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*Group Processes Intergroup Relations* 2002; 5; 133  
DOI: 10.1177/1368430202005002541

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# Implicit and Explicit Consequences of Exposure to Violent and Misogynous Rap Music

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In two experiments, primed subjects were exposed to violent and misogynistic rap music and control subjects were exposed to popular music. Experiment 1 showed that violent and misogynistic rap music increased the automatic associations underlying evaluative racial stereotypes in high and low prejudiced subjects alike. By contrast, explicit stereotyping was dependent on priming and subjects' prejudice level. In Experiment 2, the priming manipulation was followed by a seemingly unrelated person perception task in which subjects rated Black or White targets described as behaving ambiguously. As expected, primed subjects judged a Black target less favorably than a White target. By contrast, control subjects rated Black and White targets similarly. Subjects' level of prejudice did not moderate these findings, suggesting the robustness of priming effects on social judgments.

**keywords** implicit stereotypes, social cognition, The Implicit Association Test

IMAGINE a prospective employer headed for her office, stopped at a traffic light, exposed to rap music blaring from her neighbor's car radio. If she subsequently interviews a Black male applicant, her assessment of him may be skewed by this recent experience, despite her intention to make race-neutral decisions. This may be particularly true if the song portrays African Americans as violent or misogynistic, and if the applicant's behaviors are open to interpretation. In this hypothetical scenario, the employer may reject the applicant due to a perceived fit between his personal characteristics

and a negative group stereotype. If so, the employer will have fallen prey to a priming effect—the tendency to apply recently activated constructs to on-line judgments and decisions.

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## **Author's note**

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Theoretically, the outcome of the above scenario should be moderated by the employer's awareness of the rap music's possible effect on her judgments, as well as her motivation (and ability) to control for this contamination (Devine, 1989; Wilson & Brekke, 1994). Consistent with this view, researchers have found that appraising low prejudiced people of their biases inhibits subsequent discrimination (e.g. Monteith, 1993; see Devine & Monteith, 1999, for a review). However, other research suggests that temporary construct accessibility can influence social judgments more broadly. For example, Johnson, Trawalter, and Dovidio (2000) found that subjects exposed to violent rap music were likely to attribute a Black target's hostile behavior (harassing his girlfriend) to his disposition, whereas a White target's identical behavior was attributed less to internal factors (see also Johnson, Adams, Hall, & Ashburn, 1997). In addition, subjects exposed to violent rap music were less likely to hire a Black applicant for a job that required intelligence (whereas a White applicant was not discriminated against), suggesting that priming one aspect of the Black stereotype (violent) increases the accessibility of related stereotypic traits (unintelligent; Macrae, Stangor, & Milne, 1994). Moreover, subjects' ethnicity did not influence these findings (i.e. Whites and Blacks responded similarly), suggesting that level of prejudice was not a moderating factor.

The present research extends Johnson et al.'s (2000) findings in several ways. First, we examined the effect of rap music on the automatic associations underlying racial stereotypes (Greenwald & Banaji, 1995). Because these associations are learned early and often, they may be particularly difficult to control when they are activated by the social context (Devine, 1989). Although the early view of implicit associations favored their relative stability as one means of distinguishing them from explicit biases, it is now known that both are subject to contextual effects (see Devine, 2001, for a review). For example, people primed with Blacks shown near a graffiti-covered wall showed stronger automatic anti-Black associations, compared with people primed with Blacks shown in

church (Wittenbrink, Judd, & Park, 2001, Experiment 2). Further, Rudman & Borgida (1995) primed men to think of women as sexual objects (using television ads), and found cognitive and behavioral priming effects that were unrelated to individual differences. We therefore hypothesized that both high and low prejudiced subjects primed with rap music would show strengthened associations between Black men and negative stereotypic attributes, compared with control subjects primed with popular music (Experiment 1).

Second, whereas Johnson et al. primed subjects with a single violent rap song, we used several instances of rap music that were both violent and misogynistic in their content. This allowed us to test whether misogynistic stimuli might lead subjects to rate a Black male target as more sexist (as well as more violent and less intelligent), compared with a White male target (Experiment 2). If so, results would suggest that the misogyny portrayed in some rap music might be contributing to a new stereotype about Black men (i.e. that they are disrespectful of women). To date, the anti-female effects of misogynous rap music have been shown in male listeners, including greater acceptance of violence toward women (Barongan & Nagayama-Hall, 1996; Johnson, Adams, Ashburn, & Reed, 1995) and more admission of adversarial beliefs about sexual relationships (Wester, Crown, Quatman, & Heesacker, 1997). However, the attribution of sexism to Black men has yet to be established as a consequence of misogynous rap.

Third, we assessed subjects' prejudice level directly in order to examine whether people low in prejudice would be more likely to control their explicit stereotypes (Experiment 1) or their judgments of a Black man (Experiment 2) following exposure to violent and misogynistic rap. Although low prejudiced people might be expected to avoid using activated stereotypes in social judgments (Devine, 1989), as noted above, past research has not found that individual differences moderate situational priming effects (Rudman & Borgida, 1995; see also Banaji, Hardin, & Rothman, 1993).

Fourth, we examined the extent to which

individual differences in automatic associations would predict stereotypic judgments of Blacks (Experiment 2). If people with relatively strong implicit stereotypic associations subsequently rate a Black (but not White) target unfavorably, the research would contribute to a growing literature showing the predictive utility of response latency measures (e.g. Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997; Fazio, Jackson, Dunton, & Williams, 1995; McConnell & Leibold, 2001; Rudman & Borgida, 1995).

Finally, the prediction that priming people with violent and misogynistic rap music will influence judgments of Black, but not White, male targets is based on the well-established principle that activated stereotypes are more likely to be applied to stereotype-relevant targets (Banaji et al., 1993; Henderson-King & Nisbett, 1996; Johnson et al., 1997, 2000).

## The Implicit Association Test

In both experiments, we used the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998; Rudman, Greenwald, & McGhee, 2001b; Rudman, Greenwald, Mellott, & Schwartz, 1999) to measure the automatic associations between ethnicity and attributes (i.e. implicit stereotypes). Because we predicted that violent and misogynistic rap music would temporarily activate associations between Black men and negative attributes (e.g. hostile, violent, sexist), while simultaneously deactivating associations between Black men and positive attributes (e.g. calm, lawful, trustworthy) we used these attributes in our stereotype IAT. Because the IAT requires the use of a contrast group, we chose White men as the comparison group. We used the IAT because it has predicted discriminatory behaviors in the past, including unfriendliness toward African Americans (McConnell & Leibold, 2001) and discrimination against female job applicants (Rudman & Glick, 2001). In addition, recent work has shown that it is sensitive to contextual influences (e.g. Ashburn-Nardo, Voils, & Monteith, 2001; Dasgupta & Greenwald, 2001), much as other implicit measures have demonstrated this

sensitivity in the past (e.g. Dijksterhuis & van Knippenberg, 1996; Gilbert & Hixon, 1991; Pratto & Shih, 2000; Rudman & Borgida, 1995; Spencer, Fein, Wolfe, Fong, & Dunn, 1998).

## Experiment 1

### Overview and hypotheses

Experiment 1 tested the assumption that violent and misogynistic rap music would activate automatic Black stereotypes in high and low prejudiced subjects alike (Devine, 1989). Subjects were exposed to either rap or popular music and their stereotypes regarding Black men were then assessed, both implicitly and explicitly. It was expected that rap music subjects' stereotype IAT scores would be higher, relative to controls. Explicit stereotypes were also obtained for comparison purposes. Because these judgments are more likely to be controlled, we did not expect the priming manipulation to influence them generally. Instead, low prejudiced people should resist applying their activated stereotypes to overtly race-related judgments (Devine, 1989).

### Method

**Participants** Thirty subjects (15 men, 15 women) participated in exchange for partial credit toward their Introductory Psychology experimental requirement. Of these, 14 (46%) were White, 11 (37%) were Asian, and 5 (17%) used another (non-Black) ethnic identification.

### Materials

**Pre-testing** As part of an unrelated experiment, subjects were pre-tested on the Modern Racism Scale (MRS; McConahay, 1986). The MRS consists of seven items, including 'Blacks are getting too demanding in their push for equal rights', scored on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). MRS scores were averaged ( $\alpha = .82$ ), and subjects were designated high or low prejudiced on the basis of a median split (median = 2.07; range = 1.59–3.57). An equal number of highs and lows were then recruited to participate in a 'market research' project.

**Priming materials** As stimulus materials, two videotapes containing six music clips were

constructed (average length = 13 min). It is important to note that the primes were auditory only; the videotapes contained no visual material other than an opening title and numbers identifying each music clip. To offset demand, subjects believed they were participating in a market research project. To bolster the cover story, each tape was introduced by the name of a fictitious market research company ('Williamson Market Research, Inc.'). The prime tape consisted of four rap songs that portrayed Blacks as violent and sexist, and two filler songs. The rap songs (and artists) used were 'Ruff Ryders' Anthem' (DMX); 'Nuthin' But a G Thang' (Dr. Dre); 'It Was a Good Day' (Ice Cube); and 'Fuckin' Wit D' (DMX). All of the artists were African American men. Sample lyrics include: 'From a young G's perspective/and before me dig out a bitch I have to find a contraceptive'; 'Looking in my mirror not a jacker in sight/and everything is alright/I got a beep from Kim and she can f--- all night'; and 'Niggas wonder why/Niggas gonna die/my Niggas is ready/you want it? Come and get it.' The filler songs (and artists) were 'Baby One More Time' (Britney Spears) and 'No Scrubs' (TLC). These artists were White and Black females, respectively. The control tape consisted of the two filler songs used on the prime tape and four other contemporary pop tunes ('Crush' by the Dave Mathews Band, 'Madman' by Kate Schrock, 'I'll Be Missing You' by Puff Daddy, and 'Wish' by Franka Potente), sung by White and Black male and female artists. None of the songs on the control tape contained violent or sexist material but could be described, instead, as light rap ('No Scrubs' and 'I'll Be Missing You') or love songs.

**Music ratings** Consistent with the cover story, subjects completed a consumer survey asking them to provide information on (a) their age, gender, and ethnicity; (b) the types of music that they listened to; and (c) their buying habits. They also rank ordered the extent to which they liked rap music (in a context with eight other types). Low scores indicated they ranked rap higher than other types of music ( $M = 4.75$ ; range = 2–8). Subjects also rated each song on

several 5-point scales (e.g. *entertaining* and *fun to listen to*), anchored by appropriate endpoints (1 = *not at all*, and 5 = *very much*). These ratings did not differ for the rap ( $M = 3.25$ ) and popular ( $M = 3.32$ ) music groups ( $t(28) < 1.00$ ). For each clip, subjects also indicated if they owned a copy of the song. These ratings also did not differ as a function of prime ( $t(28) = 1.08$ , *ns*). In tandem, these data suggest that any effect of the priming manipulation is likely to be due to specific activated constructs, and not to greater familiarity with or liking for the stimulus materials.<sup>1</sup>

**The stereotype IAT** The IAT used 14 names to describe the target categories of Black versus White men (e.g. Jamal, Tyrrel, Lerone, Doug, Greg, Hank), 7 words to describe negative attributes (*hostile, violent, sexist, criminal, dangerous, crude, loud*), and 7 words to describe positive attributes (*calm, lawful, ethical, trustworthy, polite, respectful*). Because the negative words may be more associated with Black men, whereas the positive words may be more associated with White men (Wittenbrink, Judd, & Park, 1997), the IAT assessed *evaluative* ethnic stereotypes (i.e. stereotypes that are contrasted in valence; see also Blair, Ma, & Lenton, 2001; Rudman et al., 1999; Rudman et al., 2001b). As a result, the stereotype IAT is likely to assess a combination of beliefs about and prejudice toward African Americans (see also Wittenbrink et al., 1997).<sup>2</sup> Not surprisingly, this IAT is positively correlated with the racial attitude IAT ( $r(45) = .41$ ,  $p < .01$ ) (Rudman, Ashmore, & Gary, 2001a, Exp 1), although the two measures are nonetheless distinct.

In the IAT, words are presented on the computer screen and subjects respond by matching the word to the correct category of race or valence. After learning to distinguish between Black versus White names, and positive versus negative attributes, subjects complete two critical blocks of combined categorization trials. In the stereotype compatible block, subjects map Black names and negative attributes (e.g. hostile, sexist) onto the same response key, and White names and positive attributes (e.g. calm, polite) onto the same (opposing) response key (abbreviated as Black + negative). In the

stereotype noncompatible block, subjects perform these associations in reverse (abbreviated as Black + positive). The IAT effect is computed by taking the difference between response latencies for the stereotype compatible and noncompatible blocks. High scores represent more implicit racial stereotyping. Block order is counterbalanced across subjects (as is key assignment; see Rudman et al., 1999). The two critical blocks consist of 40 trials each. The critical blocks are preceded by a block of 20 practice trials.

**Explicit stereotype measure** To provide an explicit counterpart to the IAT, subjects estimated the percentage of African American and White American men who possessed each of the 14 traits used in the implicit measure (Kawakami, Dion, & Dovidio, 1998; Rudman et al., 2001a). The difference between trait endorsement for Blacks and Whites for each trait was computed such that high scores reflected more explicit stereotyping. These difference scores were averaged to form the negative Black ( $\alpha = .82$ ) and positive White ( $\alpha = .88$ ) indexes. These indexes were related ( $r(28) = .55, p < .01$ ). They were then averaged to form the *stereotype index*.

**Procedure** Subjects arrived for the market research project in groups of up to five. Each group was randomly assigned to prime condition. The consent form explained that they would be evaluating popular songs, some of which may contain explicit lyrics. Subjects were invited to leave if the lyrics were likely to upset them, with full remuneration (no subject did). They then completed the 'consumer survey'. Following this, subjects were instructed to listen to each song and rate it on the scales provided. The experimenter then began the tape, pausing after each music clip. Upon completion, the experimenter noted that the procedure had taken less time than anticipated. As a favor to the experimenter, subjects were then asked to serve as pilots for an upcoming project (all subjects agreed).

Subjects were then led to separate cubicles, each containing a desktop PC. After receiving computerized instructions and a brief tutorial,

subjects completed the stereotype IAT. They then completed the explicit stereotype measure. The implicit and explicit measures were not counterbalanced because our primary aim was to assess whether the prime tape would increase the automatic activation of negative Black stereotypes.

## Results

**The IAT effect** The IAT effect is calculated as the difference between response latencies for stereotype compatible (e.g. Black + hostile) versus stereotype noncompatible (e.g. White + hostile) tasks. Thus, high scores reflect more implicit stereotyping.<sup>3</sup> Overall, subjects showed a strong tendency to associate Blacks with negative attributes and Whites with positive attributes. The mean IAT effect was + 210 ms ( $SD = 182$ , Cohen's  $d = 1.15$ ). The effect for counterbalancing of blocks within the IAT was weak but in the expected direction ( $t(28) = 2.10, p < .06$ ). That is, subjects who performed the Black + negative task first were somewhat more likely to show automatic stereotyping, compared with subjects who performed the White + negative task first ( $M_s = +273$  vs. +146 ms, respectively). Analysis showed no reliable effects for subject ethnicity on IAT scores ( $F(3, 26) = 1.40, p = .27$ ).

**Priming effects on implicit stereotyping** The focal hypothesis was that primed subjects would score higher than control subjects on the stereotype IAT, irrespective of their prejudice level (Devine, 1989). To test this assumption, IAT effect scores were submitted to a 2 (prime)  $\times$  2 (prejudice level)  $\times$  2 (subject sex) analysis of variance (ANOVA). The results are shown in the top half of Table 1. As can be seen, the hypothesis was supported. First, the predicted main effect of prime emerged ( $F(1, 23) = 11.94, p < .001$ ). As expected, primed subjects ( $M = +327$ ) showed greater IAT scores, compared with controls ( $M = +107$ ). Using the pooled standard deviations, these mean scores translated to large effect sizes for both primed ( $d = 2.25$ ) and control subjects ( $d = .74$ ), but the overall difference in their effect sizes was also large ( $d = 1.51$ ). Second, prejudice level did not influence subjects' IAT scores, and the Prime  $\times$  Prejudice



Table 1. Subjects' IAT and explicit stereotype scores as a function of priming condition and prejudice level (Experiment 1)

	Primed subjects		Control subjects		Combined sample	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Stereotype IAT</i>						
High prejudice	337 <sub>a,x</sub>	191	74 <sub>b,x</sub>	135	266 <sub>x</sub>	210
Low prejudice	292 <sub>a,x</sub>	111	117 <sub>b,x</sub>	115	152 <sub>x</sub>	132
<i>Explicit stereotypes</i>						
High prejudice	14.59 <sub>a,x</sub>	8.12	.70 <sub>b,x</sub>	4.61	10.88 <sub>x</sub>	9.60
Low prejudice	8.52 <sub>a,x</sub>	5.62	3.60 <sub>a,x</sub>	4.39	4.58 <sub>y</sub>	4.88

Notes: IAT scores are shown in ms (rounded up). Means within rows not sharing an a, b subscript differ at the  $p < .05$  level. Means within columns not sharing an x, y subscript differ at the  $p < .05$  level.

Level interaction term was weak (both  $F_s(1, 23) < 1.00$ ). Finally, subject gender did not influence IAT scores (all  $F_s(1, 23) < 2.43$ ,  $ps > .13$ ). In sum, these results are consistent with our expectation that rap music would strengthen automatic associations between Blacks and negative attributes for high and low prejudiced subjects alike.<sup>4</sup>

**Priming effects on explicit stereotyping** Overall, subjects also showed evidence of explicit racial stereotypes ( $M = 7.74$ ,  $SD = 8.41$ ,  $d = .92$ ). As with the IAT, subjects' explicit stereotype scores revealed no effect for participant race ( $F(1, 23) = 1.26$ ,  $ns$ ). The combined scores were then submitted to a 2 (prime)  $\times$  2 (prejudice level)  $\times$  2 (subject sex) ANOVA. Results are shown in the bottom half of Table 1.

As with the IAT, this analysis also showed a main effect for prime ( $F(1, 23) = 6.75$ ,  $p < .05$ ). Primed subjects ( $M = 13.29$ ) showed greater explicit stereotyping, compared with controls ( $M = 2.88$ ). However, these results were qualified by a significant Prime  $\times$  Prejudice Level interaction ( $F(1, 23) = 4.71$ ,  $p < .05$ ). Table 1 shows that high prejudiced subjects negatively stereotyped Blacks more in the prime ( $M = 14.59$ ) than in the control ( $M = .70$ ) condition ( $t(13) = 3.13$ ,  $p < .01$ ). By contrast, low prejudiced subjects showed similar levels of stereotyping in the prime ( $M = 8.52$ ) and control ( $M = 3.60$ ) conditions ( $t(13) = 1.65$ ,  $ns$ ). These results suggest that low prejudiced subjects controlled their stereotypes in the prime condition,

whereas high prejudiced subjects did not. The main effect for prejudice was weak in this analysis ( $F(1, 23) = 1.29$ ,  $ns$ ). Finally (and not shown in Table 1), a main effect for gender emerged ( $F(1, 23) = 7.62$ ,  $p < .05$ ). In general, women were less likely to report racial stereotypes ( $M = 4.82$ ,  $SD = 6.25$ ) than were men ( $M = 11.07$ ,  $SD = 8.95$ ).<sup>5</sup>

### Relations among stereotyping and prejudice measures

Variables were scored such that positive relations were expected among them. The correlation between the stereotype IAT and the explicit stereotype index was reliably positive ( $r(28) = .46$ ,  $p = .01$ ). Thus, subjects who reported negative Black stereotypes (and positive White stereotypes) were also likely to show automatic stereotyping. By contrast, the relationship between the IAT and MRS scores was weak ( $r(28) = .24$ ,  $p = .19$ ). These findings suggest that implicit-explicit convergence may be stronger when they capture the identical construct (see also Dovidio, Kawakami, & Beach, 2001). Nonetheless, the correlation between the MRS and the explicit stereotype index was reliably positive ( $r(28) = .47$ ,  $p < .01$ ). This result is not surprising given the controlled nature of both measures.

### Discussion

Experiment 1's focal finding was that subjects primed with rap music scored higher on an implicit stereotype measure, compared with

controls. Moreover, this result was shown for both high and low prejudiced people. Thus, exposure to violent and misogynistic rap music had the generalized effect of strengthening the association between Black men and negative attributes (e.g. hostile, criminal, sexist) and decreasing the association between Black men and positive attributes (e.g. calm, trustworthy, polite). By contrast, subjects' explicit stereotypes were influenced by the priming manipulation and subjects' prejudice level. That is, only high prejudiced subjects reported more stereotyping under prime, versus control, conditions. These findings are consistent with Devine's (1989) dissociation model, in which low prejudiced people are posited to be more motivated than high prejudiced people to control their social judgments, even in the wake of automatic stereotype activation (see also Devine & Monteith, 1999).

These results might suggest, for Experiment 2, that only high prejudiced subjects exposed to rap music will apply their activated stereotype to judgments of a Black male target. However, in Experiment 1, the explicit stereotype measure obviously called for a direct comparison between Whites and Blacks, and no doubt triggered cautionary responses on the part of at least low prejudiced subjects (Devine, 1989, Experiment 3). By contrast, in Experiment 2, we carefully masked the connection between the priming manipulation and the person perception task. This was done to create a situation in which subjects are unlikely to be aware that their activated stereotypes might contaminate social judgments. As a result, it is likely that people will involuntarily use them as tools for interpreting a Black target's behavior (Banaji et al., 1993; Devine, 1989; Greenwald & Banaji, 1995; Rudman & Borgida, 1995). If so, primed subjects should rate a Black target as more hostile and sexist (and less intelligent) than a White target, irrespective of their prejudice level.

## Experiment 2

As in Experiment 1, subjects pre-tested to be high or low in prejudice level were primed with either rap or popular music. They then rated a male target behaving in an ambiguously

stereotypic manner. To operationalize ambiguity, we used a modified version of the 'Donald' paragraph (Srull & Wyer, 1979). The modification concerned using women as the primary targets of Donald's ambiguously hostile actions, which might also be construed as sexist. To operationalize target race, we labeled half of our targets 'Donald' (a White name), and half of our targets 'Kareem' (a Black name).

Experiment 2's subjects were also pre-tested on the stereotype IAT. This afforded a test of the ability of chronically activated implicit stereotypes to predict judgments of Black targets more generally (i.e. irrespective of the priming manipulation). For two reasons, we expected subjects' implicit stereotypes to be better predictors of the Black target's ratings, compared with explicit stereotypes. First, people may provide socially desirable responses when they report racial stereotypes, rendering self-reports untrustworthy (Dovidio & Fazio, 1992; Fazio et al., 1995). Second, interpreting a target's behaviors may evoke the use of implicit more than explicit stereotypes (Dunning & Sherman, 1997; Rudman & Glick, 2001). If people are unaware that automatic stereotypes may bias how information is interpreted, the stereotypes are likely to be used without subjects' knowledge or volition (Greenwald & Banaji, 1995). In support of this view, researchers have found that at least some discriminatory behaviors are better predicted by implicit, versus explicit, measures of attitudes and beliefs. These behaviors include spontaneous reactions to outgroup members (Dovidio et al., 1997; Fazio et al., 1995; McConnell & Leibold, 2001), as well as judgments that require subjective interpretation, such as attributions for racial unrest (Fazio et al., 1995) and ratings of Black target essays (Jackson, 1997). In concert, the evidence suggests that ratings of a Black target's behaviors might be better predicted by automatic, compared with controlled, racial stereotyping indexes.

## Method

**Participants** Seventy-five subjects (33 men, 42 women) participated in exchange for partial credit toward their Introductory Psychology experimental requirement. Of these, 49 (65%)



were White, 12 (16%) were Asian, and 14 (19%) used another (non-Black) ethnic identification.

### Materials

**Pre-test measures** As in Experiment 1, subjects were pre-tested on the MRS (McConahay, 1986). MRS scores were averaged ( $\alpha = .83$ ), and subjects were designated high or low in prejudice level on the basis of a median split (median = 2.05). Subjects also completed Experiment 1's stereotype IAT and explicit stereotype measures.<sup>6</sup> To decrease suspicion, subjects completed automatic and controlled gender-stereotype measures as filler items during this ostensibly unrelated experiment.

**Target ratings** Two packets were prepared, each containing a modified version of the paragraph about a man and his daily activities used in past research (Devine, 1989; Srull & Wyer, 1979). For half of the subjects, the man was named 'Donald' (putatively White); for the other half, the man was named 'Kareem' (putatively Black). The target's behaviors were designed to be ambiguously hostile and sexist (see Appendix). For example, after the narrator and Donald have lunch at a café, 'Donald said he couldn't tip the waitress because he was saving money to get his car fixed'. After the narrator arrives at the target's residence, 'a saleswoman knocked at the door, but Donald refused to let her enter.' Thus, the behaviors were designed to represent hostile (i.e. anti-female) sexism, rather than benevolent sexism (Glick & Fiske, 1996).<sup>7</sup>

After subjects read the target paragraph, they rated their impression of the target on five dimensions. These ratings used 5-point scales (1 = *not at all*, 5 = *very much*), and were prefaced by the statement, 'To what extent did [the target] appear to be [e.g. hostile]?' The *hostile* index consisted of three items (*hostile*, *aggressive*, and *angry*,  $\alpha = .73$ ). The *sexist* index consisted of two items (*sexist* and *disrespectful of women* ( $r = .35$ ,  $p < .01$ )). We also included a single item measure of targets' intelligence, and two filler items (popularity and mechanical ability).

**Procedure** Both high and low prejudiced subjects were recruited for the market research

project, described as an hour-long procedure. To reduce demand, the experiment's protocol was divided into two parts—the music ratings phase and the (unexpected) person perception phase.

**The music ratings phase** The music ratings phase followed Experiment 1's protocol, with one exception. After the fifth song played on each tape, the beginning of a sixth song was heard (rap or popular, depending on prime condition). Approximately two minutes into the sixth song, the videotapes were engineered to seemingly 'break down' (i.e. produce only static). A scripted crisis scene ensued, during which the experimenter feigned surprise, toyed with the equipment, futilely tried another tape (engineered to produce only static), and eventually sought aid from a second experimenter. Subjects then overheard a scripted exchange (in the hallway) in which Experimenter 1 expressed dismay that subjects could not complete their experimental obligation due to technical difficulties. Experimenter 2 then entered the room with apologies and the seemingly fortuitous opportunity for subjects to complete their obligation by participating in a brief second experiment (all subjects agreed). Experimenter 2 then gave subjects a consent form for the 'Person Perception' project to bolster perceptions that the two experiments were separate.

**Person perception phase** Subjects completed this phase in separate cubicles, each containing a desktop PC. Each subject was randomly assigned to receive either a White target packet or a Black target packet, containing the modified 'Donald' paragraph and target ratings. The written instructions encouraged subjects to respond candidly, and to place their packets in an unmarked manila envelope (to ensure anonymity of responding).

**Manipulation check** Following this, subjects were asked to indicate whether the target was White or Black. Pilot research showed that asking subjects on paper what they imagined the ethnicity of the target to be yielded poor results. Specifically, subjects tended to rate all targets as

Table 2. Target ratings as a function of the priming manipulation and target race (Experiment 2)

	<i>Black target</i>		<i>White target</i>		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>d</i>
<i>Primed subjects</i>					
Hostile	4.45 <sub>a,x</sub>	0.72	4.00 <sub>b,x</sub>	0.59	.69
Sexist	3.73 <sub>a,x</sub>	0.91	3.27 <sub>b,x</sub>	0.68	.58
Intelligent	2.20 <sub>a,x</sub>	0.70	2.95 <sub>b,x</sub>	0.73	−1.04
Popular	2.20 <sub>a,x</sub>	0.68	2.11 <sub>a,x</sub>	0.89	.12
Mechanical	2.40 <sub>a,x</sub>	0.60	2.72 <sub>a,x</sub>	1.17	−.36
<i>Control subjects</i>					
Hostile	3.96 <sub>a,y</sub>	0.76	4.14 <sub>a,x</sub>	0.80	−.23
Sexist	3.11 <sub>a,y</sub>	0.76	3.50 <sub>a,x</sub>	0.67	−.55
Intelligent	3.00 <sub>a,y</sub>	0.84	2.68 <sub>a,x</sub>	1.11	.32
Popular	2.40 <sub>a,x</sub>	0.78	2.21 <sub>a,x</sub>	0.86	.23
Mechanical	2.22 <sub>a,x</sub>	0.94	2.63 <sub>a,x</sub>	1.16	−.39

Notes: Positive effect sizes (Cohen's *d*) indicate the Black target ('Kareem') was rated higher than the White target ('Donald'). By convention, small, medium, and large effect sizes correspond to .20, .50, and .80, respectively (Cohen, 1988). Means within rows not sharing an a, b subscript differ at the  $p < .10$  level. Means within columns not sharing an x, y subscript differ at the  $p < .05$  level.

White, suggesting reluctance to report that a man engaged in somewhat hostile behaviors was likely to be Black. This finding warranted a new means of gathering manipulation check data. In Experiment 2, after subjects had completed their packet (and placed it in an envelope), the experimenter approached them privately and, feigning distress over having failed to note the type of packet they had received, verbally asked subjects if they had rated 'the Black or the White man.' He or she stressed that the information was critical to the success of the experiment. Under these conditions, all subjects allowed that 'Kareem' was the Black target, and all but two pronounced 'Donald' to be White.

Finally, subjects were probed for suspicion during debriefing (no subject expressed suspicion that the two experimental phases were linked). Indeed, many subjects asked, prior to debriefing, if the tape had been fixed (primarily due to concern for the first experimenter, who had appeared to be distraught). Thus, we are confident that our scripted crisis scene was believable and had the intended effect of separating the two phases of the research.

## Results and Discussion

**Target ratings** Initial analyses revealed no effects for subject sex or ethnicity on subjects' ratings of either Black or White targets (all  $F$ s  $< 2.53$ , *ns*). Therefore, these ratings were submitted to 2 (prime)  $\times$  2 (target race)  $\times$  2 (prejudice level) ANOVAs for the results reported below. Table 2 shows the means and standard deviations as a function of target race and priming condition, the focal independent variables.

**Hostility index** Results revealed the predicted Prime  $\times$  Target Race interaction for hostility ratings ( $F(1, 67) = 4.92$ ,  $p < .05$ ). The remaining effects in this analysis were nonsignificant (all  $F$ s(1, 67)  $< 1.00$ ). As expected, primed subjects rated the Black target as more hostile than the White target ( $t(36) = 2.12$ ,  $p < .05$ ). Table 2 shows that the effect size for this difference was moderately large ( $d = .69$ ). By contrast, control subjects rated the Black and White targets similarly ( $t(35) < 1.00$ ). In addition, primed subjects rated Kareem as more hostile than did controls ( $t(36) = 2.36$ ,  $p < .05$ ), whereas Donald was rated similarly across the prime condition ( $t(35) < 1.00$ ).

**Sexist index** Analysis of the sexist ratings also showed the predicted Prime  $\times$  Target Race interaction ( $F(1, 67) = 4.01, p < .05$ ). The remaining effects were nonsignificant (all  $F(1, 67) < 2.10, ns$ ). As expected, primed subjects rated the Black target as (marginally) more sexist than the White target ( $t(36) = 1.73, p < .09$ ). By contrast, control subjects rated the White and Black targets similarly ( $t(35) = 1.66, ns$ ). Further, primed subjects rated Kareem as more sexist than did controls ( $t(36) = 2.64, p = .01$ ), whereas Donald was rated similarly across the prime condition ( $t(35) < 1.00$ ).

In sum, primed subjects tended to apply activated stereotypes about Blacks as hostile and sexist—stereotypes specifically intimated by rap music—to their judgments, irrespective of their prejudice level. The findings that a Black target was rated as more sexist than a White counterpart by primed subjects, and that primed subjects rated a Black target as more sexist than controls, supports the idea that rap music might be contributing to a relatively new stereotype about Black men (i.e. that they are disrespectful of women).

**Intelligence rating** Johnson et al. (2000) found that violent rap music decreased ratings of a Black (but not White) target's intelligence, ostensibly due to a 'spreading activation' effect (Macrae et al., 1994). Consistent with their results, our rating of targets' intelligence showed a Prime  $\times$  Target Race interaction ( $F(1, 67) = 6.51, p = .01$ ). The remaining effects were nonsignificant (all  $F(1, 67) < 2.24, ns$ ). In the prime condition, the Black target was rated as significantly less intelligent than the White target ( $t(36) = 3.23, p < .01$ ). Table 2 shows that the effect size for this difference was large ( $d = -1.04$ ). By contrast, control subjects rated the intelligence of the Black and White targets similarly ( $t(35) < 1.00$ ). In addition, primed subjects rated Kareem as less intelligent than did controls ( $t(36) = 3.21, p < .01$ ), whereas Donald's ratings were similar across prime condition ( $t(35) < 1.00$ ).<sup>8</sup>

**Discriminant validity** Consistent with predictions, the results for the remaining items, popularity and mechanical ability, did not differ as a

function of the independent variables (all  $F(1, 67) < 1.07, ps > .38$ ). These findings provide the necessary discriminant validity for the research, showing that it was not the case that primed subjects tended to rate Black targets more negatively than Whites, irrespective of the rating dimension (see also Johnson et al., 2000).

In sum, Experiment 2 showed that subjects primed with rap music were likely to judge a Black male target as more hostile and sexist, but less intelligent, than a White male target. In addition, primed subjects were more likely to rate a Black man unfavorably on all three dimensions, compared with control subjects. Consistent with our expectations, prejudice level did not moderate these effects.

**Stereotype measures** Experiment 2's subjects were pre-tested on the IAT for their chronic activation of implicit stereotypes. As in Experiment 1, subjects showed an overall tendency to associate Blacks with negative attributes and Whites with positive attributes. The mean IAT effect was  $+232$  ( $SD = 178$ ), corresponding to a large effect size ( $d = 1.30$ ). There was virtually no effect for counterbalancing of blocks within the IAT ( $t(73) < 1.00$ ). In addition, subject sex and ethnicity did not influence results (both  $F(1, 73) < 1.00$ ).

Subjects were also pre-tested on the explicit stereotype measure. The average score was  $5.98$  ( $SD = 7.50$ ), corresponding to a large effect size ( $d = .80$ ). Subjects' ethnicity did not influence results ( $F(2, 72) = 1.91, ns$ ). As in Experiment 1, there was an effect for subject sex ( $F(1, 73) = 4.25, p < .05$ ), such that women were less likely to report stereotypes ( $M = 4.43, SD = 4.99$ ) than were men ( $M = 7.96, SD = 9.53$ ).

**Relations among stereotyping and prejudice measures** The relationship between the implicit and explicit stereotype measures was weaker in Experiment 2, compared with Experiment 1 ( $r(73) = .19, p = .09$ ). As in Experiment 1, the relationship between the stereotype IAT and the MRS was negligible ( $r(73) = .12, p = .32$ ). Finally, the MRS and the explicit stereotype index were positively related ( $r(73) = .49, p < .01$ ). Again, this is likely due to the controlled nature of the self-report measures.

Table 3. Correlations among target ratings, prime condition, and individual difference measures (Experiment 2)

	<i>Prime condition</i>	<i>Stereotype IAT</i>	<i>Explicit stereotypes</i>	<i>MRS</i>
<i>Black target</i>				
Hostile	.35*	.39*	.25	.06
Sexist	.40*	.36*	.10	.22
Intelligence	-.47**	.08	-.08	-.17
<i>White target</i>				
Hostile	-.09	.10	.07	.01
Sexist	-.14	.17	-.08	.23
Intelligence	.14	-.16	-.04	.04

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

Notes: Prime condition was coded 1 = control (popular music), 2 = primed (rap music). Correlations involving the IAT are based on transformed latencies. Correlations with untransformed latencies were similar.  $N = 38$  in the Black target condition.  $N = 37$  in the White target condition.

**Correlates of target ratings** Our second aim was to examine whether the stereotype IAT might, in general, predict bias toward Black (but not White) targets. We therefore correlated IAT scores with subjects' hostility, sexist, and intelligence ratings, separately by target race. For comparison purposes, we included the prime condition, the explicit stereotype measure, and the MRS in these analyses. Table 3 shows the results.

The top half of Table 3 shows the correlations when the target was Black. Our expectation was that the IAT would predict the Black target's hostile and sexist ratings, because the measure assessed these attributes. By contrast, his intelligence ratings should only be predicted by the prime condition. As can be seen, these predictions were supported. The stereotype IAT showed positive relations with Kareem's hostile and sexist ratings, similar in size to those shown by the priming manipulation, whereas his intelligence rating only reliably covaried with prime condition.

Because the self-report measures were more likely to be contaminated by social desirability bias, we did not expect them to covary with these ratings. As can be seen in Table 3, the explicit stereotype index and the MRS were weakly (albeit positively) related to the Black target's hostile and sexist ratings. Surprisingly, both self-

report measures showed weak negative links to Kareem's intelligence ratings.

The bottom half of Table 3 shows the correlations when the target was White. As can be seen, none of the predictor variables correlated significantly with ratings of Donald's hostility, sexism, or intelligence. These results are consistent with past research showing that stereotype application is a function of target relevance (Banaji et al., 1993; Henderson-King & Nisbett, 1996; Johnson et al., 1997, 2000). In the present research, White targets were likely viewed as irrelevant with respect to attitudes toward and stereotypes about Blacks. Nonetheless, the stereotype measures also assessed positive White male stereotypes (e.g. as more calm and trustworthy than Blacks), a fact that suggests some association between these measures and the White target's ratings should have been observed. However, the White target was behaving in a counterstereotypic manner (i.e. as ambiguously hostile and sexist), whereas the Black target was not. As a result, the White target may have been individuated more than the Black target was (i.e. judged more on the basis of his behavior than a positive White stereotype).

**Correlates of target ratings within prime condition** Although the above analyses suggest

Table 4. Correlations among target ratings and individual difference measures as a function of prime condition and target race (Experiment 2)

	Prime condition			Control condition		
	Stereotype IAT	Explicit stereotypes	MRS	Stereotype IAT	Explicit stereotypes	MRS
<i>Black target</i>						
Hostile	.48*	.26	.04	.16	.23	-.01
Sexist	.47*	-.04	.03	.12	.18	.32
Intelligence	.21	-.02	.05	.27	-.07	-.27
<i>White target</i>						
Hostile	.26	-.11	-.17	-.05	.17	.13
Sexist	.22	-.23	.32	-.04	-.01	.13
Intelligence	.01	.02	-.20	-.28	-.05	.19

\*  $p < .05$ .

Notes: Correlations involving the IAT are based on transformed latencies. Correlations with untransformed latencies were similar.  $N = 20$  in the Black target/Rap condition.  $N = 18$  in the Black target/Control condition.  $N = 18$  in the White target/Rap condition.  $N = 19$  in the White target/Pop condition.

that implicit stereotyping measures can be better predictors of social judgments, compared with explicit belief measures, they did not afford a test of whether these relationships are moderated by the prime condition. In fact, recent research has shown that context can influence the relationship between IAT scores and self-reports (Wittenbrink et al., 2001, Experiment 1). Specifically, subjects primed with a film showing Blacks in a gang-related context (and who elaborated on the film for 20 minutes afterward) showed more evidence of implicit-explicit convergence, compared with subjects primed with Blacks in a family barbecue context. The likely explanation for this finding is that gang-related media may have primed subjects with a negative Black subtype, which appears to have promoted a more systematic relationship between the racial attitude IAT and self-reports (e.g. the MRS). However, Wittenbrink et al. (2001) did not test for the differences between correlations, so the extent to which context moderates implicit-explicit linkages is unclear.

In the present research, we collected individual differences prior to the priming manipulation, and subjects subsequently rated a Black or White male target. If primed subjects were more likely to subtype Kareem (e.g. as a gang

member), it was possible that they might rely more on their automatic associations between Blacks and negative traits (hostile and sexist) when judging him, compared with control subjects. Table 4 shows the correlations between target ratings and individual difference variables as a function of prime condition and target race. As can be seen, the relationships between primed subjects' IAT scores and their ratings of Kareem's hostility and sexism were reliably positive, whereas these same correlations for control subjects were weaker. However, tests for differences between each pair of correlations were uniformly nonsignificant (all  $z < 1.59$ ,  $ns$ ). This may be due to the relatively low power in these analyses. By comparison, the correlations between self-report measures and Kareem's ratings were unreliable, irrespective of the prime condition. Finally, the relationships between Donald's ratings and the individual difference measures remained unreliable, as they were in the overall analysis, and they were not moderated by the prime condition (all  $z < 1.00$ ,  $ns$ ).

## General discussion

In Experiment 1, violent and misogynistic rap music was shown to have an effect on people's

social cognitions, such that primed subjects showed generally stronger anti-Black implicit associations, compared with controls. These findings are consistent with growing evidence that the social context has an impact on automatic evaluations and stereotypic beliefs (Devine, 2001). Although researchers have inferred that rap music automatically activates negative Black stereotypes (Johnson et al., 2000), Experiment 1 provides the first direct evidence for this link. In addition, high prejudiced people showed more evidence of explicit stereotyping in the primed condition, compared with their control counterparts, whereas low prejudiced subjects did not show this effect. Thus, Experiment 1 supports Devine's (1989) contention that low prejudiced people are less likely to apply their automatically activated stereotypes to social judgments, provided they are aware of the possibility of doing so.

In Experiment 2, violent and misogynistic rap music was also found to have an effect on people's judgments of a Black (but not White) male target. Although prior research has found that violent rap music promotes attributions of Black males' hostility and low intelligence (Johnson et al., 2000), Experiment 2 extended these results to include the attribution of sexism. That is, primed subjects rated Kareem as more sexist, as well as more hostile and less intelligent than Donald, and they did so irrespective of their prejudice level. Thus, Experiment 2 provides the first evidence that misogynistic rap music may be contributing to a novel and negative stereotype about Black men.

The finding that prejudice level did not moderate these effects is consistent with Johnson et al. (2000), who found no differences between their Black and White subjects when they made attributions concerning hostility and intelligence following exposure to violent rap. It is also consistent with research (e.g. Banaji et al., 1993; Rudman & Borgida, 1995) in which priming people with gender stereotypes had subsequent effects on people's behavior and judgments irrespective of their level of sexism.

This is not meant to suggest that people universally or generally apply their stereotypes when making racial judgments. In both experi-

ments, subjects showed substantial evidence of explicit racial stereotypes (i.e. large effect sizes were observed). Yet, in Experiment 2, a Black target was not judged more prejudicially than a White target in the control condition. These findings show that in the absence of overtly activated stereotypes, people's judgments were race-neutral. Further, they were race-neutral irrespective of prejudice level, suggesting that even high prejudiced subjects were unwilling to judge an African American unfavorably. Finally, Experiment 1's primed, low prejudiced subjects showed greater resistance to using activated constructs when reporting racial stereotypes, compared with highs. Thus, when the judgment was explicitly racial (i.e. involved comparing Whites and Blacks), low prejudiced people showed controlled responding (Devine, 1989).

Nonetheless, the absence of this control in Experiment 2 suggests that even low prejudiced people are unlikely to recognize the power of the situation and implicit stereotypes when they make interpretative judgments about others (Banaji et al., 1993; Dunning & Sherman, 1997; Johnson et al., 2000; Rudman & Borgida, 1995). Indeed, recent research found that people who reported that they are generally effective at controlling prejudiced responses were least likely to recognize that their automatic anti-Black associations were indicative of racial bias (Monteith, Voils, & Ashburn-Nardo, 2001). Thus, even people practiced at nonprejudiced responding may succumb to the influence of implicit stereotypes and prejudice when they interpret and judge social behavior.

### ***Implicit versus explicit measures of stereotypes***

Experiment 2 also compared the ability of implicit versus explicit stereotyping measures to account for variance in targets' ratings. Because subjects may be unwilling to speak their minds (Dovidio & Fazio, 1992; Fazio et al., 1995), or unable to know their minds (Greenwald & Banaji, 1995; Nisbett & Wilson, 1997), we expected the IAT to better serve as an indicator of chronic stereotype activation. Experiment 2's findings supported this assumption, by showing that stereotype IAT scores correlated with a Black target's hostility and sexist ratings,



whereas self-reported stereotyping weakly predicted these ratings. Thus, subjects who possessed an automatic association between Blacks and negative traits (and Whites and positive traits) were likely to interpret a Black target's behaviors stereotypically. In tandem with prior research, these findings underscore the necessity of using indirect measures when assessing intergroup orientations as predictors of social judgments and behaviors (e.g. Dovidio et al., 1997; Fazio et al., 1995; Greenwald & Banaji, 1995; McConnell & Leibold, 2001; Rudman & Glick, 2001).

In addition, we investigated whether context would moderate the relationship between people's IAT scores and their ratings of a Black male target's hostility and sexism. The hypothesis was that subjects primed with violent and misogynistic rap music might subsequently categorize a Black male as a member of a negative subtype (e.g. gang member), and, as a result, be more likely than controls to apply an automatic stereotype of Blacks as hostile and sexist to their judgments of his behavior. Indeed, primed subjects showed reliably positive links between their IAT scores and Kareem's hostility and sexist ratings, whereas control subjects showed unreliably positive links. Because the difference between these correlations was nonsignificant, we are unable to draw conclusions. Nonetheless, the pattern of results suggests that this is an area ripe for future research (cf. Wittenbrink et al., 2001).

### ***Limitations of the research***

Our subjects were largely young, White, and urban—a fact that limits the generalizability of our findings. Although our specific stimulus materials are associated with a youth culture, future research may wish to examine whether the findings generalize to older adults, African Americans, and rural populations (but see Johnson et al., 1997, 2000). Growing up in a relatively urban environment might have desensitized our subjects to rap music, as they undoubtedly hear it often in their daily lives. This desensitization could have the effect of blinding subjects to the potentially negative implications of the stimulus materials. Future

research may wish to examine the effects of rap music as novel stimuli in subjects less sensitized to it (see Wester et al., 1997).

In addition, our sample scored relatively low on the prejudice measure (MRS), resulting in limited variance with which to find relations. Future research should attempt to recruit a population that shows more prejudice variability. It may be that high and low prejudiced subjects were too alike to be differentially affected by the experimental manipulations. However, if a low level of prejudice characterized our sample, then Experiment 2's primed subjects should have resisted using the activated stereotype and rated Black and White targets similarly. Instead, subjects wrongly failed to correct for their exposure to rap music, and the ensuing increase in stereotypic judgments that it entailed (see also Johnson et al., 2000).

Further, our method did not allow for us to control for the possibility that priming people with *any* Black targets might have increased their stereotypic judgments. This is because the prime tape included many more African American men than did the control tape. However, Johnson et al. (2000), in tandem with a no music control condition, used a control condition that exposed subjects to a nonviolent Black male rapper. They found significant differences between these subjects' ratings of a subsequent Black man and the ratings of subjects exposed to a violent Black male rapper, and no differences between their two control groups. Thus, we do not believe that simply exposing subjects to Black men (or even Black rappers) is sufficient to cause the explicit consequences of our priming manipulation's effects.

Finally, our research is unable to determine the process by which priming subjects with violent and misogynistic rap music influences implicit cognitions and social judgments. It may be that the stimulus materials strengthened negative anti-Black associations, which, in turn, were involuntarily applied to the ratings of a Black male target. However, without providing a mediational test, this possibility remains speculative. Perhaps the major obstacle to testing a mediational hypothesis is that implicit measures are often less reliable than self-reports,

rendering the interpretation of a null result ambiguous. This may be why researchers have not directly tested mediational hypotheses and, instead, have inferred support for implicit cognitive mediators from the results of two separate samples (e.g. Dijksterhuis et al., 1998).

### Implications of the research

Our findings support the potency of situational priming effects and their influence on subsequent judgments, provided targets are viewed as a match to the activated stereotype (Banaji et al., 1993; Henderson-King & Nisbett, 1996; Johnson et al., 1997, 2000). Even low prejudiced subjects apparently succumbed to the prime's effects and applied a negative stereotypic construct to Black-identified targets. Because even these subjects failed to control for their activated stereotypes, there may be limitations to people's ability to control stereotypic judgments (cf. Devine, 1989). Specifically, the effects of temporary construct accessibility may override individual differences in prejudice when perceivers encounter stereotype-relevant targets (Rudman & Borgida, 1995).

We are not suggesting that Black musicians (and the music industry) eschew rap music as a cultural vehicle by which Blacks receive recognition. However, it does appear that negative stereotypes of Blacks as hostile, sexist, and unintelligent may be perpetuated by (some) rap music, at least in college-aged subjects. The problem may not be the music per se, but rather the greater media attention given to Black rappers, compared to nonstereotypic Blacks (e.g. political leaders). If the media reflected the complex reality of Blacks (as it does the complex reality of Whites), it is likely that beliefs about Blacks would be less stereotypic. Similarly, Rudman and Borgida's (1995) findings do not preclude using scantily clad women to endorse consumer products. However, the evidence from both lines of research suggest the need for broader portrayals of minorities in the media, which could offset the influence of women and Blacks in the media who are portrayed as stereotype confirming.

The research also suggests the need for education with respect to the potential negative

influence of messages in popular mediums. If the present subjects (and those of Rudman & Borgida, 1995) are typical, people may naively assume that their judgments are uncontaminated by recently activated stereotypes. Because awareness of bias is the first step to counteracting it (e.g. Wilson & Brekke, 1994), manipulations that draw attention to people's implicit stereotypes (Devine & Monteith, 1999; Monteith, 1993) or that teach them how to control for bias (Schaller, Asp, Rosell, & Heim, 1996) may prove effective. Nonetheless, in the absence of such interventions, the present research suggests that recently activated stereotypes can influence both implicit social cognitions and judgments of stereotype-relevant targets.

### Notes

1. Because Experiment 2's subjects essentially replicated these findings, they are not discussed when we present Experiment 2.
2. In fact, non-Blacks apparently do not possess a positive implicit stereotype of Blacks, or a negative implicit stereotype of Whites (Wittenbrink et al., 1997; Rudman et al., 2001a, Experiment 2). Thus, the racial stereotypes that exist for non-Blacks at the automatic level are evaluative.
3. We followed standard procedures for analyzing IAT data (Greenwald et al., 1998). The first two trials of every block were eliminated due to their typically long latencies. Latencies less than 300 ms or greater than 3000 ms were recoded as 300 and 3000, respectively. Latencies were log-transformed to normalize the distribution. Error trials were included in all analyses ( $M = 6.2\%$ ).
4. Following procedures described in Aiken & West (1991), we also regressed the IAT effect scores on prime condition (0 = control, 1 = rap), centered prejudice (MRS) scores, and the Prime  $\times$  Prejudice interaction term (after controlling for subjects' gender and race). Consistent with the ANOVA, only a main effect for prime emerged ( $\beta = .59, p < .01$ ). The remaining effects were nonsignificant (all  $p$ 's  $> .33$ ).
5. Following procedures described in Aiken & West (1991), we also regressed the explicit stereotype scores on prime condition (0 = control, 1 = rap), centered prejudice (MRS) scores, and the Prime  $\times$  Prejudice interaction term (after controlling for subjects' gender and race). This analysis showed a prime main effect ( $\beta = .51, p < .01$ ), and

- a significant Prime  $\times$  Prejudice Level interaction ( $\beta = .34, p < .05$ ). The remaining effects were weak (all  $ps > .19$ ).
6. As in Experiment 1, the explicit measure was scored by computing the difference between endorsement for Blacks and Whites for each trait. These difference scores were averaged to form the negative Black ( $\alpha = .85$ ) and positive White ( $\alpha = .90$ ) indexes. These indexes were related ( $r(73) = .72, p < .001$ ). They were then averaged to form the stereotype index.
  7. More benevolently sexist behaviors, such as complaining that a career woman should be 'at home with her kids' were also ruled out because they would not likely be interpreted as *ambiguously* sexist. Moreover, the type of sexism represented in the prime condition pertained to treating women harshly rather than confining them to female gender roles.
  8. Following procedures described in Aiken & West (1991), we also regressed the targets' hostile, sexist, and intelligence ratings on prime condition (0 = control, 1 = rap), centered prejudice (MRS) scores, and the Prime  $\times$  Prejudice interaction term. Consistent with the ANOVAs, the only reliable effect in each equation was the Prime  $\times$  Prejudice interaction term ( $\beta$ s = .25, .26, and -.29, respectively, all  $ps < .05$ ). The remaining effects were weak (all  $ps > .13$ ).

## Acknowledgments

This research was partially supported by Grant SBE-9807970 from the National Science Foundation. We thank Anthony Greenwald for helpful comments on an earlier version of this manuscript.

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Paper received 31 July 2001; revised version accepted 12 November 2001.

## Appendix

I ran into my old acquaintance Donald the other day and I decided to go over and visit him, since by coincidence we took our vacations at the same time. Soon after I arrived, a saleswoman knocked at the door, but Donald refused to let her enter. The phone rang and Donald let the machine pick up. A female voice answered, and Donald explained to me that he was refusing to pay his rent until the landlady repaints his apartment. We talked for a while and had lunch at a café. Donald said he couldn't tip the waitress because he was saving money to get his car fixed. In fact, I had to drive my car because his car broke down this

morning and he told the mechanic that he would have to go somewhere else if he couldn't fix his car that same day. We went to the park for about an hour and then stopped at a hardware store. I was sort of preoccupied, but Donald bought some small gadgets, and then I saw him get annoyed at the lady filling his bags because she was filling them too slowly. I couldn't find what I was looking for, so we left and walked a few blocks to another store. We walked past one of Donald's new co-workers named Maria, but Donald was in too much of a hurry to say hello. In front of the store, the Red Cross had set up a stand. The nurse asked us to donate blood. Donald lied by saying he had diabetes and therefore could not give her any blood. It's funny that I hadn't noticed it before, but when we got to the store, we found that it had gone out of business. It was getting kind of late by this point, so I took Donald to pick up his car, and we agreed to meet again as soon as possible.

## Biographical notes

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