are often made in the context of anticipated intra-organizational interdependence between the decision maker and the candidate (Edenborough, 2005; Harris, Brewster, & Sparrow, 2003). We demonstrate the importance of taking into account this feature of the organizational context by showing it can fundamentally change how individuals discriminate in selection decisions.

THEORY

The dominant view of discrimination in organizations is that decision makers exhibit (some degree of) favoritism toward candidates belonging to the same social group when making selection decisions (Allport, 1954; Pager & Shepherd, 2008; Whitley & Kite, 2009). The reason that decision makers discriminate in this way has been explained by several related theoretical perspectives, which we briefly summarize below.

The social identity approach suggests that people categorize others as being in-group or out-group members based on salient individual characteristics (Tajfel & Turner, 1979). Categorization activates positive cognitive and emotional reactions toward members of one's own group and derogatory responses toward out-group members, a phenomenon that is said to serve the function of self-esteem enhancement. The positive reactions toward in-group members should lead to their preferential selection in organizations.

Likewise, the similarity-attraction model (Byrne & Nelson, 1965) suggests that people find interactions with similar others positively reinforcing and thus exhibit greater liking for those who correspond to them along characteristics such as attitudes, race, and age (Byrne & Nelson, 1965). Because similar individuals are liked more, people should prefer them in selection decisions (Peters & Terborg, 1975).

Finally, theoretical perspectives emphasizing intergroup conflict, including realistic conflict theory (Campbell, 1965; Sherif, Harvey, White, Hood, & Sherif, 1961), the stereotype content model (Fiske, Cuddy, Glick, & Xu, 2002), and evolutionary models (e.g., Schaller, Park, & Mueller, 2003), suggest that competition with out-groups creates favoritism for members of the same social group and hostility toward members of different social groups.

Although past research finds some support for the prediction that decision makers discriminate in favor of candidates belonging to the same social group, a sizeable body of research fails to find support for this prediction or even documents an opposite trend, as we noted at the outset of the paper. In the subsequent sections, we address this explanatory problem by proposing a novel theoretical model that diverges from past perspectives by making the prediction that, under certain conditions, decision makers will systematically discriminate in favor of candidates belonging to *different* social groups. For this reason, our theory may explain the seeming irregularity in the pattern of discrimination in selection decisions, and in that way provide insights into the fundamental processes driving discrimination in organizations.

Candidate Social Group Membership–Task Requirement Stereotype Fit

Our model proposes that those in charge of selection decisions make inferences about the degree to which candidates possess the specific ability required for the task based (among other things) on stereotypical beliefs about different social groups, such as racial or age

groups, to which the candidate belongs. Stereotypes are generalized beliefs about characteristics possessed by people belonging to certain social groups (Hilton & Von Hippel, 1996; Lippman, 1922) and they constitute a mechanism by which people interpret and manage the wealth of social stimuli encountered in everyday life (Hamilton, 1979; Taylor, 1981). For instance, people often infer that an individual is competent in quantitative tasks if the individual is Asian (Shih, Pittinsky, & Ambady, 1999).

Drawing on stereotypical beliefs about different social groups, decision makers may infer the degree to which candidates possess the ability required for successful fulfillment of the specific organizational tasks for which the candidate is being considered. Task specialization is a fundamental means by which organizations attain their goals (March & Simon, 1958; Weber, 1947), and organizations attempt to match tasks with individuals who have the abilities required for the successful execution of these tasks (Kristof, 1996). Although many tasks require multiple abilities, different abilities are in most cases not of equal importance for successful performance in the given task. Therefore, it follows that one ability will be more important than others for successful performance in a given task (Durkheim, 1893/1997). Stereotypical beliefs about the abilities of members of different social groups constitute one source of information about the degree to which the candidate possesses the ability required for the task. For instance, if the task requires strong quantitative skills, an Asian candidate (stereotyped as having strong quantitative skills) should be more likely to be seen as having a greater ability required for the task compared to a White candidate (for whom the stereotypical belief concerning quantitative skills is not as positive).

This proposition is consistent with the stereotype fit hypothesis (Dipboye, 1985; Heilman, 1983), which suggests that decision makers perceive members of different social groups to be more or less fit (i.e., possessing different levels of the required characteristics) for specific work tasks based on the stereotypes held about their social group. For instance,

women might be stereotyped as lacking masculine traits and therefore unfit for tasks requiring such characteristics (Glick, Zion, & Nelson, 1988). Similarly, we expect that decision makers infer the degree to which candidates possess the specific ability required for the task based on stereotypical beliefs about the abilities of the candidate's social group. At a more general level, this proposition is also consistent with the statistical theory of discrimination formulated in the economics literature (Arrow, 1973; Phelps, 1972), which suggests that lacking perfect information, employers estimate candidates' expected performance by drawing on their naïve beliefs about the average performance of different social groups.[1]

Decision Maker–Candidate Interdependence

Our theory further suggests that the expected interdependence between the decision maker and the candidate affects the pattern of discrimination in selection decisions. A major problem we see with most extant models of discrimination in organizations is that they assume that decision makers act in a social vacuum and are in no way affected personally by the future performance of the candidate.

Yet, decision makers often make selection decisions that lead to the introduction of the candidate into their own organization or work team (Edenborough, 2005; Harris et al., 2003). For example, in the financial services company J.P. Morgan, employees participate in making selection decisions about their future peers (J.P. Morgan, 2013). Google has a similar policy whereby employees evaluate their future peers and have a say in the selection decisions (Google, 2013). In academic departments, candidates are often selected by the members of the same department (Darley, Zanna, & Roediger, 2003).

[1] Statistical theory of discrimination focuses on social group membership as a signal of general work ability, rather than a particular ability required for a specific task. Yet, different social groups may be stereotyped as competent in one work domain but not another (e.g., for the case of Asians, see Berdahl & Min, 2012; Sy et al., 2010). For this reason, we focus on stereotypes of the particular ability required for a specific task.

For this reason, decision makers should expect candidates' future performance to also be relevant to their personal outcomes. For example, a decision maker may believe that a capable candidate may be suitable for a position that the decision maker aspires to and thus represents a potential threat in terms of career advancement. In a different situation, a capable candidate may be viewed as a future collaborator who can improve the decision maker's career prospects. Although such expected interdependence can have important implications for interpersonal decisions (Deutsch, 1949; Kelley & Thibaut, 1978), it has largely been overlooked by past research on selection decisions.

Two main types of interdependence have been distinguished in the organizational literature: *cooperation* and *competition* (Deutsch, 1949; Johnson & Johnson, 1989; Kelley & Thibaut, 1978; Wageman, 1995). The way the organization arranges rewards and tasks can create the expectation that the decision maker's outcomes will be either positively (cooperative interdependence) or negatively (competitive interdependence) correlated with the candidate's outcomes (Deutsch, 1949; Johnson & Johnson, 1989; Kelley & Thibaut, 1978). For example, in many positions, employees' performance is assessed relative to the performance of their coworkers, creating competitive interdependence (Becker & Huselid, 1992). In other cases, organizations evaluate and remunerate joint performance of teams, creating cooperative interdependence between team members (Sundstrom, De Meuse, & Futrell, 1990). Many situations entail a mix of cooperative and competitive elements, but the two are rarely perfectly balanced in the real world (Tjosvold, 1988; Tjosvold, Andrews, & Struthers, 1991). For that reason, one of the two types of interdependence generally serves as a more salient guide for behavior (Deutsch, 1949; Johnson & Johnson, 1989).

We propose that the nature of interdependence between the decision maker and the candidate will determine whether the decision maker discriminates against or in favor of the candidate stereotyped as having a greater ability required for the task. When expecting

competitive interdependence, the candidate stereotyped as having a greater ability required for the task will be seen as less instrumental (i.e., more threatening) to the decision maker's personal outcomes because such a candidate would represent a more capable future competitor. Thus, in this situation decision makers should discriminate *against* the candidate stereotyped as having a greater ability required for the task.

Hypothesis 1. When decision makers expect to compete with the candidate, they discriminate against a candidate stereotyped as having a greater ability required for the task.

In contrast, when the decision maker expects to cooperate with the candidate, the candidate stereotyped as having a greater ability required for the task will be seen as more instrumental (i.e., more helpful) to the decision maker's personal outcomes because such a candidate would represent a more capable future cooperator. Thus, in this situation decision makers should discriminate *in favor of* the candidate stereotyped as having a greater ability required for the task.

Hypothesis 2. When decision makers expect to cooperate with the candidate, they discriminate in favor of a candidate stereotyped as having a greater ability required for the task.

The underlying psychological mechanism implied by our theory is that decision makers discriminate in favor of candidates seen as more instrumental to their personal goals. This theoretical formulation implies a mediated moderation model whereby the stereotypical perception of a candidate's greater ability required for the task leads to lower (higher) selection preference when the decision maker and the candidate are expected to compete (cooperate) due to the lower (higher) perceived instrumentality of the candidate to the decision maker. Figure 2 depicts this moderated mediation model.

Hypothesis 3. Stereotypical perception of a candidate's greater ability required for the task leads to a lower (higher) perception of the instrumentality of the candidate to the decision maker when the two are expected to compete (cooperate), in turn causing lower (higher) selection preference.

Insert Figure 2 about here

STUDY 1: METHODS

The initial test of our theory (Studies 1–3) was conducted in the context of racial discrimination in selection decisions between White and Asian candidates. The focus on White candidates ensured continuity with past research on selection decisions, which predominately considered Whites as the race that is discriminated in favor of (Pager & Shepherd, 2008; Whitley & Kite, 2009). We chose Asians as the non-White comparison group because Asians constitute not only the largest racial group in the world (Central Intelligence Agency, 2013), but also the largest group of legal immigrants to the United States (Pew Research Center, 2013) and the United Kingdom (Office for National Statistics, 2013). Our choice also has a practical value: Despite indications that Asians are discriminated against in the workplace (Bell, Harrison, & McLaughlin, 1997; Kim & Lewis, 1994; Tang, 1993), the literature on racial discrimination in organizations has largely overlooked this group (Cheng & Thatchenkery, 1997).

To test our theory, we examined discrimination in selection decisions for tasks in which Whites versus Asians are stereotyped as having a greater ability required for successful performance in the task. Most research shows that Asians and Whites are stereotyped similarly in terms of global stereotypical perceptions—as relatively competent but somewhat cold (Cuddy, Fiske, & Glick, 2007; Sanchez & Bonam, 2009; Wong, 1980). However, the competence dimension can be further differentiated into *intellectual competence* and *dominance* to identify differences in stereotypical beliefs about Asians versus Whites.

Specifically, Asians are stereotyped as more *intellectually competent* but less *dominant* than Whites (Berdahl & Min, 2012; Sy et al., 2010). The perception of intellectual competence focuses on general cognitive abilities and is defined by such characteristics as intelligent, smart, knowledgeable, and skilled, whereas the perception of dominance focuses on interpersonal abilities and is defined by such characteristics as dominant, assertive, persuasive, and self-confident (Ridgeway, 1987; Wiggins, Phillips, & Trapnell, 1989).

Given the differential stereotypes of Asians and Whites in terms of intellectual competence and dominance, we tested our theory by examining selection decisions between Asian versus White candidates for tasks requiring either predominately intellectual competence or predominately dominance for successful performance. Our hypotheses imply that when decision makers select candidates for tasks requiring intellectual competence, and they expect to be competitively (cooperatively) interdependent with the candidate who gets hired, they should discriminate against (in favor of) Asian candidates because Asians are stereotyped as having a greater ability required for the task. In contrast, when decision makers select candidates for tasks requiring predominately dominance, and they expect to be competitively (cooperatively) interdependent with the candidate who gets hired, they should discriminate against (in favor of) White candidates, because Whites are stereotyped as having a greater ability required for the task. Finally, the perception of the instrumentality of the candidate to the decision maker should mediate these discriminatory tendencies.

Participants and Design

Ninety-eight White males recruited from a university subject pool (mean age = 27.75, s.d. = 7.34) took part in a lab experiment in exchange for £10.[2] Given the large body of research documenting differential treatment as a function of both candidate's and decision maker's gender (Olian, Schwab, & Haberfeld, 1988), we sought to minimize this additional

[2] In this and all subsequent studies, there were no exclusions of participants.

source of variance by focusing on same-sex dyads of males in all studies.[3] In addition, Study 1 used a sample of White individuals for reasons of continuity with past research, which purported to document a preference for White candidates primarily among White decision makers (Goldberg, 2005; Pager & Shepherd, 2008; Whitley & Kite, 2009). We sought to demonstrate that this tendency can reverse in favor of non-White candidates under conditions specified by our theory and in that way provide a conservative test of our model.

Participants were randomly assigned to the conditions of a 2 (interdependence: competition vs. cooperation; between-subject) × 2 (task requirement: intellectual competence vs. dominance; between-subject) × 2 (candidate race: Asian vs. White; within-subject) design.

Procedure and Materials

Participants arrived at the lab in groups of 4–6 and were told by the experimenter that they would participate in a tournament along with other participants. The tournament purportedly consisted of two parts: tournament participant selection and 3 rounds of tournament tasks. Participants were told tournament member selection was conducted individually in separate rooms. Afterwards, all participants would engage in tournament tasks in a larger room. As the lab was running multiple experiments at the same time, participants were able to see both Whites and Asians in the waiting area, which was expected to make the cover story more convincing. In reality, we were only interested in participants' selection decisions and the tournament did not actually take place.

After the participant was seated in an individual room, the experimenter asked him to fill out a one-page profile sheet including different personal information such as name, date and country of birth, length of residence in the United Kingdom, educational history, fluency in English, and several hobbies. After about 3 minutes, the experimenter re-entered the room to collect the participant's profile sheet and told the participant the following: "You will

[3] We return to this point in the general discussion, where we discuss the generalizability of our theory to women.

select another participant for the tournament. I will come back with the profile sheets of the candidates. While you are waiting, please spend time familiarizing yourself with the rules of the tournament." Then, the experimenter handed over a one-page tournament instruction sheet, which contained our manipulations of task requirement and interdependence.

Task requirement manipulation and pretest. Task requirement was manipulated by varying the tasks the tournament was said to consist of. Participants in the *intellectual competence* condition read that the tournament consisted of forecasting the price of a stock based on contextual information such as the price of related goods. They were provided with several sample questions and answers. This task was the probability learning task, which has been shown to require primarily intellectual competence (Hagafors & Brehmer, 1983). Participants in the *dominance* condition read that they would debate on controversial topics. Debating is known to require dominance-related capabilities such as self-confidence, persuasiveness, and assertiveness (Johnson, 2009). The instruction sheet included several sample topics, such as the importance of love in marriage and the importance of financial versus non-financial rewards for employee motivation.

We conducted a *task requirement pretest* among an independent sample of adult males ($N = 51$; mean age = 27.39, s.d. = 7.94) to verify that the stock price forecasting task was seen as requiring more intellectual competence (and less dominance) than the debating task. Participants for this and all other pretests were recruited from an online crowdsourcing mechanism with members representative of the U.S. population (see Buhrmester, Kwang, & Gosling, 2011 for subject pool details). Following previous research (Berdahl & Min, 2012; Wiggins, Trapnell, & Phillips, 1988), participants were asked to indicate how important the following characteristics were for success at each of the two tasks: intelligent, smart, knowledgeable, and skilled (intellectual competence); and dominant assertive, persuasive, and self-confident (dominance). Stock price forecasting was seen as requiring intellectual

competence (mean = 6.26, s.d. = 0.77; α = .85) more than debating (mean = 5.47, s.d. = 1.31; α = .91), $F(1, 50) = 20.34$, $p < .001$, $\eta_p^2 = .29$. In contrast, debating (mean = 5.94, s.d. = 0.82; α = .81) was seen as requiring dominance more than stock price forecasting (mean = 4.52, s.d. = 1.36; α = .85), $F(1, 50) = 58.60$, $p < .001$, $\eta_p^2 = .54$. Thus, the manipulation of task requirement was effective.

Interdependence manipulation. Next, interdependence was manipulated by varying whether it was said the candidate would compete against or cooperate with the participant in the tournament (cf. Beersma et al., 2003). Participants in the *competition* (*cooperation*) condition read:

> In the first round of the tournament, you will compete with the person you choose as your opponent (cooperate with the person you choose as your team partner in the competition with an opponent team). The participant (team) who outperforms the opponent (the opponent team) will move to the next round of the tournament and have a chance of winning the financial reward. The participant (team) who loses the first round is eliminated from the competition and will be assigned to work on unrelated individual tasks.

Because participants were explicitly told whether they would be competing against or cooperating with the other participant, we did not additionally check whether the manipulation affected participants' expectations of competition versus cooperation with the candidate. After about 5 minutes, the experimenter came back to the individual room to give the participant the profile sheets ostensibly filled out by two other participants, as well as a sheet on which candidate evaluation and choice would be indicated.

Race manipulation and pretest. Following previous research (Bertrand & Mullainathan, 2003), candidate's race was manipulated by varying candidate name and country of origin indicated on the two profiles (Asian candidate: Yoshi Takahashi, Japan;

White candidate: Geoffrey Johnson, United States). Information other than race included in the profile sheet was similar and only included minor differences in terms of year of birth (1985 or 1986), length of residence in the U.K. (15 or 16 years), university major (King's College London major in either business or management), hobbies (running or swimming), etc. Participants were informed that both candidates were fluent in English. We counterbalanced the race of the candidate across the two profiles, which ensured that any effect of candidate race was due to our race manipulation and not due to any differences in information between the two profiles.

We conducted a *race manipulation pretest* to check whether our manipulation effectively influenced the perceived race of the candidate using an independent sample of adult males ($N = 58$, mean age = 26.28, s.d. = 8.32). The majority of participants correctly identified the race of the White candidate (89.7%), $\chi^2(1, N = 58) = 36.48$, $p < .001$, as well as the race of the Asian candidate (98.3%), $\chi^2(1, N = 78) = 54.07$, $p < .001$, among the racial categories recognized by the U.S. Census Bureau (2013).

Candidate perceptions and selection decisions. After reviewing the profiles, candidates responded to a set of measures about each candidate. These included the same measures of perceived *intellectual competence* ($\alpha_{White} = .79$; $\alpha_{Asian} = .82$) and *dominance* ($\alpha_{White} = .82$; $\alpha_{Asian} = .85$) as in the task requirement pretest. In addition, to measure *perceived instrumentality* of the candidate to the decision maker, we followed previous research (Fitzsimons & Shah, 2009) and asked participants to indicate their agreement (1 = "strongly disagree" to 7 = "strongly agree") with the statement "If I choose [candidate name] as my opponent (partner), this makes it more likely that I will win the first round of the tournament." Finally, we measured *selection preference* by asking participants to respond to the question "Would you select [candidate name] as your opponent (partner) for the tournament?" (1 = "definitely would not select" to 7 = "definitely would select").

Next, the experimenter collected the materials and thoroughly debriefed participants. No participant expressed suspicion or concern regarding the cover story or the procedure.

STUDY 1: RESULTS AND DISCUSSION

Stereotypes of Asians and Whites

Consistent with prior research, the Asian candidate (mean = 5.99, s.d. = 0.76) was seen as more intellectually competent than the White candidate (mean = 5.14, s.d. = 0.72), $F(1, 97) = 83.92$, $p < .001$, $\eta_p^2 = .46$. The White candidate (mean = 5.55, s.d. = 0.88) was seen as more dominant than the Asian candidate (mean = 4.20, s.d. = 0.95), $F(1, 97) = 106.90$, $p < .001$, $\eta_p^2 = .52$.

Discrimination in Selection Decisions

Means of selection decisions by condition are displayed in Figure 3. Across conditions, decision makers, who were White, exhibited a similar preference for the White candidate (mean = 4.84, s.d. = 1.43) as they did for the Asian candidate (mean = 4.77, s.d. = 1.59), $F(1, 94) = 0.28$, $p = .868$, $\eta_p^2 = .001$. Therefore, we did not find evidence of a general discrimination in favor of candidates belonging to the same social group. We next analyzed whether decision makers instead discriminated in line with the predictions of our theoretical model. For ease of interpretation, in all studies we focus on analyses of simple effects of candidates' social group membership (in this case, race).[4]

Insert Figure 3 about here

The results show that when the task required intellectual competence, the White candidate (mean = 5.48, s.d. = 0.75) was preferred to the Asian candidate (mean = 3.41, s.d. =

[4] Because we predict simple effects of candidate social group membership in the opposite direction as a function of decision maker–candidate interdependence and task type, significant simple effects imply that all relevant two-way and three-way interactions are also significant. Consistent with this reasoning, in all studies, all simple two-way interaction and three-way interactions for both instrumentality perception as well as selection decisions as the outcome variables are significant at $p < .001$. All details are available from the first author.

0.93) when the decision maker expected to compete with the candidate, $F(1, 94) = 42.02$, $p < .001$, $\eta_p^2 = .31$, but when the decision maker expected to cooperate with the candidate, the Asian candidate (mean = 5.92, s.d. = 0. 83) was preferred to the White candidate (mean = 4.29, s.d. = 1.16), $F(1, 94) = 22.93$, $p < .001$, $\eta_p^2 = .20$.

In contrast, when the task required dominance, the Asian candidate (mean = 5.92, s.d. = 1.25) was preferred to the White candidate (mean = 3.67, s.d. = 1.40) when the decision maker expected to compete with the candidate, $F(1, 94) = 43.96$, $p < .001$, $\eta_p^2 = .32$, but when the decision maker expected to cooperate with the candidate, the White candidate (mean = 5.87, s.d. = 1.22) was preferred to the Asian candidate (mean = 3.96, s.d. = 1.36), $F(1, 94) = 30.46$, $p < .001$, $\eta_p^2 = .25$.

The results for both tasks thus support Hypotheses 1 and 2: Decision makers discriminated against candidates stereotyped as having a greater ability required for the task when they expected competition with the candidate who gets hired, but in their favor when cooperation was expected.

The Role of Instrumentality Perception

To test Hypothesis 3, we followed the guidelines by Judd, Kenny, and McClelland (2001) for testing mediation in the context of within-subject designs. Our moderated mediation model is depicted in Figure 2. OLS regression was used to estimate individual paths and the significance of indirect effects was tested using the bootstrap method with 10,000 resamples (Shrout & Bolger, 2002).

Because candidates' relative ability is different for each task, we tested the moderated mediation model separately for each task. For the task requiring intellectual competence, we computed the relative difference in perceived intellectual competence, instrumentality, and selection preference by subtracting the values for the White candidate from those for the Asian candidate (who was stereotyped as more intellectually competent). The results showed

that when the decision maker expected to compete with the candidate, the perception of a greater intellectual competence of the Asian candidate led to a relatively lower perception of the instrumentality of the candidate to the decision maker (b = -0.35, s.e. = 0.18, p = .063) and, in turn, a lower selection preference for the Asian (relative to White) candidate (conditional indirect effect CI: -0.62, -0.08). In contrast, when the decision maker expected to cooperate with the candidate, the perception of a greater intellectual competence of the Asian candidate led to a relatively higher perception of the instrumentality of the candidate to the decision maker (b = 1.05, s.e. = 0.27, p < .001) and, in turn, a higher selection preference for the Asian (relative to White) candidate (conditional indirect effect CI: 0.29, 1.62).

Next, we focused on the task requiring dominance and computed the relative difference in perceived dominance, instrumentality, and selection preference by subtracting the values for the Asian candidate from those for the White candidate (who was stereotyped as more dominant). The results indicate that when the decision maker expected to compete with the candidate, the perception of a greater dominance of the White candidate led to a relatively lower perception of the instrumentality of the candidate to the decision maker (b = -0.78, s.e. = 0.27, p = .006) and, in turn, a lower selection preference for the White (relative to the Asian) candidate (conditional indirect effect CI: -1.17, -0.33). In contrast, when the decision maker expected to cooperate with the candidate, the perception of a greater dominance of the White candidate led to a relatively higher perception of the instrumentality of the candidate to the decision maker (b = 0.58, s.e. = 0.20, p = .006) and, in turn, a higher selection preference for the White (relative to the Asian) candidate (conditional indirect effect CI: 0.23, 1.19). The results thus support Hypothesis 3.

STUDY 2: METHODS

Study 2 sought to constructively replicate our findings in the field. We conducted a field experiment in which we unobtrusively manipulated task requirement and

interdependence in a tournament organized in a business school association. The second goal of Study 2 was to test our theory among a sample of South Koreans to provide evidence that the behavior in line with our theory that we documented in Study 1 was not specific to White decision makers and in that way to strengthen the external validity of our conclusions. Finally, most prior research focused on White decision makers (Henrich, Heine, & Norenzayan, 2010), so Study 2 represents an important addition to the extant body of evidence because it examines a phenomenon that fundamentally concerns interracial dynamics among decision makers of a race other than just White.

Research Site and Participants

The sample consisted of members of the Management Consulting Student Association at a major university in South Korea. Most association members are undergraduates or master-level business students. The association was established in 1996 with the goal of helping prepare its members for jobs in management consulting. At any given time, the association numbers about 100 active members; they had over 500 alumni at the time of data collection. The association organizes weekly sessions, which include lectures, discussions, business case competitions, and other group activities.

One of the authors had access to the association as an alumnus. We learned that the association had planned to hold an intensive two-week "Winter Boot Camp" in January 2013, which would include two 5-hour sessions per week, consisting of more diverse activities than during regular weekly sessions. In early December, 2012, we contacted the president of the association, requesting to arrange a data collection among association members. The managing body of the association was informed of our research and study design and agreed to conduct a field experiment among its members according to our specifications.

However, due to ethical considerations, we were asked not to administer measures pertaining to stereotypical beliefs about White versus Asian candidates and their perceived

instrumentality. We complied with this request, so Study 2 did not test these two elements of our theory and instead focused only Hypotheses 1 and 2. We considered this acceptable because Study 2 provided a unique opportunity to examine this sensitive behavior in the field. In addition, due to a high degree of deception involved in the study, we also considered it preferable to administer the minimum amount of measures resembling those commonly employed in research studies so as to avoid suspicion.

We asked the association president to send an e-mail message to 98 active male association members one week prior to the "Winter Boot Camp." Seventy-eight members responded to the email (79.59% response rate). As described below, through this e-mail correspondence we managed to unobtrusively manipulate interdependence and task requirements and measure participants' selection decisions. Participants' average age was 23.01 (s.d. = 1.51). As a reward for members' participation in the study, we provided the president with $250.00 (in local currency) for the purpose of funding a group dinner for the members, which took place after the data collection was completed.

Design, Procedure, and Materials

Participants were randomly assigned to conditions of a 2 (interdependence: competition vs. cooperation; between-subject) × 2 (task requirement: intellectual competence vs. dominance; between-subject) × 2 (candidate race: Asian vs. White; within-subject) design. They received an email from the association president in which they were told that they would participate in a tournament during one of the sessions of the Winter Boot Camp. In the competition (cooperation) condition, the e-mail stated as follows:

> Hi; we are writing to inform you of a tournament scheduled for the 19 January afternoon session. In consultation with the educational coordinator, I decided to invite some non-members, who are exchange students from the United States, to enrich the

tournament experience. Please read carefully the following instructions and select one person as your tournament opponent (partner).

Manipulations of task requirement and interdependence. Next, participants read a description of the tournament, which contained the manipulations of task requirement and interdependence and was identical to that used in Study 1.

Race manipulation. At the end of the e-mail, participants saw the profiles of the two candidates, which contained the same race manipulation used in Study 1. The information presented in the two profiles had the same format as in Study 1 but was adapted to the study setting. The contents of profiles again included minor differences (i.e., year of birth 1990 vs. 1991; degree in business vs. management at the University of California, Santa Barbara, one of the exchange partners of the University, etc.) to increase believability. The e-mail stressed that both students were fluent in English.

Candidate selection decisions. Finally, we asked participants to reply to the e-mail by indicating which candidate they wanted to be paired with in the tournament and the choices expressed in participants' responses served as our dependent variable.

STUDY 2: RESULTS AND DISCUSSION

Discrimination in Selection Decisions

Participants' selection decision frequencies by condition are displayed in Figure 4. Across conditions, decision makers, who were Asians, were about equally likely to select the Asian candidate (47.4%) as they were to select the White candidate (52.6%), $\chi^2(1, N = 78) = 0.21$, $p = .651$. Therefore, we again did not find evidence of a general preference for candidates of the same race. We next examined whether decision makers instead discriminated in line with the predictions of our theoretical model.

Insert Figure 4 about here

We conducted a moderated logistic regression analysis to test differences in participants' selection decisions as a function of task requirement and interdependence. When the task required intellectual competence, the coefficient for the effect of interdependence (0 = cooperation, 1 = competition) on selection decisions (0 = White, 1 = Asian) was significant and negative, b = -2.22, s.e. = 0.74, p = .003. This result shows a greater likelihood of preference for the White candidate when the decision maker expected to compete (vs. cooperate) with the candidate, or, interpreted differently, a greater likelihood of preference for the Asian candidate when the decision maker expected to cooperate (vs. compete) with the candidate.

In contrast, when the task required dominance, the coefficient for the effect of interdependence on selection decisions was significant and positive, b = 3.47, s.e. = 0.94, p < .001. This result shows a greater likelihood of preference for the Asian candidate when the decision maker expected to compete (vs. cooperate) with the candidate, or, interpreted differently, a greater likelihood of preference for the White candidate when the decision maker expected to cooperate (vs. compete) with the candidate.

The results for both tasks thus support Hypotheses 1 and 2: Decision makers discriminated against candidates stereotyped as having a greater ability required for the task when they expected competition with the candidate who gets hired, but in their favor when cooperation was expected.

STUDY 3: METHODS

Study 3 sought to extend the previous studies in several ways. First, we used a different operationalization of selection decisions: Participants engaged in a recruitment simulation and indicated what candidate they would select to join their department. Second, we used a different manipulation of interdependence. Instead of manipulating task and reward interdependence, we manipulated whether the department's culture was described as

competitive or cooperative (Chatman & Barsade, 1995). These modifications sought to enhance the external validity of our conclusions through a constructive replication of previous studies. In addition, we used a different (more racially typical) name of the White candidate in hopes of attaining an even better effectiveness of the candidate race manipulation. Finally, because Study 2 did not test the role of instrumentality, we wanted to provide additional evidence for our hypothesized mechanism.

Participants and Design

We recruited 122 males with work experience (mean age = 32.19, s.d. = 10.08; 91.0% White, 5.7% Asian, 2.5% Black, and 0.8% Pacific Islander) from the same online crowdsourcing mechanism used in pretests for previous studies to participate in the experiment in exchange for $1.00. As Studies 1 and 2 found no differences in results as a function of participant race, we did not include race as a recruitment criterion in this or the subsequent study.

Participants were randomly assigned to conditions of a 2 (interdependence: competition vs. cooperation; between-subject) × 2 (task requirement: intellectual competence vs. dominance; between-subject) × 2 (candidate race: Asian vs. White; within-subject) design.

Procedure and Materials

All materials were presented on the computer. Participants were told they would engage in a recruitment simulation, which we developed based on vignettes of competition and cooperation at work (Wageman, 1995). Participants were first asked to read a scenario describing their work setting and assume the role of a team member in charge of hiring a new employee. Participants were then told they would review profiles of potential candidates, respond to measures of their perception of the candidates, and indicate whether they would hire the candidates.

Task requirement manipulation and pretest. Task requirement was manipulated by varying the description of the department to which participants belonged. Participants in the *intellectual competence (dominance*) condition read that they had just started working in the engineering (sales) department at ABC Company. Prior research found that work in these two departments is seen as requiring significantly different levels of intellectual competence versus dominance (Sy et al., 2010).

A *task requirement pretest* among an independent sample of adult males ($N = 55$; mean age = 34.49, s.d. = 12.15), which used the same items and scales as the task requirement pretest in Study 1, confirmed that the job in the engineering department was seen as requiring more intellectual competence (mean = 6.63, s.d. = 0.58; $\alpha = .91$) than the job in the sales department (mean = 5.55, s.d. = 1.02; $\alpha = .88$), $F(1, 54) = 71.68$, $p < .001$, $\eta_p^2 = .57$. In contrast, the job in the sales department was seen as requiring dominance (mean = 6.06, s.d. = 0.86; $\alpha = .80$) more than the job in the engineering department (mean = 4.49, s.d. = 1.10; $\alpha = .78$), $F(1, 54) = 69.44$, $p < .001$, $\eta_p^2 = .56$.

Interdependence manipulation. We manipulated interdependence by varying the description of the department's culture (cf. Chatman & Barsade, 1995). Participants in the *competition* (*cooperation*) condition read:

> Your department is seen as having a very competitive (cooperative) atmosphere. Individual (joint) performance and individual (joint) initiative are highly valued, and competition (cooperation) among department members is considered to be the best means toward career success.

To check the effective of interdependence manipulation, we asked participants to indicate whether they expected their future relationship with the candidate who gets hired would be competitive or cooperative.

Race manipulation and pretest. Next, participants were presented with the profiles of the two candidates. The word length and the format were held constant, but, as in the previous studies, the content such as hobby, major, and university varied slightly between the two profiles to make the recruitment simulation more realistic. We counterbalanced the race of the candidate across the two profiles. The race manipulation was the same as in previous studies, with the exception that we used the name David Schmitt for the White candidate as a somewhat more typical White-specific name, based on the U.S. Census report (U.S. Census Bureau, 2010). To check the effectiveness of the race manipulation, we asked participants to indicate what they thought each candidate's race was among the racial categories recognized by the U.S. Census Bureau (2013).

Candidate perceptions and selection decisions. Participants were asked to provide their evaluation of each candidate. Specifically, using the same items as in the task requirement pretest and previous studies, participants indicated how *intellectually competent* (α_{White} = .93; α_{Asian} = .94) and *dominant* (α_{White} = .78; α_{Asian} = .83) they thought each candidate was. In addition, we measured *perceived instrumentality* of the candidate to the decision maker by asking participants to indicate their agreement (1 = "strongly disagree" to 7 = "strongly agree") with the following statement: "If this person is hired for the position in my department, this makes my career success within the department more likely." To measure *selection preference*, we asked participants to respond to the following question: "How likely would you be to recommend hiring this person for the position in your department?" (1 = "very unlikely" to 7 = "very likely").

STUDY 3: RESULTS AND DISCUSSION

Manipulation Checks

The majority of participants correctly identified the race of the White candidate (98.4%), $\chi^2(1, N = 122) = 232.15$, $p < .001$, as well as the race of the Asian candidate (100%; perfect classification).

In addition, the majority of participants in the competition condition (95.2%), $\chi^2(1, N = 63) = 51.57$, $p < .001$, indicated that they expected a competitive relationship with the candidate who gets hired; and the majority of participants in the cooperation condition (96.7%), $\chi^2(1, N = 59) = 51.27$, $p < .001$, expected a cooperative relationship.[5]

Stereotypes of Asians and Whites

The Asian candidate (mean = 5.61, s.d. = 0.96) was seen as more intellectually competent than the White candidate (mean = 5.48, s.d. = 0.87), $F(1, 121) = 4.57$, $p = .035$, $\eta_p^2 = .04$. The White candidate (mean = 4.79, s.d. = 0.78) was seen as more dominant than the Asian candidate (mean = 4.63, s.d. = 0.78), $F(1, 121) = 5.14$, $p = .025$, $\eta_p^2 = .04$.

Racial Discrimination in Selection Decisions

Means of selection decisions by condition are displayed in Figure 5. Across conditions, decision makers, who were predominately White, exhibited a similar preference for the White candidate (mean = 5.26, s.d. = 1.39) as they did for the Asian candidate (mean = 5.11, s.d. = 1.49), $F(1, 118) = 0.26$, $p = .613$, $\eta_p^2 = .002$. Restricting the sample for the analysis to White participants led to the same conclusion, $F(1, 105) = 0.10$, $p = .749$, $\eta_p^2 = .001$. Therefore, we did not find evidence of a general preference for candidates of the same race. We next examined whether decision makers instead discriminated in line with the predictions of our theoretical model.

Insert Figure 5 about here

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[5] We also estimated for all manipulation checks in Studies 3 and 4 a model that included all manipulations and their interactions, and the only significant effects were the main effects reported in the paper (in Study 3 all other *p*s > .208; in Study 4, all other *p*s > .138).

When the task required intellectual competence, the White candidate (mean = 5.29, s.d. = 1.32) was preferred to the Asian candidate (mean = 3.79, s.d. = 1.37) when the decision maker expected to compete with the candidate, $F(1, 118) = 22.87$, $p < .001$, $\eta_p^2 = .16$, but when the decision maker expected to cooperate with the candidate, the Asian candidate (mean = 6.45, s.d. = 0.63) was preferred to the White candidate (mean = 5.41, s.d. = 1.18), $F(1, 118) = 9.28$, $p = .003$, $\eta_p^2 = .07$.

In contrast, when the task required dominance, the Asian candidate (mean = 5.45, s.d. = 1.33) was preferred to the White candidate (mean = 4.59, s.d. = 1.72) when the decision maker expected to compete with the candidate, $F(1, 118) = 6.44$, $p = .012$, $\eta_p^2 = .05$, but when the decision maker expected to cooperate with the candidate, the White candidate (mean = 5.73, s.d. = 1.08) was preferred to the Asian candidate (mean = 5.00, s.d. = 1.02), $F(1, 118) = 4.82$, $p = .030$, $\eta_p^2 = .04$.

The results for both tasks thus support Hypotheses 1 and 2: Decision makers discriminated against candidates stereotyped as having a greater ability required for the task when they expected competition with the candidate who gets hired, but in their favor when cooperation was expected.

The Role of Instrumentality Perception

We followed the same mediation analysis procedure as in Study 1. First, focusing on the task requiring intellectual competence, when the decision maker expected to compete with the candidate, the perception of a greater intellectual competence of the Asian candidate led to a relatively lower perception of the instrumentality of the candidate to the decision maker ($b = -0.92$, s.e. = 0.35, $p = .010$) and, in turn, a lower selection preference for the Asian (relative to the White) candidate (conditional indirect effect CI: -1.65, -0.13). In contrast, when the decision maker expected to cooperate with the candidate, the perception of a greater intellectual competence of the Asian candidate led to a relatively higher perception of the

instrumentality of the candidate to the decision maker (b = 0.92, s.e. = 0.43, p = .035) and, in turn, a higher selection preference for the Asian (relative to the White) candidate (conditional indirect effect CI: 0.26, 1.07).

Next, focusing on the task requiring dominance, when the decision maker expected to compete with the candidate, the perception of a greater dominance of the White candidate led to a relatively lower perception of the instrumentality of the candidate to the decision maker (b = -1.56, s.e. = 0.37, p < .001) and, in turn, a lower selection preference for the White (relative to Asian) candidate (conditional indirect effect CI: -1.73, -0.38). In contrast, when the decision maker expected to cooperate with the candidate, the perception of a greater dominance of the White candidate led to a relatively higher perception of the instrumentality of the candidate to the decision maker (b = 1.09, s.e. = 0.40, p = .009) and, in turn, a higher selection preference for the White (relative to Asian) candidate (conditional indirect CI: -1.82, -0.54). The results thus support Hypothesis 3.

STUDY 4: METHODS

The main goal of Study 4 was to test our theoretical model in a different empirical context and in that way to demonstrate the generalizability of our theory to other instances of discrimination. While Studies 1–3 focused on racial discrimination, in Study 4 we focused on age discrimination. To test our hypotheses, we examined how decision makers discriminate when making selection decisions for tasks in which younger versus older candidates are stereotyped as having a greater ability required for successful performance in the task.

Prior research found that younger employees are stereotyped as more creative but less stable (dependable) than older employees (for meta-analyses, see Finkelstein et al., 1995; Ng & Feldman, 2012). Creativity refers to how well employees manage new information and changes, and are capable of generating new ideas (Anderson, De Dreu, & Nijstad, 2004). Characteristics defining creativity include being innovative, creative, adaptable, flexible, and

curious (Avolio & Barrett, 1987; Cleveland & Landy, 1983; Rosen & Jerdee, 1976). Stability refers to individuals' ability to act and perform in a consistent and reliable manner and is defined by such traits as stable, dependable, careful, cautious, and steady (Bal, Reiss, Rudolph, & Baltes, 2011; Finkelstein et al., 1995; Rosen & Jerdee, 1976).

Therefore, we tested our theory by examining selection decisions between younger versus older candidates for tasks requiring either predominately creativity or predominately stability for successful performance. Our hypotheses imply that when decision makers select candidates for tasks requiring creativity, and they expect to be competitively (cooperatively) interdependent with the candidate who gets hired, they should discriminate against (in favor of) younger candidates, because younger people are stereotyped as having a greater ability required for the task. In contrast, when decision makers select candidates for tasks requiring predominately stability, and they expect to be competitively (cooperatively) interdependent with the candidate who gets hired, they should discriminate against (in favor of) older candidates, because older people are stereotyped as having a greater ability required for the task. Finally, the perception of the instrumentality of the candidate to the decision maker should mediate these discriminatory tendencies.

Participants and Design

One hundred and twenty-one male participants (mean age = 30.77, s.d. = 10.01; 80.2% White, 12.4% Asian, 5.7% Black, and 1.7% American Indian) were recruited using the same procedure as in Study 3.

Participants were randomly assigned to conditions of a 2 (interdependence: competition vs. cooperation; between-subject) × 2 (task requirement: stability vs. creativity; between-subject) × 2 (candidate age: 25 years old vs. 50 years old; within-subject) design.

Procedure and Materials

The procedure and materials were almost identical to those used in Study 3 except that the manipulation of task requirement, candidate profiles, and questions about candidate perception were adjusted to test our theory in the context of age discrimination.

Task requirement manipulation and pretest. Participants in the *stability* (*creativity*) condition read that they had just started working in the corporate strategy (product design) department at ABC Company.

We conducted a *task requirement pretest* among an independent sample of adult males ($N = 44$; mean age = 32.07, s.d. = 10.07) to verify that the product design position was seen as requiring more creativity (and less stability) than the corporate strategy position. Following previous research (Cleveland & Landy, 1983; Meyer, Dalal, & Bonaccio, 2009), participants were asked to indicate how important the following characteristics were for success at each of the two tasks: stable, dependable, careful, cautious, steady (stability); and innovative, creative, adaptable, flexible, and curious (creativity). The results confirmed that the corporate strategy department was seen as requiring stability (mean = 5.66, s.d. = 0.92; $\alpha = .81$) more than did the job in the product design department (mean = 5.06, s.d. = 1.19; $\alpha = .88$), $F(1, 43) = 17.59$, $p < .001$, $\eta_p^2 = .29$. In contrast, the product design department was seen as requiring creativity (mean = 6.26, s.d. = 0.75; $\alpha = .84$) more than did the job in the corporate strategy department (mean = 5.24, s.d. = 1.14; $\alpha = .87$), $F(1, 43) = 36.23$, $p < .001$, $\eta_p^2 = .46$. Thus, the manipulation of task requirement was effective.

Candidate perceptions and selection decisions. The profiles of the two candidates were similar to each other except age indicated on the profile (25 versus 50 years old) and we counterbalanced the age of the candidate across the two profiles. Then, using the same items as in the task requirement pretest, participants indicated how stable ($\alpha_{old} = .91$; $\alpha_{young} = .96$) and creative ($\alpha_{old} = .92$; $\alpha_{young} = .85$) they thought each candidate was. To check the effectiveness of the age manipulation, we asked participants how old they thought each

candidate was (1 = "very young;" 7 = "very old"). All other measures and materials were the same as in Study 3.

STUDY 4: RESULTS AND DISCUSSION

Manipulation Checks

Participants perceived the 25-year-old candidate (mean = 2.20, s.d. = 0.79) to be younger than the 50-year-old candidate (mean = 5.36, s.d. = 0.82), $F(1, 120) = 769.71$, $p < .001$, $\eta_p^2 = .87$.

In addition, the majority of participants in the competition condition (100%, perfect classification) indicated that they expected a competitive relationship with the candidate who gets hired, and the majority of participants in the cooperation condition (96.8%), $\chi^2(1, N = 63) = 55.25$, $p < .001$ expected a cooperative relationship.

Stereotypes of Old and Young Candidates

The 25-year-old candidate (mean = 5.39, s.d. = 0.99) was seen as more creative than the 50-year-old candidate (mean = 4.56, s.d. = 1.11), $F(1, 120) = 41.06$, $p < .001$, $\eta_p^2 = .26$. The 50-year-old candidate (mean = 5.72, s.d. = 0.87) was seen as more stable than the 25-year-old candidate (mean = 4.38, s.d. = 1.15), $F(1, 120) = 100.41$, $p < .001$, $\eta_p^2 = .46$.

Discrimination in Selection Decisions

Means of selection decisions by condition are displayed in Figure 6. Across conditions, decision makers' own age did not affect preference for candidates of different ages, $F(1, 116) = 0.04$, $p = .836$, $\eta_p^2 < .001$. Therefore, we did not find evidence of a general preference for candidates who were similar to decision makers in terms of age. We next examined whether decision makers instead discriminated in line with the predictions of our theoretical model.

Insert Figure 6 about here

When the task required stability, the 25-year-old candidate (mean = 5.97, s.d. = 1.00) was preferred to the 50-year-old candidate (mean = 3.50, s.d. = 2.00) when the decision maker expected to compete with the candidate, $F(1, 117) = 36.85$, $p < .001$, $\eta_p^2 = .24$, but when the decision maker expected to cooperate with the candidate, the 50-year-old candidate (mean = 6.12, s.d. = 0.99) was preferred to the 25-year-old candidate (mean = 4.21, s.d. = 1.17), $F(1, 117) = 22.73$, $p < .001$, $\eta_p^2 = .16$.

In contrast, when the task required creativity, the 50-year-old candidate (mean = 5.89, s.d. = 1.03) was preferred to the 25-year-old candidate (mean = 3.27, s.d. = 1.87) when the decision maker expected to compete with the candidate, $F(1, 117) = 33.61$, $p < .001$, $\eta_p^2 = .22$, but when the decision maker expected to cooperate with the candidate, the 25-year-old candidate (mean = 6.30, s.d. = 1.26) was preferred to the 50-year-old candidate (mean = 4.00, s.d. = 1.53), $F(1, 117) = 29.00$, $p < .001$, $\eta_p^2 = .20$.

The results for both tasks thus support Hypotheses 1 and 2: Decision makers discriminated against candidates stereotyped as having a greater ability required for the task when they expected competition with the candidate who was hired, but in their favor when cooperation was expected.

The Role of Instrumentality Perception

We followed the same mediation analysis procedure as in previous studies. First, regarding the task requiring stability, the results showed that when the decision maker expected to compete with the candidate, the perception of a greater stability of the 50-year-old candidate led to a relatively lower perception of the instrumentality of the candidate to the decision maker ($b = -0.53$, s.e. = 0.21, $p = .016$) and, in turn, a lower selection preference for the 50-year-old (relative to the 25-year-old) candidate (conditional indirect effect CI: -0.85, -0.03). In contrast, when the decision maker expected to cooperate with the candidate, the perception of a greater stability of the 50-year-old candidate led to a relatively higher

perception of the instrumentality of the candidate to the decision maker (b = 0.72, s.e. = 0.33, p = .032) and, in turn, a higher selection preference for the 50-year-old candidate (relative to the 25-year-old) candidate (conditional indirect effect CI: 0.13, 0.92).

Regarding the task requiring creativity, the results showed that when the decision maker expected to compete with the candidate, the perception of a greater creativity of the 25-year-old candidate led to relatively lower perception of the instrumentality of the candidate to the decision maker (b = -0.90, s.e. = 0.42, p = .038) and, in turn, lower selection preference for the 25-year-old (relative to the 50-year-old) candidate (conditional indirect effect CI: -1.96, -0.09). In contrast, when the decision maker expected to cooperate with the candidate, the perception of a greater creativity of the 25-year-old candidate led to a relatively higher perception of the instrumentality of the candidate to the decision maker (b = 1.65, s.e. = 0.48, p = .001) and, in turn, a higher selection preference for the 25-year-old (relative to the 50-year-old) candidate (conditional indirect effect CI: 0.18, 2.32). The results thus support Hypothesis 3.

GENERAL DISCUSSION

Theoretical Contribution

This research contributes to the literature by proposing and testing a novel explanation for discrimination in selection decisions. By specifying the conditions under which decisions discriminate in favor of as well as against candidates belonging to the same social group, our theory may help explain the mixed findings for the dominant theoretical paradigm suggesting that decision makers exhibit preference for candidates belonging to the same social group (Allport, 1954; Pager & Shepherd, 2008; Whitley & Kite, 2009). It is relevant to note that our research does not imply that favoritism for candidates belonging to the same social group plays no role in selection decisions. Rather, we show that this force can be overridden by self-interested considerations on the part of decision makers, jointly defined

by the stereotypical beliefs about candidates' abilities and expectations of future interdependence with the candidate. In the absence of strong task imperatives or future interdependence, it could well be the case that decision makers select others who are from their own social group. The social identity approach, similarity-attraction model, and theories focusing on intergroup conflict may be more relevant in such circumstances than our theory.

While we tested our theory in the context of racial and age discrimination, we believe our model may explain various instances of discrimination in selection decisions that satisfy the assumptions of our theory. As long as members of different social groups are stereotyped differently in terms of a characteristic that the decision maker considers relevant for the execution of the task for which candidates are being considered, our theory should be a useful explanatory tool for understanding decision makers' discriminatory tendencies. For instance, our theory should be able to explain gender discrimination for jobs seen as requiring masculine versus feminine traits (Glick et al., 1988). Women (men) are stereotyped as having the characteristics required for successful performance of tasks requiring feminine (masculine) characteristics. For that reason, decision makers should discriminate against them (in their favor) when competitive (cooperative) interdependence is expected. The theory can similarly be applied to explain discrimination of other social groups, including people of other races (e.g., discrimination against black candidates), religious beliefs, and sexual orientations.

We also contribute to research on discrimination in organizations by situating decision makers' behavior in the context of intra-organizational interdependent relationships. Most prior models of discrimination in selection decisions have assumed that decision makers expect no future relationship with the candidate, an assumption that is untenable considering how many real-world selection decisions are made (Edenborough, 2005; Harris et al., 2003). We show that taking into account the expected interdependence between

decision makers and candidates and the corresponding perceived instrumentality of the candidates can provide a powerful explanation for discriminatory behavior in organizations.

Although self-interested considerations have been emphasized in the theoretical economics literature as a potentially relevant factor in discrimination (Arrow, 1973; Phelps, 1972), such motives have been underutilized as an explanation in the organizational literature. In contrast, "softer" motives such as likeability and conflict aversion has been long regarded as the key mediating variable explaining discrimination in performance evaluation and selection decision (Whitley & Kite, 2009). Our results highlight the importance of considering intra-organizational interdependencies and the corresponding instrumentality perceptions for the understanding of other interpersonal decisions in organizations that have often been conceptualized as having been made in a social vacuum, such as performance evaluations, promotion decisions, and compensation negotiations.

Limitations and Further Research

We tested our theory in the context of selection decisions in which both decision makers and candidates were men. In addition, Studies 1–3 focused on selection decisions between White and Asian candidates. Thus, generalizing our conclusions to other combinations of decision maker–candidate gender or race warrants caution. Decisions concerning our study design were guided by the fact that this research constitutes the initial test of our theory, and thus, providing internally consistent tests was the priority. We sought to accomplish this goal through controlled experiments in which we minimized additional sources of variation, including gender. However, as Cook and Campbell (1979) note, such sampling decisions may pose a threat to the external validity of inferences, particularly when there is an interaction between the causal relationships and sample characteristics. In our case, this is a potential concern. Prior work suggests that women might be less instrumental in their decisions (Bakan, 1966; McClelland, 1975; Tannen, 1991). Thus, because the effects we

documented are based on the propensity to be instrumental when making selection decisions, they might be expressed less strongly among women. Future research is needed to test our theory in the context of other combinations of decision maker–candidate gender and race, and in so doing perhaps identify boundary conditions of our theory.

Future research should examine other individual differences that might affect how instrumental decision makers are in their selection decisions. For instance, people differ in the degree to which they are motivated to follow their self-interest at the expense of the interests of others (De Dreu & Nauta, 2009; Van Lange, 1999), such as their organization. Those who are relatively more motivated to benefit their organization (rather than the self) should be less likely to exhibit self-serving discriminatory tendencies in situations that contrast personal and organizational interests, such as situations in which the decision maker expects to be competitively interdependent with the candidate who gets hired, and thus has the incentive to hire the weakest candidate, which is contrary to the interest of the organization.

Research has also shown that individuals differ in how prejudiced they are toward other racial groups (Stewart & Perlow, 2001; Whitley & Kite, 2009). Among people who harbor strong aversion to racial out-groups, discrimination in favor of candidates of the same race might be less likely to abate as a result of greater perceived instrumentality of candidates of other races. Strongly prejudiced individuals might prefer members of their own race even when this goes against their self-interest, i.e., when such candidates are less instrumental to their personal outcomes. Future research is needed to explore this possibility.

Our research focused on situations in which decision makers face a choice between equally qualified candidates. While this allowed us to isolate the effect of race in selection decisions (and in that way operationalize racial discrimination), we note that stereotypical beliefs about candidates' abilities might be less relevant in situations in which some

candidates are clearly more qualified than others (Dipboye, Fromkin, & Wiback, 1975). Future research is needed to ascertain the power of stereotypical beliefs about candidates' abilities based on their social group membership in the effects we documented, relative to other sources of information about potential future performance, such as candidates' educational record or prior work experience.

Our theory is also limited to situations in which decision maker–candidate interdependence exists. While we believe that decision makers often expect at least some degree of interdependence with the candidate (e.g., at the very least by virtue of working within the same organization), our theory should be less relevant in situations in which interdependence is less pronounced. Nevertheless, we note that the largest part of the economy is composed of small to medium firms (Beck, Demirguc-Kunt, & Levine, 2005), and in such smaller firms, people who make decisions about candidates arguably have some level of interdependence with the candidate who gets hired. In addition, even in large organizations, employees working on tasks requiring advanced skills might be best placed to evaluate potential candidates for work on similar jobs. Therefore, while decision maker–candidate interdependence is certainly present to a different degree across different organizations, we believe this aspect of selection decisions in organizations does manifest itself in a considerable number of cases. Future research might examine how differences in the strength of interdependence of decision maker and the candidate who gets hired affect the explanatory power of our model.

An important extension of this research would be to test our theory using large-scale passive observational studies in the field. For instance, one approach to further testing of our theory in the field might be to measure cooperative and competitive interdependence among members of hiring committees and then measure their initial candidate preferences.

Managerial Implications

By shedding new light on causes of discrimination, this research provides some clear prescriptions for managers. We demonstrate that expected interdependence between the person making the selection decision and the candidate along with decision makers' stereotypes about members of different social groups can lead to discriminatory decisions. Awareness of potential interdependence and stereotyping tendencies should allow organizations to design selection practices to minimize potential discrimination.

One feature of the selection process could be a focused accountability system. Making decision makers accountable can decrease their tendency to follow their self-interest at the expense of others (Pitesa & Thau, 2013). In addition, research shows that accountability concerns motivate thorough processing of social information (Chaiken, 1980), which should reduce reliance on stereotypes (Bodenhausen, 1990). Thus, by making decision makers accountable, managers might be able to inhibit stereotype use and in that way interrupt the process behind the discriminatory behavior documented in this research.

Conclusion

This research proposed and tested a novel theoretical model explaining how and why discrimination in selection decisions occurs. We situated selection decisions in the organizational context of differential task requirements and decision maker–candidate interdependence, which allowed us to diverge from the dominant theoretical paradigm that suggests that decisions makers systematically prefer candidates belonging to their own social group and to propose a more nuanced view of discrimination in organizations.

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FIGURES

FIGURE 1

Overview of the Theoretical Model

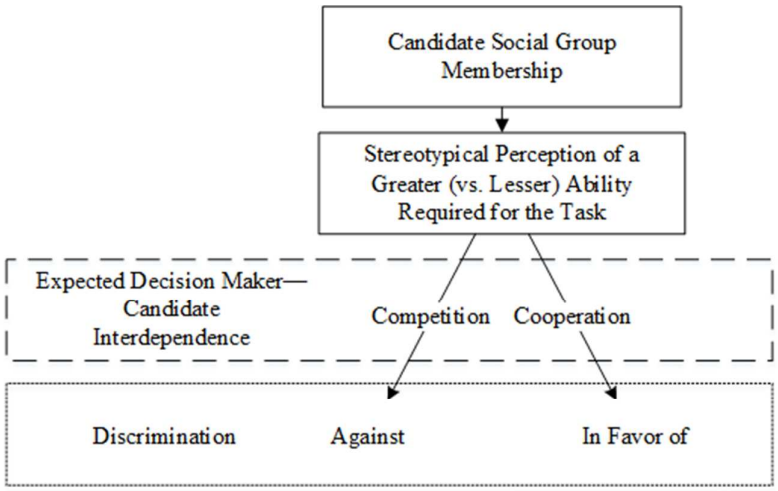


FIGURE 2

The Role of Perceived Candidate Instrumentality in Racial Discrimination: Moderated Mediation Model

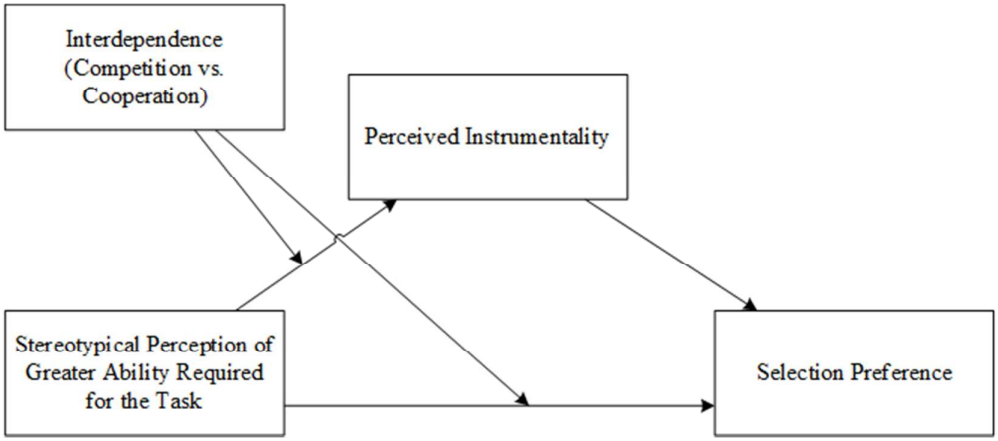
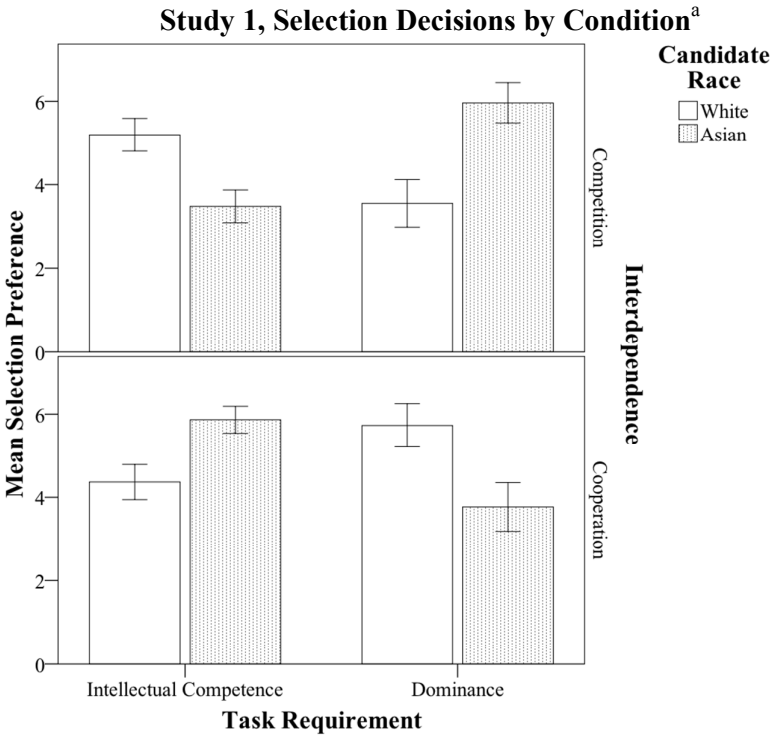


FIGURE 3



[a] Error bars represent 95% confidence intervals.

FIGURE 4

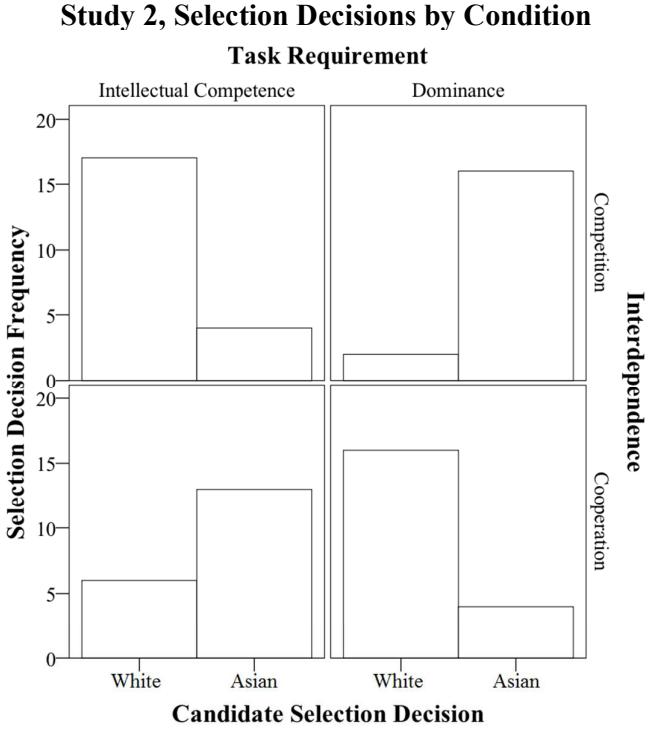
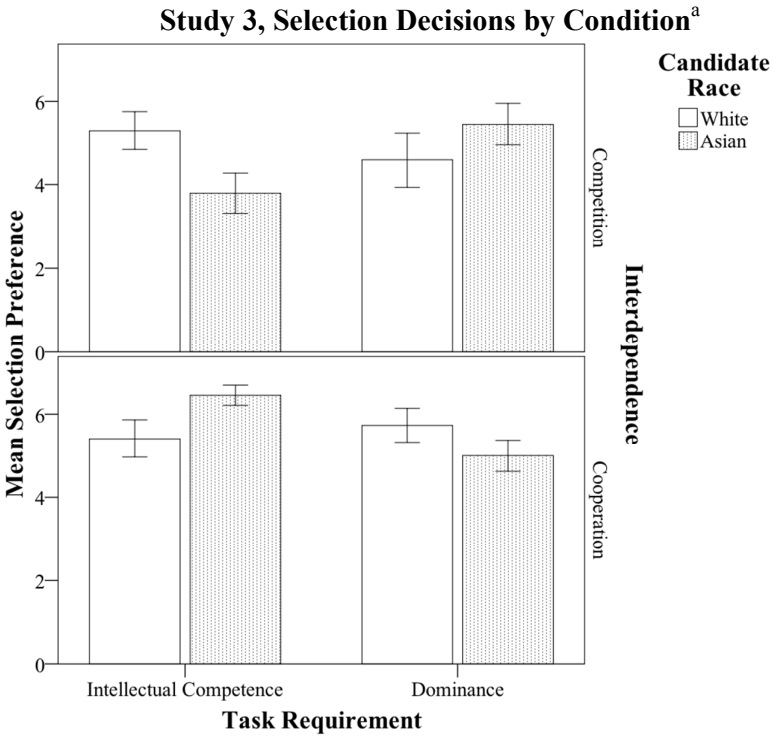
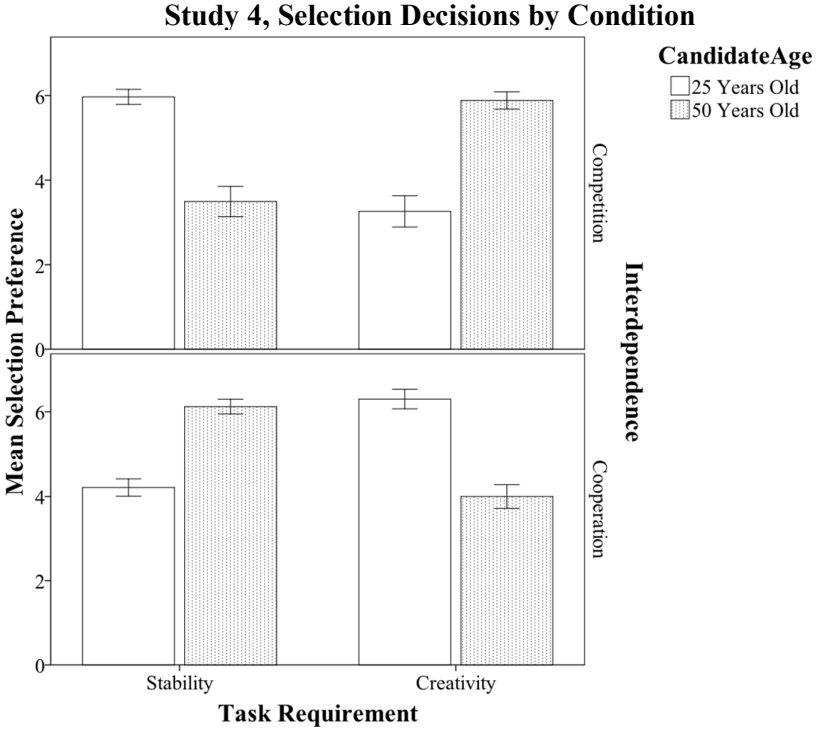


FIGURE 5



[a] Error bars represent 95% confidence intervals.

FIGURE 6



[a] Error bars represent 95% confidence interval