

The Effect of Context on the Silver Ceiling:  
A Role Congruity Perspective on Prejudiced Responses

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## Abstract

Three studies examined role incongruity as a source of age bias in hiring decisions. Building upon previous research demonstrating contextual variation in prejudice, we predicted that prejudiced responses emerge particularly in contexts where group stereotypes misalign with the requirements of social roles. Findings indicate that (a) older workers are particularly penalized in occupational contexts that are quickly changing; (b) older workers are perceived as less adaptable than younger workers; and (c) the tendency to prefer younger than older workers more for a dynamic than a stable company is mediated by perceptions of adaptability. Finally, adaptability perceptions better predicted hiring bias than did global evaluations of older people and levels of contact with older people. These experiments provide initial evidence that perceived fit to roles is a determinant of contextual variation in prejudiced responses.

Keywords: AGEISM; STEREOTYPES; PREJUDICE; DISCRIMINATION; SOCIAL ROLES

## The Effect of Context on the Silver Ceiling:

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Despite popular attention to the ageing population (Adler, 2005), age-related beliefs and their consequences have received scarce attention within social psychological research. This omission is somewhat surprising, given that age is as visible as race or gender. Indeed, previous work has shown that age stereotypes provide a greater influence than gender stereotypes in impression formation (Kite, Deaux, & Miele, 1991). Because of the growth in the older segment of the population, ageism is gaining greater consideration within social psychology (Nelson, 2002). Most important, however, is that the examination of ageism can illuminate theoretical models of prejudice and discrimination.

A central challenge in studying prejudice is explaining why biased responses manifest toward certain groups, at certain times, and in certain situations. Such contextual variation is difficult to explain from traditional theories of prejudice, which generally regard biased attitudes as inflexible and stable. The traditional view of prejudice coheres with models of mental representations as stored constructs (i.e., *things*), but recent models of mental representation instead focus on contextual variation and flexibility (i.e., attitudes as *states*; Smith, 1998). In an attitudes-as-constructions perspective, evaluation can result from a variety of inputs, including contextual information, chronically accessible beliefs or evaluations, or the perceiver's current goals (e.g., Gawronski & Bodenhausen, 2006; Schwarz, 2000; Wilson & Hodges, 1992). Consistent with this logic is role congruity theory, which posits that prejudiced responses emerge when a group's stereotype is mismatched to valued social roles. According to the role congruity perspective, biased responses stem from the intersection of (a) stereotypic beliefs about the target and (b) the context in which the target is evaluated (Eagly & Diekmann, 2005).

The current research focuses particularly on the contextual basis of bias against older, relative to younger, workers. These studies explore the contexts in which older job candidates are

particularly devalued, with the hypothesis that ageist bias will especially emerge when occupational role requirements misalign with the stereotypic qualities ascribed to older people. The “silver ceiling” may thus be especially low in contexts that mismatch stereotypes of older people. Understanding the contextual foundations of ageist bias can afford greater knowledge of discriminatory tendencies, because a primary goal of prejudice and discrimination research has been to understand when individuals will be devalued on the basis of their group memberships.

#### *Age Stereotypes, Prejudice, and Discrimination*

Examination of the processes underlying age bias is particularly timely because the increased presence of older workers in the paid labor force may give rise to increased discrimination. In 2005, about a third (28.3%) of the “retirement age” population (65-69 years) were employed or pursuing employment (Rix, 2006). Discrimination against these older workers may result because beliefs about older people conflict with the requirements of the worker role. In fact, impressions of old people include beliefs that they are warm but not very competent (Cuddy, Norton, & Fiske, 2005; Fiske, Cuddy, Glick, & Xu, 2002). Meta-analyses of attitudes toward older versus younger adults (Kite & Johnson, 1988; Kite, Stockdale, Whitley, & Johnson, 2005) revealed that older adults, relative to younger adults, were evaluated less favorably ( $d = .24$ ), treated more negatively ( $d = .21$ ), and considered less competent ( $d = .33$ ), less attractive ( $d = .38$ ), and more stereotypically (i.e., old-fashioned,  $d = .47$ ).

Like age stereotypes, differences in evaluations of older and younger workers tend to emerge on particular dimensions. Meta-analytic evidence (Gordon & Arvey, 2004) detected only a small bias in favor of younger workers ( $d = .11$ ). However, this small effect masks two opposing biases: Younger workers were thought to have greater potential for development ( $d = .45$ ), but older workers were thought to have greater stability ( $d = -.67$ ). Only small differences were found for overall evaluations and interpersonal skills ( $ds = .10$  for both). Another meta-analysis (Finkelstein, 1995) found that age bias depended on beliefs about job attributes. Bias

against older adults was more pronounced in jobs considered suitable for young people or age neutral; no bias was detected when jobs were considered suitable for older people. These meta-analytic findings suggest that bias in work settings manifests especially in ways that are consistent with stereotype content.

Although there is good reason to suspect that perceived fit to the worker role underlies age discrimination, research to date has not experimentally examined this hypothesis. Theories of ageism tend to focus on aspects of the perceiver's general orientation toward older people. For example, social segregation theory (Hagestad & Uhlenberg, 2005) argues that ageism stems from the societal custom to separate generations of people. This account coheres with the classic intergroup contact theory of prejudice. Studies of ethnicity-based prejudice have found that increased contact under favorable conditions is associated with reductions in negativity toward outgroups (Pettigrew, 1998; Pettigrew & Tropp, 2000). A different perspective draws on terror management theory (Martens, Goldenberg, & Greenberg, 2005), which posits that ageism arises because older individuals remind observers of their own mortality. This mortality salience elicits self-protective cognitions and behaviors, including stereotyping and distancing from the target. Consistent with traditional views of prejudice, both theories predict general negativity toward older people. In contrast, the role congruity hypothesis posits that devaluation will stem from the perception that the stereotyped group does not fit in the particular context.

#### *Contextual Effects on Prejudiced Responses*

Despite a general focus on prejudiced attitudes rather than discriminatory behavior (Fiske, 1998), social psychological evidence suggests that stereotypic inferences can foster differential evaluation in various decisions, including hiring or promotion contexts (Fiske, Bersoff, Borgida, Deaux, & Heilman, 1991). Research on various aspects of decision-making has demonstrated that stereotypic perceptions influence outcomes. For example, Bodenhausen and Wyer (1985) demonstrated that stereotype-consistent crimes were judged as more likely to recur

and accorded more severe penalties, relative to stereotype-inconsistent crimes. In a different domain, Glick (1991) found that personnel officers who evaluated candidates for jobs associated with feminine personality traits favored candidates with feminine rather than masculine personality traits, regardless of the candidate's sex. In parallel, personnel officers who evaluated candidates for a job requiring masculine personality traits preferred candidates with masculine personality traits, regardless of the sex of the job candidate (see also Judd & Oswald, 1997).

An important contribution of role congruity theory is its ability to explain why groups that enjoy positive regard nonetheless encounter bias. For example, general attitudes about women tend to be more positive than those toward men (Diekmann & Goodfriend, 2006; Eagly & Mladinic, 1989; Rudman & Goodwin, 2004). Indeed, gendered discrimination generally takes the shape of bias against women (or men) in counterstereotypic roles rather than overall devaluation. Because the male stereotype has considerable overlap with the requirements of leadership roles (Heilman, 1983), men are more likely to be perceived as capable of being leaders and more likely to be positively evaluated when they occupy leadership roles (Eagly & Karau, 2002). Despite its prevalent application to gender prejudice, fairly little direct evidence exists for role incongruity as a source of prejudice against other groups. Moreover, although previous studies have manipulated stereotypic fit, direct mediational evidence for the influence of stereotypes is scarce.

Role congruity theory offers a useful framework to consider contextual effects in prejudice. Contextual variation has recently sparked much interest, with several clear experimental demonstrations that even implicit attitudes vary with context (Blair, 2002; Mitchell, Nosek, & Banaji, 2003). Wittenbrink, Judd, and Park (2001) found that automatic attitudes toward black targets varied depending on the physical context in which the target was portrayed (e.g., a church or a street corner). In addition, Barden and colleagues (Barden, Maddux, Petty, & Brewer, 2004) found that controlled and automatic racial attitudes varied depending on the

occupational role of the target: For example, ingroup bias on the part of white participants was particularly evident when participants evaluated white vs. black targets in a prisoner role, but this bias reversed when participants evaluated targets in a lawyer role. In sum, contextual variation is readily apparent in both explicit and implicit responses, consistent with the argument that prejudiced responses can emerge from beliefs about the context as well as the target.

Although research has now established that context influences attitudes, the question of how context provides this influence deserves closer attention. Some context effects likely operate through mere valence – a target presented in a positive setting is likely to be ascribed more positive qualities than the same target presented in a negative setting (e.g., Wittenbrink et al., 2001). Another route for contextual effects is that positivity varies with the perceived fit between the target's characteristics and the presumed requirements of the context: Individuals thought to possess characteristics that facilitate success in valued social roles are more positively evaluated than others. Much of the recent research on contextual variation has focused on the first type of process – that is, evaluation of an individual in a context. In contrast, the current research focuses on the second type of process – that is, evaluation of an individual *for* a particular context. The “evaluation for” process, while related to “evaluation of,” simulates real-life granting or withdrawal of opportunities. This research thus extends previous work on contextual effects on prejudice to extend it to discriminatory tendencies.

Role congruity theory provides opportunities for expansion of the current thinking about contextual effects on prejudiced responses. First, role congruity theory offers an explanation for why prejudiced responses might emerge in roles that are not clearly valenced. Much of the research on contextual influences on automatic attitudes has usefully focused on contextual information that is unambiguously positive or negative. However, some of the most distressing examples of prejudice are not when people express negativity toward people in devalued roles (e.g., negativity toward a black prisoner), but when people express negativity toward certain

group members in neutral or positive roles (e.g., greater negativity toward a black than a white job applicant). Second, a role congruity perspective provides a theoretical framework for explaining why contextual effects will occur, as well as predicting when they will occur and when they will not. In short, relative negativity will stem from a greater mismatch between stereotypic characteristics and the desired social role.

### *Overview and Predictions*

Our central prediction is that the devaluation of older people will depend on context, although a general devaluation of older people may exist. The basic premise of role congruity theory is that an individual is positively regarded to the extent that characteristics align with role requirements. Thus, when older people are perceived as not fitting to particular roles, they will be especially devalued; in roles where they are perceived as fitting, older people will be more equally valued with younger people.

Consistent with role congruity predictions, we hypothesized that older people would be devalued, relative to younger people, especially in contexts that require adaptability. A recurring element in stereotypes of older people is that they are set in their ways (e.g., “you can’t teach an old dog new tricks”). Previous research (Redman & Snape, 2002; Warr & Pennington, 1993) has identified two dimensions of beliefs about older adults: Older adults were perceived as likely to be effective (i.e., conscientious, loyal) but less adaptable (i.e., willing to learn). Given these stereotypes, we reasoned that contexts incorporating change would lead to the devaluation of older vs. younger workers. In contrast, contexts highlighting stability would lead to a lessening, or perhaps reversal, of this pattern. This research also examines whether stereotypic inferences mediate the relationship between category membership and hiring decisions. Although role congruity predictions rest on the assumption that decisions are based on group stereotypes, little evidence directly tests this mediational hypothesis.



The current research sought to establish a framework in which both beliefs about social roles and group stereotypes contribute to explaining contextual effects in discriminatory tendencies. We hypothesized that both role requirements and stereotypic beliefs combine to produce positive or negative hiring decisions. To this end, we present three studies that examine age bias in a hiring context. A critical feature of these studies is their inclusion of an experimental manipulation of roles that require change versus stability, thus providing a clear test of whether congruity to role requirements underlies the devaluation of older workers. In Experiments 1 and 2, we provide evidence for the role congruity effect; in Experiment 3, we compare stereotypic fit to other predictors of prejudice (i.e., global attitudes and intergroup contact).

## Experiment 1

### *Method*

#### *Participants and Procedure*

Forty-one participants (23 women, 18 men) received partial credit toward their introductory psychology courses. Their median age was 19 years, and the majority (90.2%) reported European American ethnicity. Participants came to a laboratory setting, granted informed consent, and completed the questionnaire described below. All participants were thanked and debriefed.

#### *Independent Variables*

The design was a 2 (company: stable or dynamic)  $\times$  2 (candidate age: younger or older) mixed factorial design, with candidate age manipulated on a between-subjects basis.

Participants were informed that the research examined how people make hiring decisions based on brief summaries of resumes abstracted from full job applications. Participants read three different summaries that presented minimal background information (e.g., educational and work history, honors or awards, and names of references). The second summary was that of the

target candidate, and the manipulation of *candidate age* occurred through the alteration of two pieces of information. The younger candidate was described as graduating in 1999 and serving as president of the Parents Association for a school system. The older candidate was described as graduating in 1969 and serving as president of the Grandparents Association for a school system. Following the candidate descriptions, participants were asked to think about Candidate B in detail and to provide ratings of the likelihood that Candidate B would possess each of several traits, as described below. All target candidates were male.<sup>1</sup>

Participants then read brief descriptions of three different companies. The first company was a distracter; the second two companies constituted the manipulation of context. The *dynamic* company was described as follows:

Avator Enterprises is currently looking for a new manager for the production division of the company. Avator Enterprises has been opening many new offices and has expanded the range of services that they provide. Avator especially rewards innovation, ingenuity, and breaking new ground. A new company headquarters is currently being built. The company expects these trends to continue in the years to come, due to the rapid growth of the industry.

The *stable* company was described as follows:

Smith Brothers, INC seeks a manager for their production department. Smith Bros. is a family-owned company that has been very stable despite the recent economic changes. At Smith Bros., commitment to company tradition and loyalty are extremely important. The company is doing well with the sites they have owned for years. This steadiness is generally anticipated to continue for several years because of their industry's stability.

In addition, these descriptions were visually emphasized by presenting the title *Avator Enterprises* in a modern font and *Smith Brothers* in a more traditional font.

Pretesting with a separate sample ( $n=19$ ) established that these company descriptions were rated as equally successful but different in their dynamism and stability. Specifically, participants rated the dynamic company as higher than the stable company on *growing* ( $p<.001$ ) and *changing* ( $p<.01$ ), but lower on *stable* ( $p<.001$ ) and *traditional* ( $p<.001$ ). Importantly, the companies were rated similarly on *successful* ( $p=.89$ ) and *respected* ( $p=.54$ ).

Participants then were told that they were randomly assigned to focus on two of the companies (always the target companies). Participants were again presented with the brief summary of the job description, and then they were asked to complete the hiring and success ratings described below.

#### *Dependent Measures*

*Stereotypic inferences.* Participants rated the candidate's likelihood of possessing each of several characteristics on 7-point scales ranging from *very unlikely* to *very likely*. The measure of *adaptability* included 11 items (e.g., pursue new opportunities, change departments;  $\alpha=.89$ ), and the measure of *reliability* included 10 items (e.g., trustworthy, have expertise;  $\alpha=.79$ ).

*Hiring.* For each of the target companies, participants were asked to rate the likelihood that they would hire each of the three candidates. Next, participants were asked to rate each candidate's likelihood of success in the job. These two items were averaged to form a composite measure of hireability ( $\alpha=.86$  for dynamic company;  $\alpha=.78$  for stable company).

*Demographics.* Participants reported their sex, age, and ethnicity.

#### *Results*

No effects of participant sex were found, and therefore analyses are reported collapsing across this variable. For the main dependent measure of interest, hireability, our critical prediction was a Candidate Age  $\times$  Company interaction, in the shape of less

hireability for the older candidate in a dynamic context relative to a stable context, but a reversal or equal hireability across contexts for the younger candidate. For decomposition of interactions, analyses of simple main effects were performed (Winer, Brown, & Michels, 1991).

### *Hireability*

Data were submitted to a 2 (candidate age)  $\times$  2 (company) mixed analysis of variance (ANOVA), with company as a within-subjects factor. In general, hireability ratings were higher for the stable than the dynamic company,  $F(1, 39) = 20.08, p < .0001$ . Consistent with predictions, this main effect was subsumed by the hypothesized Candidate Age  $\times$  Company interaction,  $F(1, 39) = 7.93, p = .008$  (see Table 1 for means). The hireability for the older candidate was significantly reduced when considered for the dynamic than the stable company,  $F(1, 39) = 25.99, p < .0001$ , whereas the younger candidate was equally hireable in both companies,  $F(1, 39) = 1.42, p = .24$ . In addition, the older candidate was preferred over the younger candidate for the stable company,  $F(1, 39) = 4.41, p = .04$ , but the younger candidate was marginally preferred over the older candidate for the dynamic company,  $F(1, 39) = 3.37, p = .07$ .

### *Stereotypic Inferences*

Data were submitted to a 2 (candidate age)  $\times$  2 (trait) mixed ANOVA, with trait as a within-subjects factor. Two main effects emerged: Reliability traits were rated as more likely than adaptability traits,  $F(1, 38) = 143.32, p < .0001$ , and the younger candidate was perceived as more likely than the older candidate to possess traits overall,  $F(1, 38) = 5.15, p = .029$ . Consistent with predictions, however, older and young targets were inferred to have different traits, as reflected in the Candidate Age  $\times$  Trait interaction,  $F(1, 38) = 22.70, p < .0001$ . The younger candidate ( $M = 5.45, SD = 0.56$ ) was perceived as more adaptable than the older candidate ( $M = 4.54, SD = 0.99$ ),  $F(1, 38) = 12.65, p = .001$ , whereas

both the younger and older candidates were perceived to have similarly high levels of reliability,  $F < 1$ ,  $p = .81$  ( $M_{\text{young}} = 6.16$ ,  $SD = 0.57$ ;  $M_{\text{old}} = 6.20$ ,  $SD = 0.47$ ). Consistent with hypotheses, older people were thought to be less adaptable than younger people; however, the hypothesized reliability advantage for older people was not found.

### *Mediational Analyses*

We performed a path analysis to examine if perceptions of adaptability mediated the relationship between candidate age and hiring. Specifically, we examined whether older candidate age predicted perceptions of decreased adaptability, which then predicted a hiring disadvantage for the dynamic company relative to the stable company. A series of regressions was performed following the procedures outlined by Kenny and colleagues (Baron & Kenny, 1986; Kenny, Kashy, & Bolger, 1998). As shown in Figure 1, mediation was established: Younger candidate age predicted the tendency to be hired for the dynamic over the stable company; however, this direct relationship was reduced to nonsignificance when perceptions of adaptability were included in the model. The Goodman test revealed significant mediation,  $Z = 2.06$ ,  $p = .040$ .

### *Discussion*

Experiment 1 provided initial support for the idea that age bias in hiring stems from the alignment between age-based stereotypes and role context. In this experiment, older targets were perceived as more hireable for a position in a stable company than in a dynamic company. Critical for the role congruity explanation is that this hiring preference was mediated by age-differentiated perceptions of adaptability. Also important is the finding that older workers were not generally devalued; indeed, participants actually showed a preference for older than younger workers in the stable context. Although younger participants' ingroup bias might be expected to lead to the devaluation of older candidates relative to younger candidates (Kite & Wagner, 2002), these data

suggest that at least under some conditions, contextual features can override such ingroup biases.

One potential criticism is that these findings may not translate to real-life work settings. However, the procedure employed here resembles what happens in real-life hiring and promotion processes, where decisions are frequently made on the basis of written materials. Another possible concern is that our college-student participants lacked relevant experience or motivation. However, previous work examining hiring decisions has demonstrated parallel effects with field populations (e.g., judgments of personnel officers, Glick, 1991; actual promotion rates, Lyness & Heilman, 2006). The critical issue in the current research is the demonstration that the alignment between stereotypic inferences and roles leads to the perception of greater hireability.

Experiment 1 provides support for the idea that context can determine when age-based stereotypes will influence hiring decisions; however, the particular methodology of this study raises some questions. Most important, participants read about both the dynamic and the stable companies, which necessitated varying the descriptions across companies. The description of the dynamic company may thus have implied that this company was in greater need of workers who could be employed for a long period of time, for example. To reduce these possible confounds, Experiment 2 manipulated company on a between-subjects basis. This methodological change allowed us to modify the descriptions to be parallel in all respects except for their description as dynamic or stable (e.g., the name of the company was kept consistent).

Another change in Experiment 2 was the use of different ages for the target candidates. In Experiment 1, the candidates were described as graduating in 1999 (i.e., about 28 years old) and in 1969 (i.e., about 58 years old). To test the robustness of the role congruity explanation, we manipulated candidate age to be either 35 or 65. This

difference in the target age is advantageous for two reasons. First, the 35-year-old is more distant from the experience of our traditionally college-aged participants. Although many participants might have siblings or friends who are in their late twenties, it is less likely that they have close peers in their mid-thirties, thus further removing the younger target from the self or close peers. Second, 65 is the traditional age of retirement, and thus it is possible that the 65-year-old candidate is not perceived as hireable for any job. If age bias stems in part from role incongruity, however, the dynamic context should still elicit greater bias against the older target than the younger target.

## Experiment 2

### *Method*

#### *Participants and Procedure*

Participants were 209 individuals (130 female, 76 male, 3 unidentified) from two public Midwestern universities. Their median age was 19 years, and the majority (91.8%) of participants reported European American ethnicity.

Most participants ( $n = 160$ ) were introductory psychology students who participated for partial course credit. These participants came to a laboratory setting, granted informed consent, and completed the questionnaire described below. Volunteer participants ( $n = 49$ ) were recruited by a surveyor at campus locations. After the individual granted verbal consent, the surveyor gave the participant the questionnaire and collected it approximately 5 min later. All participants were thanked and debriefed. No differences between the laboratory or public location participants were found.

#### *Independent Variables*

The design was a 2 (company: stable or dynamic)  $\times$  2 (candidate age: younger or older) mixed factorial design, with company on a between-subjects basis and candidate age manipulated on a within-subjects basis.

Participants were asked to imagine that they were part of a hiring committee for a particular company. They were then presented with a company description that depicted it as either *dynamic* or *stable*, while keeping consistent information about the company's success. In the dynamic condition, the description read as follows:

ABC Inc. has been opening many new offices and has moved several of their department managers to different locations. This is a trend that the company expects for several years due to the rapid growth of their industry.

In contrast, the stable condition read as follows:

ABC Inc. has been a very stable company despite the recent economic changes.

ABC Inc. is doing well with their current sites and has no need to open additional offices. ABC Inc. has a very stable outlook for the future as well.

Both descriptions concluded with "Most of ABC Inc.'s employees have been with the company for several years and are very happy in their current positions. ABC Inc. is currently looking for a new manager to head up the production division of the company."

Participants were then presented with four candidate profile summaries. The first and fourth candidates were distracter candidates, intended to disguise the purpose of the study. The second and third candidates were the target candidates. The descriptions of the target candidates were matched except for the critical variable of age: Both were white males with similar backgrounds, but one was described as 35 years old and the other as 65 years old. The order of presentation of the younger and older candidates, as well as matching each background description with the older and younger candidates, was counterbalanced across conditions.

### *Dependent Measures*

*Stereotypic inferences.* Measures were similar to those in Experiment 1 (adaptability,  $\alpha_{old} = .79$ ,  $\alpha_{young} = .76$ ; reliability,  $\alpha_{old} = .74$ ,  $\alpha_{young} = .71$ ).



*Hiring.* Participants rated the likelihood they would hire each candidate on 7-point scales, with higher ratings indicating greater likelihood of hiring.

*Demographics.* Participants reported their sex, age, and ethnicity.

### *Results*

No systematic effects of participant sex were found; analyses thus omitted this variable.

#### *Hiring*

Data were submitted to a 2 (company)  $\times$  2 (candidate age) ANOVA, with candidate age as a within-subjects factor. New to this experiment, and likely due to the more advanced age of the older candidate, was the main effect of candidate age: Hireability ratings were higher for the younger than the older candidate,  $F(1, 207) = 195.25, p < .0001$ . In addition, hiring ratings were higher for the stable than the dynamic company,  $F(1, 207) = 4.16, p = .043$ . Similar to Experiment 1, the Company  $\times$  Age interaction,  $F(1, 207) = 4.95, p = .027$ , was significant (see Table 2 for means). The older candidate was less likely to be hired for the dynamic than the stable company,  $F(1, 207) = 6.49, p = .012$ , whereas the younger candidate was equally likely to be hired in both companies,  $F < 1, p = .88$ . Despite the substantial preference for the younger candidate, the emergence of the significant Company  $\times$  Age interaction provides support for the role congruity hypothesis.

#### *Stereotypic Inferences*

Data were submitted to a 2 (candidate age)  $\times$  2 (trait: adaptability or reliability) within-subjects ANOVA.<sup>2</sup> Main effects emerged such that targets were generally perceived as more reliable than adaptable,  $F(1, 208) = 655.50, p < .0001$ , and younger candidates were perceived as more likely to have both types of traits than older candidates,  $F(1, 208) = 107.69, p < .0001$ . Critical for hypotheses was the significant

Candidate Age  $\times$  Trait interaction,  $F(1, 208) = 202.13, p < .0001$ . Older candidates ( $M=3.84, SD=0.93$ ) were perceived as less adaptable than younger candidates ( $M=5.10, SD=0.80$ ),  $F(1, 208) = 297.41, p < .0001$ , whereas older candidates were perceived as marginally more reliable than the younger candidate,  $F(1, 208) = 3.63, p = .058$  ( $M_{\text{young}} = 5.60, SD = 0.68; M_{\text{old}} = 5.73, SD = 0.76$ ).

### *Mediational Analyses*

Similar to Experiment 1, we performed mediational analyses to examine whether the hiring difference in the dynamic context stemmed from the stereotypic ascription of adaptability traits. This analysis was more complicated in this experiment because candidate age was manipulated on a within-subjects basis. Therefore, we conducted within-subjects mediational analyses, following the procedures outlined by Judd, Kenny, and McClelland (2001). To show within-subjects mediation, the two critical conditions are that (a) there is a significant difference in the mediator and (b) this difference predicts the difference in the dependent variable.

Conditions to establish that adaptability inferences mediated the hiring bias against older workers in a dynamic company were met. First, as noted in the ANOVA results above, younger candidates were perceived as more adaptable than older candidates. Second, this difference in adaptability predicted the difference in hiring for a dynamic company,  $B = .442, \beta = .332, p < .001$ , in an equation including the adaptability sum (i.e.,  $\text{adaptability}_{\text{young}} + \text{adaptability}_{\text{old}}$ ). The adaptability sum did not significantly predict hiring, suggesting that candidate age did not moderate adaptability. Additionally, the regressions suggested only partial mediation of hiring by adaptability; the intercept in an equation including the centered sum variable remained significant,  $p < .0001$ , reflecting the residual effect of age on hiring. In sum, successful mediation was indicated by (a) the higher scores for younger than older candidates on both hireability and adaptability,

along with (b) the significant prediction of the hiring bias favoring younger workers from the perceived adaptability advantage for younger workers.

### *Discussion*

Experiment 2 provided further evidence that older workers, compared to younger workers, are perceived as less adaptable, and that this stereotypic assumption leads to a bias against older workers especially for positions involving change. Supporting role congruity theory predictions, ageist bias was exacerbated when older workers were considered for a position in a company that was quickly adapting and changing, relative to a company that was successful but stable. Critically, these effects emerged even with tighter methodological control and different manipulations of both candidate age and company qualities.

The role congruity effects were clearly stronger in these studies for adaptability than reliability, and for older than younger workers. Although participants rated younger workers as more adaptable than older workers, they did not perceive older workers as more reliable than younger workers. The high levels of desirable traits accorded to the younger candidate may reflect some degree of ingroup bias by our relatively young participants (although, as noted above, such a bias did not transfer to hireability judgments in Experiment 1, where participants preferred the older candidate for the stable company). A possible explanation for the finding that role congruity particularly affected hiring judgments of older rather than younger targets may be that the older targets were more susceptible to stereotyping because of their difference from our relatively young participants. The difference in age may mark older targets as available to broad categorizations, and then the specific role congruity processes investigated here further mark the older target group as fitting or misfitting to specific contexts. In contrast, younger targets may be more likely to be individuated.

A divergence between the findings of the two experiments is that hiring ratings for the stable company reflected a preference for older workers in Experiment 1 but only an attenuation of the preference for younger workers in Experiment 2. The critical difference between the findings of the two studies may be that in Experiment 2, the older worker was at retirement age, and consequently participants perceived him as less suitable for any job at all. Even with this large difference by candidate age, the hiring context still mattered, providing a fairly strong test of the idea that perceived role incongruity underlies age bias. Nonetheless, the presence of the overall preference for younger candidates in Experiment 2 clarifies that role congruity is but one source of bias. Ageist bias may also stem from motivational distancing, general social devaluation, or other negative stereotypes. For example, older workers may be perceived as more grouchy or forgetful, which would contribute to a general devaluation of older workers, regardless of context.

Unlike previous work about contextual effects, the contexts here did not diverge in their valence; both companies were rated as equally successful and respected. The detection of context effects, even in equivalently positive contexts, suggests that beliefs about role requirements, above and beyond effects of role valence, can influence responses to targets. In addition, the role congruity effect was robust across different manipulations of candidate age and company characteristics. Finally, critical to role congruity hypotheses, mediational analyses revealed that the age bias can be explained by stereotypic beliefs that the older candidate possesses lower levels of adaptability than the younger candidate.

### Experiment 3

Traditional perspectives of prejudice conceptualize prejudice as a stable attitude, but they differ in the proposed causes of this stable attitude. For the sake of simplicity, we focus here on

those theories of prejudice that have specifically been applied to understand ageism (Nelson, 2005). As noted in the introduction, social segregation theory (Hagestad & Uhlenberg, 2005) locates the cause of ageism in the lack of contact between older and younger individuals. From a different perspective, terror management theory (Martens et al., 2005) hypothesizes that older individuals elicit mortality-related thoughts, which then lead to avoidance and distancing. The important commonality between these two perspectives, however, is that they both predict general negativity toward older people. In contrast, role congruity hypotheses explicitly posit that prejudice arises from consideration of the context along with the group stereotype. When a group stereotype aligns with a valued social role, that target group will be preferred relative to others. Intergroup contact or motivational factors might contribute to forming chronic beliefs about the target group; however, the impact of these beliefs on any particular decision will be determined by the context.

In Experiment 3, we put the role congruity hypothesis to a more stringent test against alternative explanations that focus on global attitudes or past behavior. In this study, we included measures of participants' pre-existing attitudes about older people, as well as measures of contact with older people. The inclusion of these measures allows the examination of whether role congruity beliefs afford additional explanatory power when considered alongside pre-existing attitudes and behavior toward older people. Although a fundamental claim of role congruity theory is that global attitudes are insufficient to explain specific instances of bias, this experiment is the first to our knowledge to test this hypothesis directly.

Another addition to Experiment 3 was the initial exploration of perceptions of legitimacy of the hiring decisions. If individuals base their decisions on beliefs that they consider accurate, they may consider their decisions as wholly legitimate. This perceived

legitimacy could impede recognition of stereotype-based decisions as biased. We thus added an item assessing respondents' perceived legitimacy of their decisions.

### *Method*

#### *Participants and Procedure*

Participants were 108 individuals (61 women, 47 men) who received partial credit toward their introductory psychology course. The majority (87.96%) of participants reported European American ethnicity, and their median age was 19 years. Participants completed the materials described below in a laboratory setting, and then they were debriefed and thanked.

#### *Independent Variables*

The design was a 2 (company)  $\times$  2 (age) mixed factorial design, with company manipulated on a within-subjects basis. Regression analyses included measures of contact and attitudes toward middle-aged people as predictors of hireability.

*Candidate age and company.* As in Experiment 1, participants read brief descriptions of three different companies; the latter two companies constituted the manipulation of role context. Some minor methodological changes were made. First, the names of the companies were selected to be more generic (i.e., Millus and Longes) and were counterbalanced across the dynamic versus the stable descriptions. Second, the position advertised was described as a director of human resources. Other than these changes, the content of the dynamic versus the stable company descriptions was identical to those in Experiment 1.

*Pre-existing attitudes and behavior.* Participants first completed the measures of attitudes and behavior toward older people, as part of an ostensibly separate study of attitudes toward social groups. The target group was embedded within identical questionnaires that focused on married people and Hispanics, in order to disguise the nature of the study.

Participants were asked to think about “middle-aged people (e.g., 65 or older).” Participants rated the extent of their contact with middle-aged people on a 7-point scale, ranging from *none* to *a great deal*. Participants then estimated the hours per week they spend with middle-aged people. These two items were standardized and averaged together to form an index of contact ( $\alpha = .64$ ).

Attitudes toward middle-aged people were assessed through a semantic differential measure. Participants rated middle-aged people on five items (*good-bad*, *negative-positive*, *valuable-useless*, *unpleasant-pleasant*, *nice-awful*;  $\alpha = .88$ ).

#### *Dependent Measures*

Measures of hireability, stereotypic inferences, and demographics were identical to Experiment 1 (hireability,  $\alpha > .77$ ; adaptability,  $\alpha = .87$ ; reliability,  $\alpha = .86$ ). In addition, participants rated how *legitimate* they felt their level of support for the target candidate was, on a 7-point scale ranging from *not at all* to *extremely*.

#### *Results*

Initial analyses included participant sex as a variable; consistent with previous experiments, no systematic effects emerged, and this variable was thus omitted from subsequent analyses.

#### *Hireability, Stereotypic Inferences, and Mediation Analyses*

*Hireability.* Main effects included significantly higher hireability ratings for the stable than the dynamic company,  $F(1, 106)=63.54, p<.0001$ , and higher hireability ratings for the younger than the older candidate,  $F(1, 106) =6.38, p=.013$ . Replicating previous findings, the critical Age  $\times$  Company interaction emerged,  $F(1, 106)=26.36, p<.0001$  (see Table 3 for means). For the dynamic company, the younger candidate was preferred over the older candidate,  $F(1, 106)=25.84, p<.0001$ , whereas the older candidate was marginally preferred for the stable company,  $F(1, 106)= 2.32, p=.13$ .<sup>3</sup>

*Stereotypic inferences.* Candidates were perceived as more likely to have reliability than adaptability characteristics,  $F(1, 104)=144.94, p<.0001$ , and the younger candidate was perceived as more likely to have traits overall than the older candidate,  $F(1, 102)=6.81, p=.01$ . Similar to other studies, the Trait  $\times$  Candidate Age interaction,  $F(1, 104)=43.22, p<.0001$ , reflected that the younger candidate ( $M=5.30, SD=0.66$ ) was perceived as more likely than the older candidate ( $M=4.48, SD=0.90$ ) to possess adaptability traits,  $F(1, 104)=28.78, p<.0001$ , whereas the older candidate was perceived as marginally more likely to possess reliability traits,  $F(1, 104)=2.20, p=.14$  ( $M_{\text{young}}=5.73, SD=0.65; M_{\text{old}}=5.92, SD=0.70$ ).

*Mediational analyses.* Perceived adaptability again mediated the relationship between candidate age and relative hireability for the dynamic company over the stable company. Following the model illustrated in Figure 1, candidate age predicted relative hireability, and candidate age predicted adaptability. The relationship between candidate age and relative hireability was reduced when adaptability was included in the model, and adaptability remained a significant predictor of relative hireability. The Goodman test revealed significant mediation,  $Z=2.68, p=.007$ .

#### *Do Global Attitudes Predict Hireability?*

A unique prediction of role congruity theory is that it is specific fit to roles, driven by stereotypic assumptions, that predicts prejudice within a particular situation. To test this prediction against other hypothesized explanatory variables, such as global negativity or the extent of contact, we conducted a series of multiple regressions that included candidate age, a hypothesized explanatory variable, and their interaction. These independent variables were used to predict the relative hireability for the dynamic versus the stable company (i.e., a difference score calculated by subtracting hireability for the stable company from hireability for the dynamic company).



In Model 1, global evaluation ( $M=5.29$ ,  $SD=1.05$ ) was included along with candidate age and their interaction. As shown in Table 4, only age emerged as significant. Model 2 included the measure of contact ( $M=.01$ ;  $SD =0.72$ ) with middle-aged people; again, only age emerged as significant. Model 3 included perceived adaptability ( $M=4.89$ ,  $SD=0.89$ ), which, along with age, significantly predicted the extent of hiring bias. Model 4 was a composite model, to examine whether effects of global evaluation or contact would emerge when controlling for the other variables. Again, only age and adaptability emerged as significant. Their magnitudes were only slightly reduced from Model 3, suggesting that global evaluation and contact had little to do with the hiring decisions in this particular context. The variables typically relied on in prejudice research thus provided relatively weak explanatory power relative to the perception that the candidate possessed traits aligned with the role.

#### *Does Contact Predict Adaptability?*

Although contact did not predict hireability, it is possible that contact influences hireability through a different mechanism – that is, that contact does not directly relate to bias but instead shapes stereotypic perceptions of individuals. To investigate this possibility, we predicted adaptability and reliability from candidate age, contact, and their interaction. No predictors were significant for reliability. However, adaptability was positively predicted by contact,  $B=.33$ ,  $p=.016$ ,  $\beta=.327$  (as well as being predicted by candidate age, as described above in the ANOVA results,  $B=.78$ ,  $p<.0001$ ,  $\beta=.442$ ). This relationship varied marginally by candidate age, as reflected in the Contact  $\times$  Candidate Age interaction,  $B=-.35$ ,  $p=.057$ ,  $\beta=-.256$ . For older candidates, contact positively predicted perceived adaptability,  $B=.335$ ,  $p=.035$ ,  $\beta =.291$ ; for younger candidates, as expected, no relationship emerged,  $B=-.011$ ,  $p=.914$ ,  $\beta=-.015$ . Contact may thus influence beliefs about older individuals, which then influence hiring tendencies.

*Legitimacy*

Participants reported that their level of support for the target candidate was equally legitimate for both older and younger candidates,  $F < 1$ ,  $p = .95$  ( $M = 4.58$ ,  $SD = 1.34$ ).

*Discussion*

This experiment provided support for the role congruity theory prediction that stereotypic assumptions form the basis of decisions about suitability for roles. Moreover, in multiple regressions including global evaluation and previous contact, only beliefs about adaptability of candidates emerged as significant predictors of evaluation. Importantly, contact influenced the endorsement of stereotypic beliefs about older individuals, suggesting that contact may indirectly reduce role-incongruity prejudice by reducing stereotypes.

An important consideration is whether stereotypic inferences are simply more specific than evaluative indices and thus provide greater explanatory power. Certainly, much research on attitude-behavior relations has demonstrated that measures that are more closely aligned will perform better (Ajzen & Fishbein, 2005; Eagly & Chaiken, 1993). Part of the reason that stereotypic inferences might explain more variance in hiring decisions, then, is that they are more closely aligned to the decision. Rather than viewing this as a reason to dismiss our findings, we believe this argument makes an even more compelling case for why context-specific beliefs and attitudes should be given a more prominent role in research about prejudice and discrimination. We thus join Barden and colleagues (2004) in their call for more attention to context, even in the experimental stimuli presented to participants: “Abstracting race stimuli from any physical context exaggerates the importance of global attitudes and obscures the importance of substantial contextual variation” (p. 21). Indeed, the literature’s current focus on preferences and

decisions in the absence of context may lead to the artificial embellishment of global attitudes.

### General Discussion

These findings contribute to understanding prejudice because they clearly demonstrate that bias can occur as a relative preference, rather than overt negativity, and that this relative preference emerges particularly in certain contexts. Overall, ratings of both older and younger candidates in both job contexts were positive (i.e., above the midpoint of the evaluative scale). Respondents did not reveal disdain or derogation of older candidates; instead, they tended to evince a relative preference for younger candidates, particularly in dynamic settings. Indeed, Experiment 1 demonstrated that a stable context can elicit a relative preference for older candidates. Additionally, these studies established that age bias in hiring for certain companies was mediated by perceived stereotypicality, thus providing a demonstration of the processes underlying context-specific devaluation.

The current research expands the understanding of contextual variation in prejudice by showing that context effects are not solely due to the positivity of certain roles or settings. In these experiments, the alignment between the group stereotype and the roles produced favorability. Role congruity theory thus provides a framework for understanding *why* some context effects for prejudice appear. Certainly, part of contextual variation is due to valence effects: Individuals who occupy valued social roles will be viewed more positively than individuals in devalued social roles (Barden et al., 2001). However, in these studies, both the dynamic and the stable roles were perceived as equally successful companies. The contextual variation in prejudice that resulted was thus not simply a valence effect, but a result of the match between stereotype and role.

The implications of this lack of overt negativity are important. Given strong social norms against the expression of prejudice, individuals are wary of appearing prejudiced, even to themselves (e.g., Dovidio & Gaertner, 2004). The context-dependent prejudice effects demonstrated may not be considered “prejudice” because they do not reflect negativity toward the target individual. The self-regulatory mechanisms that follow from committing a prejudiced action (Devine & Monteith, 1993; Monteith, Ashburn-Nardo, Voils, & Czopp, 2002) may thus not be initiated. As a consequence, individuals are unlikely to devote resources to minimizing such responses.

A further possibility is that respondents might consider role congruity motives as fairly legitimate. To the extent that they perceive a “kernel of truth” to the stereotype that older people are less adaptable, they may believe that it is wholly legitimate to prefer a younger person for a role requiring adaptability. Suggestive evidence that individuals perceive decisions based on role congruity as legitimate comes from Experiment 3, where participants in both candidate age conditions believed that their decisions were equally legitimate. The belief that a preference for one group above another is legitimate is unlikely to trigger any motive to suppress this preference; consistent with the justification-suppression model of prejudice (Crandall & Eshleman, 2003), these group-based preferences are likely to be expressed. Role requirements, along with accepted stereotypes, thus can function as a justification for prejudice.

Some individuals may feel that they are not prejudiced because they possess subjectively positive beliefs about group members. The current research, however, suggests that even a group that is stereotyped positively (e.g., being reliable) may nonetheless be blocked from valued roles because of other stereotypic perceptions. Parallels can certainly be found in other group stereotypes. For example, although men tend to have higher status than women, the belief that men are not nurturing may prove a

disadvantage to fathers who seek custody of their children. Likewise, the belief that women are warm, which is generally positively evaluated, may prove a liability in management or leadership contexts (Rudman & Glick, 2001). This research thus supports other perspectives, such as the stereotype content model (Fiske et al., 2002), that argue for the consideration of more complex arrays of positive and negative dimensions and stereotypic beliefs about groups rather than a sole focus on overall global evaluation.

*Adaptability: A New Dimension of Age Stereotypes*

Questions related to age stereotypes and age discrimination have begun to capture widespread attention, although this social category has been somewhat underrepresented within social psychological research (Nelson, 2005). A glimpse at demographic data suggests that it is timely to consider these questions more rigorously within social psychological theory and research. Including older individuals as a target group can thus help to expand theories of prejudice and discrimination.

In the studies presented here, respondents believed that younger individuals were more adaptable than older individuals, but they thought both age groups were generally high in reliability. This pattern differs from previous research (Redman & Snape, 2002; Warr & Pennington, 1993), in which older people were thought to possess higher levels of reliability-related traits (e.g., loyalty, conscientiousness) than younger people.

Determining whether this pattern is due to the relatively young age of our participants will require additional research. Another possibility is that traits related to adaptability are far more central to age bias, particularly within a hiring context. Although further research will need to examine how perceptions of reliability influence age bias, the current evidence clearly demonstrates that the relationship between age and hireability is mediated by perceptions of adaptability. This stereotypic dimension is not typically

considered in ageism research, but these findings suggest that the adaptability dimension may be central to some age-related biases.

An additional implication of the role congruity perspective is that beliefs about incongruity might extend to more general devaluation of the target group. Individuals who do not fit to societally-endorsed roles may be relatively negatively viewed. To the extent that a society is considered fast-paced or dynamic, individuals who are less adaptable may be generally derogated. Although the current data speak specifically to devaluation in a hiring context, more global measures of devaluation might also have their roots in generalized beliefs about misalignment to society's typical or valued goals.

*Conclusions: Contextual Effects on Prejudiced Responses*

A critical finding to emerge from these studies is that attitudes toward older people were not wholly negative; instead, the context for which the individual was considered influenced the tendency to approve of the candidate. This contextual variation coheres with other recent findings that both explicit and implicit prejudice can vary depending on the context occupied by the target or the perceiver, including occupational role (Barden et al., 2004) or physical context (Wittenbrink et al., 2001). These contextual effects may be further moderated by intrapersonal or interpersonal factors. For example, Maddux, Barden, Brewer, and Petty (2005) found that such context effects were moderated by motivation to control prejudiced reactions: White individuals who were low in motivation to control showed ingroup bias when targets were shown in threatening contexts, whereas white individuals who were high in motivation to control actually showed the reverse effect – an outgroup bias – even in threatening contexts. Such extensions of the contextual effects documented here would be a fruitful avenue for future research.

Although the current studies focused on ageism, they carry implications for a broad range of stereotyped groups. These findings clearly demonstrate that contextual effects in discrimination may in part stem from the perceived alignment between an individual's characteristics and the requirements of roles. Certainly, an individual's characteristics and qualifications should be evaluated for potential performance in a role. The matter of concern documented in these studies is that group-based stereotypes provided the critical information that determined hireability. To the extent that evaluators perceive these stereotypic perceptions as a legitimate source of bias, or are unaware of their relative preferences, these forms of discrimination may continue unchecked.

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## Endnotes

<sup>1</sup> A separate study manipulated the sex and age of target candidates; the effects were similar for both male and female targets.

<sup>2</sup> We did not predict differences in trait inference by company, but we analyzed this variable on an exploratory basis. The only effect involving company was the Age  $\times$  Trait  $\times$  Company interaction,  $F(1, 207)=3.96, p=.048$ , which showed that in addition to the pattern described in the Age  $\times$  Trait interaction, adaptability ratings were marginally lower for the older candidate in the dynamic company ( $M=3.74, SD=1.00$ ) than in the stable company ( $M=3.97, SD=0.83$ ). This interaction may suggest that the role requirements of a company can frame a stereotypic view of older workers; however, because this effect was small and unreplicated in any of the other studies, we hesitate to interpret it strongly.

<sup>3</sup> Separate analyses with participant sex detected a Candidate Age  $\times$  Participant Sex interaction,  $F(1, 104)=4.28, p=.041$ , which reflected that female participants were less likely than male participants to hire the older candidate but slightly more likely than male participants to hire the younger candidate.

Table 1

Hireability by Candidate Age and Company: Experiment 1

Company	Candidate age					
	Younger		Older		Overall	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Dynamic	5.19	1.02	4.40	1.67	4.80	1.42
Stable	5.60	1.04	6.18	0.67	5.88	0.92
Overall	5.39	0.75	5.29	0.96	5.34	0.85

*Note.* The hireability ratings were made on 7-point scales, with 7 indicating greatest hireability.



Table 2

## Hiring Ratings: Experiment 2

Company	Candidate age					
	Younger		Older		Overall	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Dynamic	6.05	1.02	4.13	1.69	5.09	1.08
Stable	6.07	1.06	4.68	1.36	5.38	0.92
Overall	6.06	1.04	4.38	1.57	5.22	1.02

*Note.* Ratings ranged 1 to 7, with 7 indicating greatest likelihood of hiring.

Table 3

## Hireability by Candidate Age and Company: Experiment 3

Company	Candidate age					
	Younger		Older		Overall	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Dynamic	5.20	1.05	4.10	1.20	4.65	1.25
Stable	5.59	1.01	5.90	1.07	5.74	1.05
Overall	5.40	0.82	5.00	0.81	5.20	0.84

*Note.* The hireability ratings were made on 7-point scales, with 7 indicating greatest hireability.

Table 4

## Regressions Predicting Hiring Bias: Experiment 3

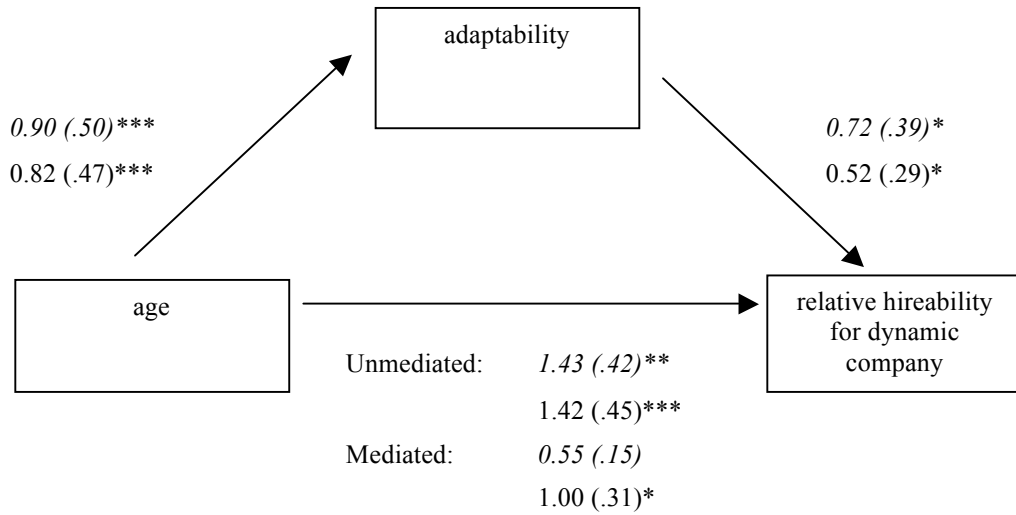
Explanatory variable	Model 1: Global evaluation		Model 2: Contact		Model 3: Stereotype fit		Model 4: Composite	
	<i>B</i>	$\beta$	<i>B</i>	<i>B</i>	<i>B</i>	$\beta$	<i>B</i>	$\beta$
Age	1.42***	.45	1.37***	.44	1.01**	.32	.97**	.31
Evaluation	.14	.09					-.01	-.01
Contact			.10	.06			-.05	.03
Adaptability					.58**	.32	.52**	.29
Interaction	.05	.02	.04	.02	.17	.05		

*Note.* Interaction refers to the interaction between age and each explanatory variable. Age was dummy-coded as 1 = young, 0 = old.

\*\*\*  $p < .001$     \*\*  $p < .01$

Figure 1

Path model for testing perceived adaptability as a mediator between age and relative hireability



*Note:* Regression coefficients are shown, with standardized coefficients in parentheses, for Experiment 1 (italics) and Experiment 3. Age was dummy-coded as 1 = young, 0 = old. Relatively hireability for the dynamic company was calculated by subtracting hireability for the stable company from hireability for the dynamic company.

\*\*\*  $p < .001$     \*\*  $p < .01$     \*  $p < .05$