
Stereotyping Against Your Will: The Role of Inhibitory Ability in Stereotyping and Prejudice Among the Elderly

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An experiment examined the hypothesis that elderly people rely on stereotypes more, and are more prejudiced, than younger people because of deficits in the ability to inhibit information. Consistent with predictions, elderly people relied on stereotypes even when instructed not to, whereas young people did not. Elderly people also were more prejudiced than young people, and these differences in stereotyping and prejudice were mediated by age differences in inhibitory ability. Because elderly people reported a stronger desire than young people to control their prejudiced reactions, these results suggest that inhibitory failure can cause people to become more prejudiced than they want to be.

It is common knowledge that older people are more prejudiced than their younger counterparts. It is also common knowledge that the root cause of this difference lies in the historical periods in which the generations came of age. Consistent with these beliefs, research supports the notion that people were more prejudiced 20, 40, and 60 years ago than they are today (G. M. Gilbert, 1951; Karlins, Coffman, & Walters, 1969; Katz & Braly, 1933; Schuman, Steeth, & Bobo, 1985). Nevertheless, this generational explanation for age differences in prejudice may be only part of the story. In the current article, we propose that elderly people may also be more prejudiced because of age-related deficits in certain cognitive abilities.

Stereotyping, Prejudice, and Inhibition

In an influential model of prejudice, Devine (1989) proposed that because our culture is suffused with stereotypes concerning African Americans, these stereotypes become overlearned and are automatically activated upon encounters with individual African Americans. What differentiates nonprejudiced from preju-

diced individuals in this model is not whether prejudiced thoughts are activated but whether individuals inhibit those thoughts and replace them with more egalitarian beliefs. Prejudiced individuals are thought to endorse the stereotypic thoughts that are automatically activated, and nonprejudiced individuals are thought to reject and subsequently inhibit the stereotypic thoughts.

Although subsequent research has not provided uniform support for Devine's (1989) model (e.g., see Fazio, Jackson, Dunton, & Williams, 1995; Fein & Spencer, 1997; Lepore & Brown, 1997), most models have maintained at least a tacit emphasis on inhibitory processes. For example, D. T. Gilbert and Hixon (1991) provided evidence that stereotype activation is not inevitable but that once stereotypes are activated, individuals who are distracted are more likely to apply them in judgment. This finding suggests that effortful inhibitory processes may be critical for preventing activated stereotypes from influencing judgment. Relatedly, Bodenhausen (1990) has demonstrated that people are more likely to apply stereotypes when they are off-cycle in their circadian rhythm. Because inhibitory abilities are depressed in circadian off-cycles (cf. May, Hasher, & Stoltzfus, 1993), this

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TABLE 1: Possible Patterns of Stereotype Activation and Inhibition Among High- and Low-Prejudice Individuals

Low prejudice
1. Stereotypes not automatically activated (Fazio, Jackson, Dunton, & Williams, 1995; D. T. Gilbert & Hixon, 1991; Lepore & Brown, 1997).
2. Only positive stereotypes automatically activated.
3. Positive and negative stereotypes automatically activated but negative stereotypes interpreted to have positive or neutral connotations (cf. Wittenbrink, Gist, & Hilton, 1997).
4. <i>Positive and negative stereotypes automatically activated and both inhibited (Devine, 1989).</i>
5. <i>Positive and negative stereotypes automatically activated but negative stereotypes inhibited.</i>
6. <i>Positive and negative stereotype automatically activated but negative responses inhibited (Crosby, Bromley, & Saxe, 1980).</i>
High prejudice
1. Only negative stereotypes automatically activated (Lepore & Brown, 1997).
2. Positive and negative stereotypes automatically activated but positive stereotypes interpreted to have negative or neutral connotations (Allport, 1954; Esses, Jackson, & Nolan, 1996; Wittenbrink, Gist, & Hilton, 1997).
3. Positive and negative stereotypes automatically activated but positive stereotypes inhibited.
4. <i>Positive and negative stereotypes automatically activated but negative stereotypes partially inhibited.</i>
5. <i>Positive and negative stereotype automatically activated but negative responses partially inhibited (Crosby et al., 1980; Devine, Monteith, Zuwerink, & Elliot, 1991; Monteith, 1993).</i>
6. <i>Positive and negative stereotypes automatically activated; attempts to inhibit them largely result in failure.</i>

finding is consistent with the notion that people prevent themselves from relying on stereotypes by effortfully inhibiting them.

The findings of D. T. Gilbert and Hixon (1991) and Bodenhausen (1990) suggest that inhibitory processes play an important role in preventing people from relying on unwanted stereotypes. Because their findings emerged in the absence of any measures of prejudice, they suggest that on average across both high- and low-prejudice individuals, inhibitory processes prevent or reduce stereotype application. This possibility leads to the question of just how inhibition might play such a role.

In response to this question, Table 1 proposes various combinations of stereotype activation and inhibition that previous research (and logic) suggest might underlie the attitudes of high- and low-prejudice people. As can be seen in Table 1, there are at least six different processes in which low- and high-prejudice individuals might conceivably engage when they encounter a member of a stereotyped group. In all probability, each of these six processes accurately describes at least some of the people some of the time. For example, a low-prejudice person who typically does not activate stereotypes automatically might do so when her self-esteem is threatened (Fein & Spencer, 1997; Spencer, Fein, Wolfe, Fong, & Dunn, 1998). Similarly, a variety of conscious and nonconscious events can prime stereotypes and increase their likelihood of activation among individuals who might not otherwise be affected by them (Bargh, Chen, & Burrows, 1996; Chen & Bargh, 1997; Dijksterhuis & van Knippenberg, 1998).

Examination of Table 1 indicates that inhibitory abilities are implicated in a variety of processes by which people could maintain either high or low levels of prejudice. In the case of low-prejudice individuals, Processes 4, 5, and 6 (shown in italics) all implicate inhibitory ability as

critical to maintaining low-prejudiced attitudes and behavior. In the case of high-prejudice individuals, Processes 4, 5, and 6 (shown in italics) also implicate inhibitory ability as preventing these individuals from becoming even more prejudiced than they already are. Process 3 among high-prejudiced individuals, on the other hand, implicates inhibitory ability as preventing these individuals from becoming less prejudiced.

Thus, an important implication of a variety of models of prejudice is that individual differences in inhibitory ability should be associated with individual differences in prejudice. Among low-prejudiced individuals, people who are good at inhibiting information should be the most successful in translating their internalized goal of being nonprejudiced into nonprejudicial attitudes and responses. To the extent that these people are successful in their efforts to inhibit stereotypes, they will tend to personalize or individuate members of stereotyped groups (see Brewer, 1988; Fiske & Neuberg, 1990). Thus, their experiences with such individuals will be relatively untainted by cultural stereotypes, allowing these good inhibitors to be largely successful in maintaining a low-prejudiced attitude.

Low-prejudiced individuals with poor inhibitory abilities, on the other hand, have the desire to inhibit their stereotypes but not the means. When these individuals encounter members of stereotyped groups, cultural stereotypes are often activated, but they meet with mixed success in their efforts to inhibit them. Thus, their experiences with stereotyped individuals are likely to be tainted by the stereotypes, causing them to encode behaviors in stereotype-consistent ways (von Hippel, Sekaquaptewa, & Vargas, 1995) and thereby undermining their goal of maintaining nonprejudicial attitudes. Such individuals may eventually become high prejudiced (see Table 1, high prejudice: Processes 4 and 6) or

they may adopt an alternative approach, whereby stereotypic attributes of other groups are accepted as true but interpreted in ways that are relatively nonprejudicial (see Table 1, low prejudice: Process 3). Finally, although some high-prejudiced individuals are probably people who would be low prejudiced if their inhibitory efforts had not failed (Table 1, high prejudice: Process 6), other high-prejudiced individuals are undoubtedly relying on their relatively good inhibitory abilities to prevent themselves from becoming even more prejudiced than they already are (Table 1, high prejudice: Processes 4 and 5).¹

In such a manner, a variety of current models suggest an important cognitive source of prejudice, whereby people who happen to be poor at inhibiting information rely on stereotypes more than people who happen to be good at inhibiting information. Because such poor inhibitors are regularly influenced by stereotypes in their perception, judgment, and memory, these individuals will tend to become more prejudiced over time. Thus, people who are poor at inhibiting are likely to be more prejudiced than people who are good at inhibiting, despite the fact that they may have the same desire to be egalitarian. Before exploring this possibility, we first present a brief discussion of inhibition.

Hierarchical and Lateral Inhibition

Bodenhausen and Macrae (1998) propose that there are two classes of inhibition that have been studied in the psychological literature. On one hand, there are the intentional suppression processes described by Wegner and his colleagues (see Wegner & Wenzlaff, 1996), whereby people effortfully push a thought from consciousness and prevent it from resurfacing. For example, in the classic demonstration of the effects of intentional suppression, Wegner, Schneider, Carter, and White (1987) asked participants to avoid thinking about a white bear. Participants were instructed to ring a bell whenever thoughts of the bear entered consciousness. People were relatively successful at not thinking about a white bear when they were focused on the task, but thoughts of the bear tended to be hyperaccessible later when they relaxed their suppression efforts. Bodenhausen and Macrae (1998) refer to this type of suppression as hierarchical (or top-down) inhibition, and their data suggest that when people try to suppress stereotypes they often show a similar rebound effect (Macrae, Bodenhausen, & Milne, 1998; Macrae, Bodenhausen, Milne, & Jetten, 1994). It is important to note, however, that rebound effects are not the inevitable consequence of stereotype suppression: When people are committed to the goal of stereotype suppression, they may be successful at it (Monteith, Sherman, & Devine, 1998).

In contrast to such effortful, top-down inhibitory processes, there is also the type of inhibition described

by Tipper (1992), whereby people unintentionally inhibit some thoughts in their attempt to focus on others. In the classic demonstration of this effect, Tipper (1985; see also Neill, 1977) presented people with drawings of superimposed objects, with one object presented in red ink and the other in green. Participants were instructed to name the object in red ink as rapidly as possible. Tipper found that when an object that had been presented on the previous trial in green ink was then presented in red ink, there was a slight delay in pronunciation because people had inhibited the to-be-ignored object on the earlier trial. This effect is often referred to as negative priming, and Bodenhausen and Macrae (1998) label this type of suppression "lateral inhibition."

To date, only two lines of research have directly addressed lateral inhibition of stereotypes. In one set of experiments, Macrae, Bodenhausen, and Milne (1995) examined the categorization of a Chinese woman. They found that when the category "Chinese" was activated by the prior presentation of a woman using chopsticks, the competing categorization of "woman" was inhibited. Thus, people were faster to name Chinese stereotypic words in this condition and slower to name female stereotypic words. The opposite result emerged when the category "female" was activated by the prior presentation of a woman applying make-up. Evidence concerning lateral inhibition was also provided in an experiment by Rudman and Borgida (1995), who found that male participants who were primed by sexualized beer commercials showed faster lexical decision times for words relevant to a sexual female subtype (e.g., babe, bimbo) but slower lexical decision times for words relevant to a familial female subtype (e.g., mother, sister).

Although the findings of Macrae et al. (1995) and Rudman and Borgida (1995) demonstrate that stereotypes can be—and probably often are—inhibited laterally, the focus of this article is on hierarchical inhibition. It is here that inhibitory efforts are often met with failure (see Devine, Monteith, Zuwerink, & Elliot, 1991; Macrae et al., 1998; Monteith, 1993), particularly when people are tired or distracted (Bodenhausen, 1990; D. T. Gilbert & Hixon, 1991), and it is the ubiquity of this sort of effortful inhibition that has been theorized to differentiate nonprejudiced from prejudiced individuals (Devine, 1989; Devine et al., 1991; Monteith, 1993). If stereotype suppression really is a variety of hierarchical inhibition, then individual differences in this sort of inhibitory ability may be an important predictor of when stereotype suppression is successful, and when it is not. As Bodenhausen and Macrae (1998) note, however, people must be both motivated to avoid potential stereotypic biases and aware of them for hierarchical stereotype suppression to ensue. Thus, inhibitory ability may be more likely to manifest itself on explicit than implicit measures of

stereotyping (which might explain why implicit tasks often reveal evidence of stereotypes that are not apparent on explicit tasks) (e.g., von Hippel, Sekaquaptewa, & Vargas, 1997). In line with these possibilities, the first hypothesis of this article is that individual differences in inhibitory ability will predict individual differences in stereotyping and prejudice.

Aging, Inhibition, and Prejudice

As with other cognitive abilities, there is substantial variance in inhibitory ability (cf. Gernsbacher, 1993; May, Kane, & Hasher, 1995). Aside from the normal variation that exists among those whose inhibitory abilities are relatively intact, there are also a variety of factors that lead people to have particularly poor inhibitory abilities. For example, diminished inhibitory ability has been associated with attentional deficit disorder and schizophrenia (see May et al., 1995; Tipper, 1992). One important and prevalent source of individual differences in inhibitory ability is age; older people are less able than younger people to inhibit information, both laterally and hierarchically (Connelly, Hasher, & Zacks, 1991; Hartman & Hasher, 1991; Zacks, Radvansky, & Hasher, 1996). For example, when elderly people engage in negative priming tasks, they typically fail to show any evidence of inhibition of information from one trial to the next (Hasher, Stoltzfus, Zacks, & Rypma, 1991; Tipper, 1991). Indeed, Hasher and Zacks (1988) have proposed that age-related deficits in memory and a variety of other cognitive functions may be caused by losses in the ability to inhibit information that are associated with aging.

If elderly people have difficulty inhibiting information, and if being nonprejudiced is achieved at least in part by (hierarchically) inhibiting stereotypes, then elderly people might be more prejudiced than younger people simply because they cannot inhibit their stereotypes. Thus, the second hypothesis of this article is that elderly people will rely on stereotypes more, and be more prejudiced, than young people, and these age effects will be mediated by differences in inhibitory ability.

To examine these hypotheses, an experiment was conducted in which stereotyping, prejudice, and inhibition were assessed among elderly and young people. To ensure that inhibition is playing a role that is specific to stereotyping and prejudice, and not just socially undesirable responding, participants were also administered an impression management scale. If inhibitory ability is only related to prejudice and stereotyping because it prevents people from exhibiting socially undesirable responses (see Table 1, low prejudice: Process 5, high prejudice: Process 6), then elderly people should show less evidence of impression management than young

people, and this difference should be mediated by inhibitory ability. If, on the other hand, inhibitory ability is related to stereotyping and prejudice through stereotype inhibition rather than response monitoring, then social desirability may be largely unrelated to inhibitory ability.

Because the current research is concerned with hierarchical inhibition, a task was borrowed from Connelly et al. (1991) that assesses people's hierarchical inhibitory ability. In this task, participants read a series of paragraphs that contain distracting text presented in a different font from the rest of the paragraph. The participants' task is to read the paragraphs out loud as quickly and accurately as possible. Because in normal adult reading the eyes are typically substantially ahead of the point at which the reader is vocalizing the words (e.g., Rayner, 1978), Connelly et al.'s (1991) task requires the reader to inhibit the vocalization of words that have already been encoded. This sort of inhibitory process is effortful and conscious—indeed, the phenomenological experience is similar to that of the Stroop (1935) task—and results in a substantial slowing in people's reading speed. Connelly et al.'s (1991) data indicate that inhibition scores measured with this technique are only modestly correlated with scores on the verbal subtest of the WAIS-R (Wechsler, 1981) and that the age differences that emerge on this measure are only modestly related to verbal intelligence.

METHOD

Participants

The study consisted of 36 young adults ($M = 21.2$ years, range = 18 to 25) and 35 older adults ($M = 80.2$ years, range = 65 to 95) who were recruited through notices placed throughout the city of Columbus, the Ohio State University campus, and retirement communities and apartment complexes. These fliers offered \$15 and parking fees as an incentive to participate in an experiment on "social attitudes."

Materials

To measure inhibitory ability, participants were presented with seven paragraphs from Connelly et al. (1991). The paragraphs were written in italic script, and four of them contained distracting phrases interspersed throughout. The distracting phrases were semantically related to the topic of the paragraph and were written in normal script. The paragraphs themselves were topically unrelated to stereotyping and prejudice and discussed general interest issues such as archaeology, computers, and fishing.

To measure stereotyping, participants were presented with either a description of a student athlete named

Jamal or an honors student named John. The manipulation of the target's name thereby covaried with his status as an honors student or student athlete and was intended to convey (without explicitly noting) that the athlete was African American and the honors student was Caucasian (Walsh, Banaji, Hughes, & Greenwald, 1994). Thus, the African American and Caucasian were described in ways that are stereotypic for their race (Devine & Elliot, 1995), and participants should be inclined to think that the African American athlete is less intelligent than the Caucasian honors student. Participants were presented with a series of responses that the student athlete or honors student had ostensibly provided to questions concerning his personal interests, family life, and so forth. These responses were intended to provide an image of the typical college student and were identical across targets.

It should be apparent that these materials confound the manipulation of race with the manipulation of status as an athlete versus honors student. This confounding was not expected to pose a problem, however, because the critical comparison in this experiment was not between the athlete and honors student but rather between the evaluations of these students by young and older adults. Because the African American athlete conveyed a negative stereotype about intelligence, whereas the honors student conveyed a positive stereotype about intelligence, this manipulation allowed the assessment of whether inhibitory abilities play a role in both positive and negative stereotyping. Thus, the primary issue in this experiment is whether—and if so why—elderly people evaluate an African American athlete as less intelligent and an honors student as more intelligent than do young people.

To measure prejudice, participants completed the Modern Racism Scale (MRS) (McConahay, Hardee, & Batts, 1981) and the Social Distance Scale (SDS) (Bogardus, 1959). The MRS is intended to tap a somewhat subtle form of racism toward African Americans that is expressed in terms of resentment of unfair advantages. Participants indicate their disagreement or agreement on 6-point scales with statements such as, "Over the past few years, Blacks have gotten more economically than they deserve." The SDS is intended to tap a more blatant, old-fashioned form of racism than the MRS—one that is expressed in the desire to maintain social distance from members of minority groups. The scale requests participants to indicate how close they feel to groups such as American Blacks; responses range from *would marry into group* to *would work in same office* to *would keep out of my nation*.

To measure the desire to control prejudice, participants were administered the Motivation to Control Prejudiced Reactions Scale (MCPRS) (Dunton & Fazio, 1997). The MCPRS requests participants to indicate

their disagreement or agreement on 7-point scales with statements such as, "I get angry with myself when I have a thought or feeling that might be considered prejudiced." Higher numbers on this scale indicate an increased desire to control prejudice.

To measure impression management, participants were administered Paulhus's (1991) Balanced Inventory of Desirable Responding (BIDR), which is made up of impression management and self-deception subscales. The BIDR requests participants to indicate the truth about a series of statements, such as, "I don't gossip about other people's business." Responses are given on 7-point scales anchored by *not true* and *very true*, and an item is only scored as evidence of impression management if participants respond with a 6 or a 7 for positively phrased items or a 1 or a 2 for negatively phrased items (Paulhus, 1991).

Procedure

Young participants were met at the laboratory where they completed the experiment by themselves or in groups of 2 or 3. Elderly participants were met at the recreation or dining areas of their retirement community where they completed the experiment by themselves or in groups of up to 10 individuals. All participants were separated from one another via cubicles, dividers, or distance between tables. Thus, participants provided their responses in a setting that was essentially isolated from others. Participants were first given the paragraphs from Connelly et al. (1991) and asked to read them out loud as quickly and accurately as possible. They were told to read only the text in italics and to avoid reading any text in normal script. The paragraphs were intermixed such that those containing no distracting text were presented in between those containing distracting text. Participants were audio-recorded as they read the paragraphs so that they could later be timed.

Once participants finished reading the paragraphs, they were presented with the materials concerning Jamal or John. After being told the person's name and background as an athlete or honors student, participants were instructed to form an impression of the target based only on his answers to the various questions and not on his background information. They were told that we were particularly interested in their ability to ignore this social-category information and that they should not allow it to influence their judgments. These instructions to ignore thoughts of the target's background information were repeated throughout the packet as participants completed the dependent variables.

After reading the responses that the target individual had provided to a series of items, participants were asked a number of (mostly filler) questions. These questions were divided into two sections, one in which participants

were asked to evaluate the target directly and one in which participants were asked to indicate how they thought the target felt about himself. To assess stereotyping of Jamal or John, buried in each section was an item assessing the target's intelligence (Devine & Elliot, 1995). Responses were given on 10-point scales, with higher numbers indicating greater intelligence. Participants were then presented with the MRS, SDS, MCPRS, and BIDR. They then completed a demographic questionnaire and were debriefed, paid, and thanked for their participation.

RESULTS

Demographics

Among young adults, 12% had a high school degree or less, 53% had some college, and 35% had a college degree. Among older adults, 15% had a high school degree or less, 27% had some college, 37% had a college degree, and 21% had an advanced degree. Thus, commensurate with their age, older adults were marginally more educated than young adults, $F(1, 65) = 3.80, p < .06$.

Inhibition

Previous research has demonstrated that the distracting text is difficult to inhibit, and older adults in particular show slower reading times for the paragraphs containing this text (Connelly et al., 1991). Failure to inhibit was operationalized as the mean difference in reading time between paragraphs containing distracting text and paragraphs containing no distracting text. Replicating Connelly et al., older adults showed poorer inhibition ($M = 37.91$ sec, $SE = 3.89$) than did young adults ($M = 14.84$ sec, $SE = 1.29$), $F(1, 67) = 30.93, p < .001$.²

Stereotyping and Prejudice

Participants' responses to the two items assessing the target's intelligence were averaged and subjected to a 2 (age) \times 2 (target) ANOVA, which revealed the predicted interaction between age and target, $F(1, 67) = 9.34, p < .01$ (see Figure 1). Simple effects analyses revealed that, compared to young adults, older adults rated John as relatively more intelligent, $F(1, 67) = 4.64, p < .04$, and Jamal as relatively less intelligent, $F(1, 67) = 5.10, p < .03$. No main effects emerged for age, $F(1, 67) = .03, ns$, or type of target, $F(1, 67) = 2.45, p > .10$.

Although these results are consistent with the hypothesis that elderly adults would be less able to inhibit their stereotypes, they do not provide sufficient evidence that inhibitory abilities are causing the differences in evaluations made by young and older adults. Rather, it is possible that older adults are simply more prejudiced than young adults and that this difference in

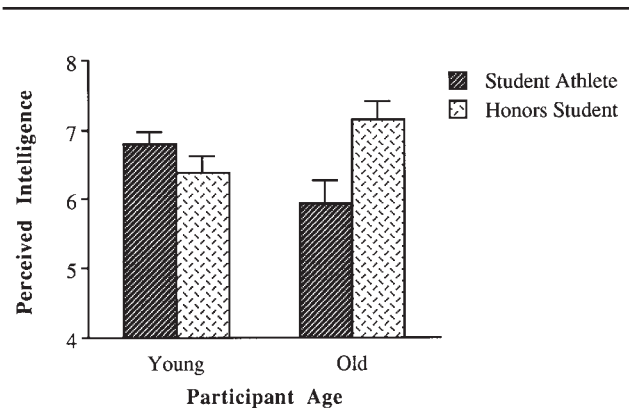


Figure 1 Perceived intelligence of student athlete and honors student.

NOTE: Larger numbers indicate greater perceived intelligence.

prejudice caused older adults to rate Jamal as less intelligent. Consistent with this possibility, older adults provided higher scores on the prejudice scales (MRS: $M = 19.95, SE = 1.40$; SDS: $M = 23.28, SE = 1.60$) than did young adults (MRS: $M = 14.21, SE = 1.12$; SDS: $M = 15.44, SE = 1.12$), $F(1, 66) = 10.15, p < .01$, and $F(1, 67) = 15.90, p < .001$, respectively.

To measure mediation of the age differences that emerged in participants' evaluations of John and Jamal, regression-based causal models were estimated (Baron & Kenny, 1986). The goal of these analyses was to assess whether the age differences that emerged in evaluations of Jamal and John were mediated by differences in inhibitory ability rather than differences in prejudice.³

As can be seen in Part A of Figure 2, inhibitory ability was a significant mediator of the age difference in evaluations of the student athlete, but prejudice was not. Of importance, the direct path from age to evaluation was significantly negative when the mediators were not included in the model (indicating that older adults perceived Jamal as less intelligent than did young adults) and nonsignificantly positive when the mediators were included, suggesting complete mediation (see Baron & Kenny, 1986). A mediational t test (as reported in Baron & Kenny, 1986) revealed that the mediated path from age through inhibitory ability to evaluations was significant, $t(32) = -2.18, p < .05$, but the mediated paths through the MRS and the SDS were not significant, $t(32) = -.14, ns$, and $t(32) = -.81, ns$, respectively.⁴ When the model was rerun without the prejudice measures, the direct path from age to evaluations dropped from $\beta = -.42, p < .05$, without inhibition in the model, to $\beta = .01, p > .90$, with inhibition in the model, and the mediated effect through inhibition was even stronger (β from inhibition to evaluations = $-.64, p < .01$). These analyses suggest that the interaction depicted in Figure 1 was indeed the product of age-related deficiencies in inhibitory ability and was not caused by age differences in prejudice. In

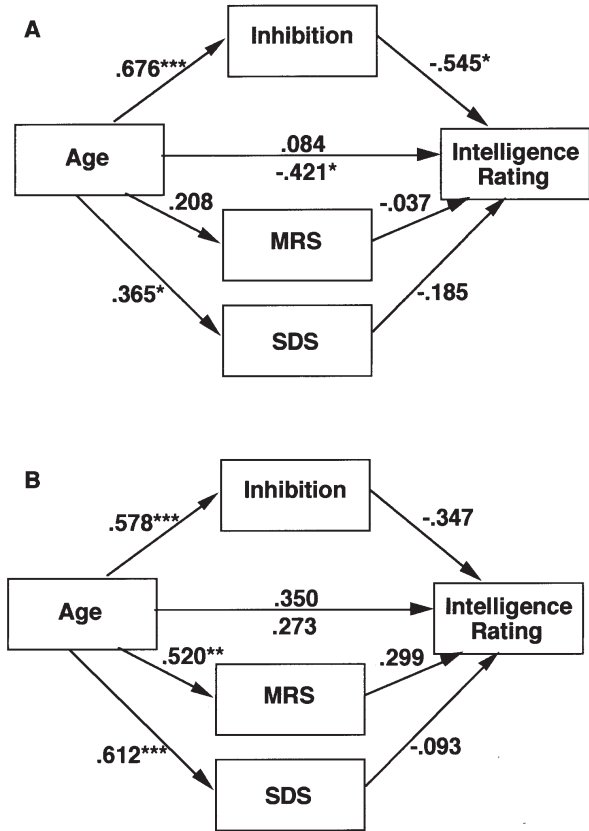


Figure 2 Mediating role of inhibition in age differences in evaluation of student athlete (A) and honors student (B). NOTE: MRS = Modern Racism Scale, SDS = Social Distance Scale. Larger numbers indicate poorer inhibition. Path coefficients represent standardized betas. The coefficient below the path from age to intelligence represents the direct effect with no mediators in the model. The coefficient above the path from age to intelligence represents the direct effect when the mediators are included in the model. * $p < .05$. ** $p < .01$. *** $p < .001$.

contrast, age had no direct or mediated effects on evaluation of the honors student (see Part B of Figure 2).

The preceding results suggest that increased negative stereotyping among the elderly is caused by the diminished ability to inhibit that is associated with aging. To examine whether the differences in prejudice that emerged between young and older adults might also be a product of differences in inhibitory ability, another regression-based causal model was estimated. As can be seen in Figure 3, inhibitory ability was a significant mediator of the effect of age on the MRS and, to a lesser degree, on the SDS. Mediation t tests revealed that the mediated path from age through inhibitory ability to prejudice was significant in the case of the MRS, $t(65) = 3.03, p < .01$, and marginally significant in the case of the SDS, $t(65) = 1.90, p < .07$.

To provide further evidence for the relationship between inhibitory ability and prejudice, correlations between inhibition and the MRS and SDS were then

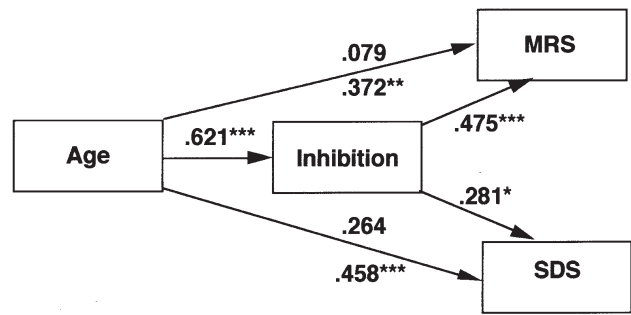


Figure 3 Mediating role of inhibition in age differences in prejudice. NOTE: MRS = Modern Racism Scale, SDS = Social Distance Scale. The coefficients below the paths from age to MRS and SDS represent the direct effect with no mediator in the model. The coefficients above the paths from age to MRS and SDS represent the direct effect when inhibition is included as a mediator in the model. * $p < .05$. ** $p < .01$. *** $p < .001$.

examined separately among young and older adults. Inhibitory ability was significantly associated with the MRS among young and older adults (young adults: $r = .47, p < .01$; older adults: $r = .43, p < .02$) and was marginally related to the SDS among older adults (young adults: $r = .11, ns$; older adults: $r = .33, p < .07$). These analyses suggest that not only is increased stereotyping among the elderly mediated by diminished inhibitory ability but increased prejudice is mediated by losses in the ability to inhibit as well.

If the above results are not simply a function of the social desirability concerns associated with self-report measures, then age and inhibitory ability should not be negatively associated with impression management. To test this possibility, impression management and self-deception scores were regressed on age and inhibitory ability. This analysis revealed that age was positively related to impression management ($\beta = .42, p < .01$), suggesting that (counter to popular stereotypes) the elderly adults in this sample were more and not less concerned with impression management. Furthermore, inhibitory ability was unrelated to impression management ($\beta = .12, p > .35$) and self-deception was unrelated to age or inhibitory ability ($ps > .15$).⁵

To assess whether negative stereotyping and prejudice were related to impression management, ratings of Jamal, MRS scores, and SDS scores were then correlated with impression management and self-deception. None of the measures of stereotyping and prejudice were correlated with impression management or self-deception in this sample ($ps > .25$). Furthermore, when the impression management and self-deception subscales of the BIDR were included in the causal models presented above, they had no affect on the relationships that emerged and were unrelated to any of the variables with the exception of age.

Finally, it might be argued that older adults are more prejudiced not because they cannot inhibit their prejudicial thoughts but because they do not desire to inhibit these thoughts. Inconsistent with this notion, a positive correlation emerged between age and the MCPRS ($r = .40, p < .01$), suggesting that the older adults in this sample have a stronger desire than the young adults to control their prejudicial responses. In addition, when the MCPRS was regressed simultaneously on inhibition and age, age remained a significant predictor of the MCPRS ($\beta = .40, p < .01$), whereas inhibition was not ($\beta = -.01, ns$). When the MCPRS was included in the causal models presented above, it had no impact on the relationships that emerged and was not related to any of the variables except age. When the MRS and SDS were regressed simultaneously on age and the MCPRS, age was a significant predictor of the MRS and SDS ($\beta = .42, p < .001$, and $\beta = .47, p < .001$, respectively) but the MCPRS was not ($\beta = -.20, p > .10$, and $\beta = -.07, ns$, respectively).⁶

DISCUSSION

The results of this experiment provide evidence for the importance of inhibition in stereotyping and prejudice. Elderly adults relied on stereotypes more than did young adults, even though they were regularly reminded to ignore the target individual's background information. Furthermore, the age difference that emerged in stereotyping of the African American student athlete was completely mediated by the difference between young and older adults in their ability to inhibit. Older adults were also more prejudiced than were young adults, and again, this age difference was mediated—at least in part—by age-related differences in inhibitory ability. It is worth noting, however, that the finding that inhibitory ability was more closely related to modern than old-fashioned prejudice suggests that old-fashioned prejudice may indeed be a by-product of the historical period in which people come of age, whereas modern prejudice may be more closely associated with the ability to inhibit.

The results of this study not only provide evidence for the role of inhibitory ability in stereotyping and prejudice but they also demonstrate the importance of that role. Losses in inhibitory ability that are associated with aging led to substantial and seemingly unwanted increases in stereotyping and prejudice. Elderly adults in this sample were the most motivated to control their prejudicial reactions, yet they were also the most likely to demonstrate stereotyping and prejudice. Thus, this experiment suggests that although historical times undoubtedly play an important role in creating attitudes toward various groups, time itself plays an even more

critical role as it robs people of their ability to inhibit previously socialized stereotypes and prejudices.

The results of this experiment provide suggestive evidence that inhibitory ability may not be related to positive stereotyping. Although the ANOVA results indicated that elderly adults perceived the honors student to be more intelligent than did young adults, this effect did not replicate in the correlational analyses (when age was treated as a continuous variable). In addition, inhibitory ability was completely uncorrelated with evaluations of the honors students, whereas it was highly associated with evaluations of the student athlete. These data suggest that people may not feel a strong need to suppress their positive stereotypic responses, even when directly instructed to do so. Perhaps positive stereotypes seem more valid, or less like stereotypes, and thus are less likely to be the target of suppression efforts. Such a possibility would clearly need to be supported by further research.

Finally, the results of this experiment indicate that the relationship between inhibition and stereotyping and prejudice was not just a product of social desirability concerns and consequent response suppression. Rather, inhibition proved to be largely uncorrelated with impression management concerns. This finding suggests that the relationships that emerged between inhibitory ability and stereotyping and prejudice were not simply caused by the inability to monitor socially undesirable responses. Instead, inhibition seems to be intrinsically associated with stereotyping and prejudice because people selectively attempt to inhibit their apparently unwanted stereotypes and prejudicial thoughts.

Conclusions

The current research suggests that being nonprejudiced is an effortful process, requiring people to continually engage in stereotype suppression. These findings emphasize the difficulty associated with being nonprejudiced and the ever-present possibility that inhibition will fail and nonprejudiced people will accidentally behave in a prejudiced fashion (see Devine et al., 1991; Monteith, 1993). The findings also emphasize the role of chronic suppression failure in causing some people to be prejudiced even though they do not want to be. More optimistically, however, the current research suggests that stereotype suppression can work and that it can be a viable route to being nonprejudiced. By an ongoing act of will, these findings indicate that most people can exert control over unintended or automatically activated stereotypes and thereby prevent themselves from succumbing to environmental pressures toward prejudice.

APPENDIX
Correlation Matrices by Condition

	Age	Inhibitory Ability	Evaluations	MRS
Honors student (N = 36)				
Inhibitory ability	.5783**			
Evaluations	.2733	-.0022		
MRS	.5204**	.6369**	.2061	
SDS	.6121**	.5926**	.1266	.6170**
Student athlete (N = 35)				
Inhibitory ability	.6757**			
Evaluations	-.4210*	-.6291**		
MRS	.2081	.3549*	-.3302†	
SDS	.3645*	.3418†	-.3694*	.6090**

NOTE: MRS = Modern Racism Scale, SDS = Social Distance Scale.
† $p < .10$. * $p < .05$. ** $p < .01$.

NOTES

1. Such a statement might lead one to ask why a high-prejudiced individual would have any desire to inhibit stereotypes. The answer to this question would seem to lie in the fact that prejudice is a continuous rather than a dichotomous variable. Ku Klux Klan leaders might have little desire to inhibit their stereotypes but more moderate and mainstream high-prejudice individuals are likely to feel at least somewhat constrained by both their egalitarian ideals (Dovidio & Gaertner, 1997) and their awareness that exceptions to the stereotypes abound.

2. Young adults' average reading time was 40.13 seconds for the paragraphs without distracters and 54.97 seconds for the paragraphs with distracters. Older adults averaged 53.35 seconds for the paragraphs without distracters and 91.26 seconds for the paragraphs with distracters.

3. See the appendix for the intercorrelations among variables reported in these causal models.

4. Results of the causal model were functionally identical when only one of the prejudice measures, or a composite of the two measures, was included in the analysis.

5. The correlation between age and impression management was $r = .51, p < .01$, and the correlation between inhibitory ability and impression management was $r = .38, p < .01$. The correlation between age and self-deception was $r = -.18, p > .10$, and the correlation between inhibitory ability and self-deception was $r = -.09, p > .45$.

6. Because this finding is somewhat inconsistent with that of Dunton and Fazio (1997), who report a negative relationship between the Motivation to Control Prejudiced Reactions Scale (MCPRS) and the Modern Racism Scale (MRS), the bivariate correlations between the MRS, Social Distance Scale (SDS), and the MCPRS were then examined. These were nonsignificant ($ps > .30$). A subscale of the MCPRS was then created that included only items that were negatively correlated with the MRS and SDS. When the MRS and SDS were regressed on age and this subscale of the MCPRS, the effect of age on the MRS and SDS remained unchanged, but the subscale was a significant predictor of both the MRS and the SDS ($\beta = -.50, p < .001, \beta = -.32, p < .01$, respectively). Of importance, age was not significantly correlated with this subscale ($r = .11, ns$).

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