

## THE ROLES OF IN-GROUP EXEMPLARS AND ETHNIC-RACIAL IDENTIFICATION IN SELF-STEREOTYPING

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African Americans' self-concept is susceptible to pervasive cultural stereotypes. However, exposure to in-group exemplars such as Barack Obama as a prominent, admired African American may be accessible enough to attenuate the detrimental effects of stereotypes. In two experiments, African-American adolescent (Pilot Experiment) and adult (Main Experiment) participants were provided with information about outstanding successes and societal contributions of Obama as a single in-group exemplar (Pilot and Main Experiments) or multiple in-group exemplars (e.g., Obama, Oprah Winfrey; Main Experiment). Then, participants reported the extent to which they associated their self-concept with stereotypes. The Pilot Experiment supported an "Obama effect"—African-American adolescents exhibited less self-stereotyping after exposure to Obama, when compared to those in a control condition. The Main Experiment demonstrated that exposure to Obama or multiple exemplars yielded less self-stereotyping, but only among strongly identified African Americans. Implications for the importance of role models in combating the effect of stigma on the self-concept are discussed.

*Keywords:* Obama effect, African American, ethnic-racial identification, exemplar, self-stereotyping

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The election of Barack Obama as the first African-American president of the United States of America has spurred discussion and research on his positive effect on interethnic relations, often referred to as the “Obama effect” (e.g., Columb & Plant, 2011, this issue; Knowles, Lowery, & Schaumberg, 2010; Plant et al., 2009; Reed, 2010; Schmidt & Axt, this issue; Schmidt & Nosek, 2010; Sharpley-Whiting, 2009). There has been relatively less empirical work on the positive influence that Obama and others like him might have on fellow African Americans (for exceptions, see Aronson, Jannone, McGlone, & Johnson-Campbell, 2009; Fuller-Rowell, Burrow, & Ong, 2011; Marx, Ko, & Friedman, 2009). The present research adopts a social cognition approach to posit that if Obama is a single exemplar that changes fellow African Americans’ mental representation of their group and its stereotypes, then he might also attenuate their mental association between these stereotypes and their self-concept represented in memory (cf. Steele, 1997). Thus, the first goal of the present research is to examine if an Obama effect extends to attenuating these mental associations, thus decreasing self-stereotyping evaluations.

Given the plausibility of an Obama effect on African Americans’ self-concept, an important query is whether Obama as a single exemplar is similarly effective as exposing African Americans to multiple exemplars. Consistent with research on the relation between perceiving variability in out-group members and stereotyping (e.g., Hewstone & Hamberger, 2000), exposure to multiple counter-stereotypical instances of the in-group should attenuate in-group members’ mental association between their self-concept and their group’s stereotypes. Thus, the second goal of the current research is to examine if exposure to Obama as a single successful African American and multiple successful African Americans (Obama, Oprah Winfrey, etc.) similarly benefit African American perceivers’ self-concept.

The final goal of the current research is to test if the effect of exposure to Obama as a single exemplar or multiple in-group exemplars is conditional on the extent to which African Americans identify with their ethnic-racial group. African Americans’ attachment to their ethnic-racial group should be a critical variable that influences the degree to which in-group exemplars are beneficial because ethnicity is a central and important source of social identity for some, but not all, African Americans (Sellers, Smith, Shelton, Rowley, & Chavous, 1998). The theoretical rationale underlying these research goals is discussed next.

## **SOCIAL COGNITIVE APPROACH TO IN-GROUP EXEMPLARS**

The present research adopts a social cognitive approach to understanding in-group exemplar processes. Individuals possess mental representations of social categories that include knowledge about category members and their attributes (Fiske & Taylor, 2013). The social cognitive perspective on social categorizations posits that the effect of mental representations on the perceptions of others is a top-down process—that is, individuals rely on their mental representations of groups to shape judgments of groups and their individual members at the downstream end. Such mental representations include multiple instances of individual group

members that converge into a prototype, the group category's "average" that represents typical group members (Smith & Zarate, 1990). Furthermore, the effect of prototypes on social categorizations and its underlying processes can be automatically activated after perceiving an out-group member in one's immediate environment (Macrae & Bodenhausen, 2000).

One way to change the role of mental representations of groups and its organization around a prototype in social categorizations is by adopting a bottom-up approach—that is, to introduce a group exemplar, a group member who separates himself or herself from the prototype (Smith & Medin, 1981; Smith & Zarate, 1992). Exposure to exemplars facilitates change in existing mental representations, which then affects subsequent group perceptions and judgments. This bottom-up process and effect demonstrate perceivers' sensitivity to specific and unique instances of individual group members recently encountered. However, because perceivers may not always have the opportunity to encounter a group exemplar or may be unmotivated or hard pressed to bring one to conscious memory, they may be susceptible to relying on an abstract group prototype stored in memory. This appears to be particularly the case when perceivers are making categorizations of strongly stigmatized out-groups because the mental representations of such groups include stereotypes that are maintained through interpersonal and intergroup experiences and the media (Lyons & Kashima, 2003; Ross & Lester, 2011). When perceivers, however, are placed in contexts in which they are exposed to exemplars of stereotyped groups, it shifts group perceptions and judgments away from those that are prototype consistent (Brauer & Er-Rafiy, 2011; Dasgupta & Greenwald, 2001; Dasgupta & Rivera, 2008; Hewstone & Hamberger, 2000).

We adopt these social cognitive principles to understand the effect of ingroup exemplars on African-Americans' self-concept. While individuals hold mental representations about out-groups, they also hold mental representations about their in-groups, which include similar assumptions and expectations that others and their social environment in general hold of their groups (Judd & Park, 1988). Individuals are susceptible to using in-group prototypes, but are capable of bringing to mind varied exemplars as well. Exemplar accessibility is particularly functional when individuals are representing their groups to others (Linville, Fischer, & Salovey, 1989). However, just as it is the case in intergroup settings, members of historically disadvantaged and under-represented groups may have difficulty accessing in-group exemplars spontaneously. This is partly the case because there may be fewer opportunities to experience counter-stereotypical (non-prototypical) in-group members via primary exposure during interpersonal and intragroup interactions or secondary exposure through media outlets (cf. Dasgupta & Greenwald, 2001; Dasgupta & Rivera, 2008). We extend past research on out-group exemplars and subsequent out-group judgments (e.g., Dasgupta & Rivera, 2008) to examine the effect of exposure to in-group exemplars on in-group members' stigma-based social cognitive processes.

## OBAMA AS A SINGLE EXEMPLAR

For African Americans, Barack Obama may be a strong and compelling exemplar because he has defied stereotypes on multiple levels (i.e., distanced himself from the prototype). Obama grew up with a single parent (a risk factor for poor behavioral outcomes; Office of Juvenile Justice and Delinquency Prevention, 2003), struggled with the absence of his father, and experienced the negative effects of interpersonal and institutional racial discrimination on his self and identity (Obama, 2004). Despite these setbacks, Obama received an undergraduate education at Columbia University, completed law school at Harvard University, was a professor of law at the University of Chicago, and, most notably, was serving as a first-term United States senator when in 2008 he was elected as the first African-American president of the United States (and subsequently re-elected in 2012). Given his distinguished successes, some have argued that Obama may be a single exemplar that is powerful enough to have a positive influence on fellow African Americans, a hypothesis that has garnered some support (Fuller-Rowell, Burrow, & Ong, 2011; Marx et al., 2009; Ong, Burrow, & Cerrada, this issue; but see Aronson et al., 2009). For example, Marx et al. (2009) administered a verbal exam to four groups of African-American and White-American participants across four pivotal times throughout Obama's presidential campaign. They found that when Obama's success was salient (e.g., after his election to the presidency), the performance gap between African-American and White-American participants in a stereotype threat situation was significantly smaller compared to when Obama's success was less salient (e.g., before his election to the presidency). Given the evidence suggesting that Obama as a single counter-stereotypical exemplar has downstream positive consequences on African Americans' stereotype-consistent behavior, our first research goal was to provide an initial test of the hypothesis that an Obama effect can extend to African Americans' social cognition. Specifically, Obama may attenuate the mental association between African Americans' self-concept and their group's stereotypes, yielding lower self-stereotyping judgments (Pilot Experiment).

## MULTIPLE EXEMPLARS

What is particularly compelling about the Obama effect is that he may serve as a *single* exemplar that can intervene in intragroup and intergroup processes, an effect typically expected to emerge after exposing individuals to *multiple* African-American exemplars (cf. Hewstone & Hamberger, 2000). From a social cognitive perspective, the more perceivers are exposed to various instances of group members who distance themselves from the prototype, the more change is expected in mental representations (Hewstone & Hamberger, 2000; Richards & Hewstone, 2001). The downstream consequence is changes in perceptions and judgments of individuals and groups, such as weaker associations between out-group members and stereotypes (Brauer & Er-Rafiy, 2011). As applied to in-group exemplar exposure and perceivers' social cognition, this research suggests that access to multiple

in-group exemplars from strongly stigmatized groups can change knowledge represented in memory from stereotypes organized around the prototype to greater perceived variability from the prototype. Altogether, the above research suggests that multiple African-American exemplars such as Obama, Oprah Winfrey, and Martin Luther King, Jr., should attenuate the association between African Americans' mental representations of their self-concept and group stereotypes. Thus, our second research goal was to test if exposure to Obama alone would have as strong of an effect as exposure to multiple counter-stereotypical exemplars on lowering self-stereotyping among African Americans (Main Experiment).

## THE MODERATING ROLE OF ETHNIC-RACIAL IDENTIFICATION

The beneficial effect of exposure to Obama as a single exemplar or multiple exemplars on self-stereotyping, however, may depend on the strength of African-American perceivers' identification with their ethnic-racial group. According to social identity theory and its extended self-categorization theory (Tajfel & Turner, 1979, 1986; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), one important source of individuals' overall self-image is their social identification with a group. However, while people categorically identify with a social group, they vary in their subjective identification with that group (Luhtanen & Crocker, 1992; Phinney, 1992). Some group members consider their social identity as more central and important to their self-concept than other group members (Luhtanen & Crocker, 1992; Phinney, 1992; Sellers, Rowley, Chavous, Shelton, & Smith, 1997; Sellers et al., 1998). Moreover, strongly group-identified individuals are expected to align themselves with the group's attributes, even if these attributes are stereotypes (Hogg & Abrams, 1988). Indeed, individuals who identify with a stigmatized and low status group are more likely to self-stereotype (Latrofa, Vaes, Cadinu, & Carnaghi, 2010), especially under conditions of threats to their group's positive distinctiveness (Spears, Doosje, & Ellemers, 1999).

Because the group is more central and important to strongly identified group members, they are more likely than weakly identified group members to be sensitive to in-group-related situational cues that have affective, behavioral, and cognitive implications (Phinney, 1992; Sellers et al., 1997, 1998). As it relates to the present research, strongly identified group members should benefit from exposure to in-group exemplars because they are a source of positive group distinctiveness (Swann & Bosson, 2010; Tajfel & Turner, 1979, 1986). Thus, the final goal of the present research is to test if subjective ethnic-racial identification moderates the effect of in-group exemplars on self-stereotyping. In the absence of any exposure to in-group exemplars, strongly identified African Americans are expected to exhibit high levels of self-stereotyping. However, following exposure to Obama as a single exemplar or multiple exemplars, strongly identified African Americans should exhibit lower self-stereotyping. Among weakly identified group members, self-stereotyping should not vary as a function of exposure to in-group exemplars

because the in-group is less likely to be a source of positive distinctiveness and influence on their self-concept.

## OVERVIEW OF THE PRESENT RESEARCH

Two experiments tested the effect of exposure to in-group exemplars on self-stereotyping with samples of African-American adolescents (Pilot Experiment) and adults (Main Experiment). The first research goal was to examine whether exposure to Obama as a single and compelling in-group exemplar may be accessible enough to positively affect African Americans' stigma-based self-concept (Pilot and Main Experiments). The second goal was to test if both Obama as a single in-group exemplar and multiple in-group exemplars (Obama, Oprah Winfrey, Martin Luther King, Jr., etc.) have a similar effect on stereotyped-based self-evaluations (Main Experiment). Finally, we examined if African-American participants' subjective ethnic-racial identification moderates the effect of exposure to in-group exemplars on self-stereotyping (Main Experiment). Consistent with our and others' prior research (Dasgupta & Greenwald, 2001; Dasgupta & Rivera, 2008), we manipulated exposure to in-group exemplars by providing African Americans with information about in-group members' outstanding successes in various domains and their important contributions to society in the United States. Then, all participants indicated the extent to which they associated their self-concept with African-American stereotypes (i.e., self-stereotype). Our main predictions were that the Obama effect would lead African Americans to exhibit lower levels of self-stereotyping (Prediction 1), an effect similar to exposing them to multiple in-group exemplars (Prediction 2), when compared to a control condition. Finally, exposure to Obama or multiple African-American exemplars would result in lower self-stereotyping among strongly (but not weakly) identified African-American participants (Prediction 3).

## PILOT EXPERIMENT

### METHOD

*Participants and Design.* A community sample of 30 African-American adolescents (53% male;  $M_{\text{age}} = 15.7$  years, age range: 14–17 years) participated in exchange for \$15 or as part of a high school course requirement. The experiment used a one-factor, two-level (Exemplar condition: Obama single, control) between-participants design.

*Obama Single Exemplar and Control Conditions (Independent Variable).* To develop the Obama single exemplar and control conditions, we used a similar procedure from the first author's past research (Dasgupta & Rivera, 2008; also see Dasgupta & Greenwald, 2001). In the Obama condition, participants were presented with a picture of Obama along with a biography of his early personal and professional life experiences that led to his election as the first African-American president of the United States of America (and subsequent re-election) as well as his successes

during his presidency (see Appendix A for biography).<sup>1</sup> For the control condition, we gathered pictures and information about 15 flowers and created brief descriptions of each flower's origin and use (see Appendix B for sample descriptions). As described in the first author's past research (Dasgupta & Rivera, 2008), we chose flowers as control stimuli because they were positive in valence (like the Obama exemplar condition) but semantically unrelated to ethnicity and race, which allowed us to rule out stimulus positivity as a potential alternative explanation for our findings (interested readers are referred to Dasgupta & Rivera, 2008, for additional details about the control condition).

*Self-Stereotyping (Dependent Variable).* Self-stereotyping is the association between the self and the attributes stereotypically associated with one's in-group. Consistent with this operationalization, participants were asked to indicate the extent to which eight stereotypes across five domains were self-characteristic on 6-point scales ranging from "Not at all characteristic of me" (1) to "Extremely characteristic of me" (6). The stereotype domains (and their respective words) were intelligence (*stupid*), aggression (*dangerous, violent*), social values (*religious, funny*), physical (*strong, athletic*), and socioeconomic status (*poor*). The stereotypes were all adopted from past studies on African-American stereotypes (Czopp & Monteith, 2006; Devine, 1989; Madon et al., 2001). Higher scores indicate greater self-stereotyping ( $\alpha = .50$ ).<sup>2</sup>

*Procedure.* Participants completed two ostensibly unrelated studies. The "first study" was presented as a task designed to increase participants' general knowledge about social groups for those in the Obama condition or about the environment for those in the control condition. Participants were told that "the Special Programs Office" from Rutgers University was "developing a new educational initiative to increase people's knowledge of various social groups (or the environment). To that end, for the next few minutes, you're going to learn about an outstanding individual (or flowers)." To motivate participants to pay attention to the task, they were asked to carefully read the information because they would be asked a few questions at a later time (in reality, we did not ask any follow-up questions). After this task, participants completed the "second study" in which they completed the self-stereotyping questionnaire. Finally, all participants completed a demographics questionnaire, then were completely debriefed and remunerated for their participation.

## RESULTS AND DISCUSSION

*Effect of Obama Single Exemplar on Self-Stereotyping.* Self-stereotyping scores were subjected to a one-way (Exemplar condition: Obama single, control) analysis of variance (ANOVA). As shown in Figure 1 and consistent with Prediction 1, African-American adolescents' self-evaluations varied as a function of experimental

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1. Interested readers should contact authors for all photo images presented with descriptions of African Americans and flowers used in both experiments.

2. In the Pilot Experiment, the reliability ( $\alpha = 0.50$ ) of the measure of self-stereotyping (after reverse-scoring the positive words) was below acceptable standards of internal consistency ( $0.80 > \alpha \geq 0.70$ ), a result that is likely due to the relatively small sample size ( $N = 30$ ). Indeed, the Main Experiment recruited a larger sample size ( $N = 62$ ) that completed a similar measure of self-stereotyping and it resulted in acceptable internal consistency ( $\alpha = 0.70$ ).

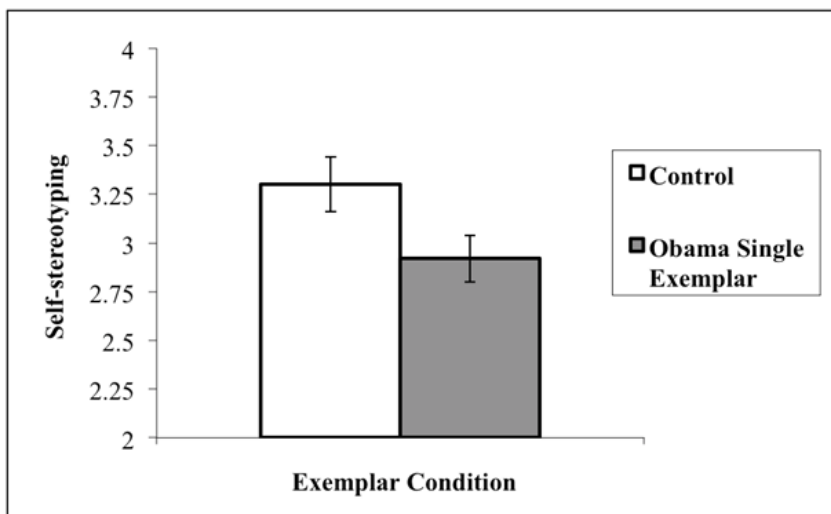


FIGURE 1. Pilot Experiment—African-American adolescents: Effect of exposure to Obama as a single exemplar on self-stereotyping. Standard error bars represented. Higher scores on the y-axis indicate greater self-stereotyping.

condition,  $F(1, 28) = 3.81, p < .06$ . Specifically, African-American adolescent participants who read about Obama's success and achievements ( $M = 2.92, SD = .51$ ) exhibited lower self-stereotyping than those who read about flowers in the control condition ( $M = 3.30, SD = .52; d = .72$ , large effect size).<sup>3</sup> In summary, this experiment provided preliminary evidence for an Obama effect on stereotype-based self-evaluations in a sample of African-American teenagers.

## MAIN EXPERIMENT

The Pilot Experiment provided preliminary evidence that Obama as a single in-group exemplar can attenuate the association between African Americans' self-concept and group stereotypes. The goals of the Main Experiment were twofold. First, we sought to test if Obama as a single exemplar is as strong as multiple exemplars in alleviating self-stereotyping. Second, we examined if strongly identified African Americans would particularly benefit from exposure to Obama and multiple in-group exemplars. To address these goals, we measured individual differences in ethnic-racial identification and added a second exemplar condition in which we presented participants with multiple successful African Americans such as Obama, Oprah Winfrey, Martin Luther King, Jr., etc.

## METHOD

*Participants and Design.* Sixty-two African-American adult participants from a university or the community (86% female;  $M_{age} = 27.29$  years, age range: 18–68

3. Across both experiments, analyses were also conducted treating positive and negative words separately, and the patterns of results were similar to those presented in the main text.



years) participated in exchange for extra course credit or \$15. The experiment used an Ethnic-Racial Subjective Identification (continuous variable)  $\times$  3 (Exemplar condition: Obama single, multiple, control) between-participants design.

*Ethnic-Racial Subjective Identification (Moderator).* Participants completed two items that measured African Americans' subjective ethnic-racial identity: (1) "Being an African American is an important part of who I am"; and (2) "Being an African American is important to my sense of self." The two items were adopted from Sellers et al.'s (1997) MMRI-Centrality scale, which captures the extent to which ethnicity is central to an African-American individual's self and identity, a psychological construct considered to be chronically salient and relatively stable across contexts (also see Leach et al., 2008; Sellers et al., 1998). The two items were highly correlated,  $r(62) = .64, p < .001$ , so they were combined into a single index.

*Obama Single Exemplar, Multiple Exemplars, and Control Conditions (Independent Variable).* The Obama single exemplar and control (flowers) conditions were identical to those in the Pilot Experiment. For the multiple exemplars condition, we used a similar procedure from our past research (Dasgupta & Rivera, 2008; also see Dasgupta & Greenwald, 2001) to select 15 admirable African Americans (8 men, 7 women) who have had outstanding success in various professions including business, politics, science, sports, art and entertainment, and social activism; and who have made important contributions to American society. The exemplars were (in alphabetical order) Maya Angelou, Tracy Chapman, Barbara Charline Jordan, Bell Hooks, Langston Hughes, Martin Luther King, Jr., Michael Jordan, Barack Obama, Bayard Rustin, Will Smith, Alice Walker, Denzel Washington, Venus Williams, and Oprah Winfrey. For each exemplar, a picture was presented along with a brief biography (see Appendix C for sample biographies).

*Self-Stereotyping (Dependent Variable).* The self-stereotyping measurement procedure was similar to the one in the Pilot Experiment, except that 14 stereotyped characteristics (randomized) representing five domains were presented to participants. The stereotype domains (and their respective words) were work ethic (*lazy, hardworking, ambitious*), intelligence (*stupid, smart*), temperament (*loud, calm*), aggression (*aggressive, peaceful*), and socioeconomic status (*poor, ghetto, welfare, wealthy, rich*). These words were drawn from past studies on African-American stereotypes (Czopp & Monteith, 2006; Devine, 1989; Madon et al., 2001). Higher scores indicate greater self-stereotyping ( $\alpha = .70$ ).

*Procedure.* Identical to that of the Pilot Experiment.

## RESULTS AND DISCUSSION

*Effect of Ethnic-Racial Subjective Identification and In-Group Exemplars on Self-Stereotyping.* To test our hypotheses, we created two sets of planned contrasts using dummy codes (Aiken & West, 1991). To examine whether the Obama exemplar and the multiple exemplars conditions varied from the control condition, the Obama exemplar and multiple exemplars conditions were each coded .5 and the control condition was coded -1. To examine whether the Obama exemplar and the multiple exemplars conditions varied from each other, the Obama exemplar condition was coded -1, the multiple exemplars conditions was coded 1, and the control condition was coded 0. We regressed self-stereotyping scores on the two

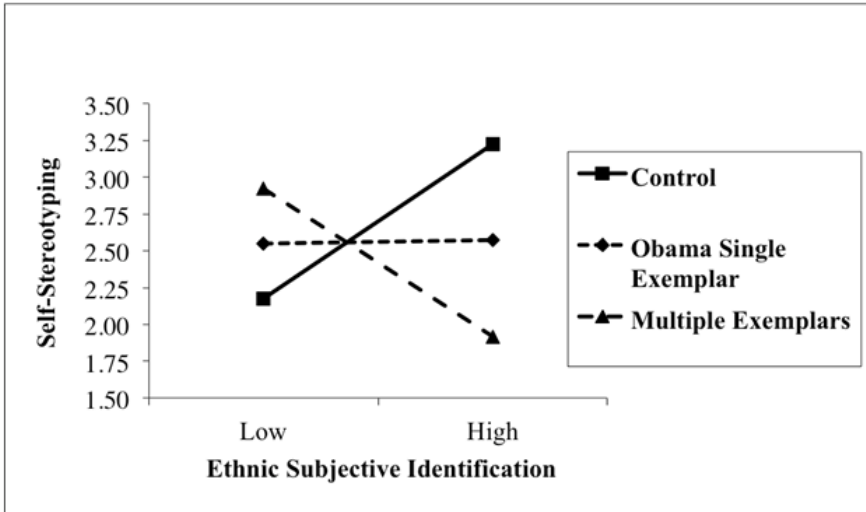


FIGURE 2. Main Experiment—African-American adults: Effect of ethnic-racial identification and exposure to Obama versus multiple exemplars on self-stereotyping. Higher scores on the y-axis indicate greater self-stereotyping.

sets of contrasts, ethnic-racial identification, and the two interactions (computed by multiplying ethnic-racial identification centered scores by each set of contrasts). Significant interactions were examined by conducting simple slopes analyses and estimating the values of self-stereotyping at 1 *SD* above and below the mean on the ethnic-racial identification measure across the three conditions (Aiken & West, 1991).

The regression analyses showed that participants in both exemplar conditions exhibited somewhat lower self-stereotyping compared to the control condition (Prediction 2), but this contrast term was not statistically significant ( $\beta = -.20, p < .12$ ; also see General Discussion). However, the contrast term interacted with ethnic-racial identification (Prediction 3;  $\beta = -.43, p < .01$ ),  $\Delta F(2, 56) = 6.38, p < .01$  (see Figure 2). Among African-American participants in the control condition, strong ethnic-racial identification was associated with high levels of self-stereotyping ( $\beta = .56, p < .05$ ), which is consistent with self-categorization theory (see introduction). However, strongly identified African-American participants exhibited lower levels of self-stereotyping after exposure to Obama (estimated  $M = 2.57$ ) and to multiple exemplars (estimated  $M = 1.92$ ), when compared to those in the control condition (estimated  $M = 3.22$ ;  $\beta = -.62, p < .01$ ). Among weakly identified participants, exemplar conditions did not affect self-stereotyping evaluations ( $\beta = .22, ns$ ). Finally, the contrast term comparing the Obama exemplar condition to the multiple exemplars condition, and the interaction between this contrast term and ethnic-racial identification were not statistically significant ( $.001 < \beta_s < .08, ns$ ). In summary, these data suggest that exposure to either Obama as a single exemplar or multiple exemplars can similarly attenuate self-based stereotyped evaluations among strongly identified African-American adults.

## GENERAL DISCUSSION

The present research tested if exposure to positive in-group exemplars benefits African Americans' self-concept. We sought to make salient the successes and achievements of Barack Obama as a single exemplar who defied the odds by becoming the first African American to be elected president of the United States (Pilot and Main Experiments), or of multiple African-American exemplars including Obama, Oprah Winfrey, and Martin Luther King, Jr. (Main Experiment). In the Pilot Experiment, African-American adolescents who read about Obama's exemplary life exhibited lower levels of stereotype-based self-evaluations, when compared to adolescents in a control condition. To our knowledge, the Pilot Experiment is the first research to demonstrate that the Obama effect extends to stereotyping the self, and that such an effect can emerge at a relatively early developmental stage ( $M_{\text{age}} = 15.7$ , age range: 14–17 years) when an individual's self and identity are still being shaped by his or her environment (Phinney, 1989, 1992).

The Main Experiment extended these results by examining if the effect of Obama as a single exemplar on self-stereotyping is similar to that of exposing African Americans to multiple in-group exemplars, and if these effects are contingent on the strength of African Americans' identification with their ethnic-racial group. While African Americans acknowledge their category membership in their ethnic-racial group, there are meaningful individual differences in the degree to which they consider their ethnic-racial group central and important to their self-concept (Luhtanen & Crocker, 1992; Phinney, 1989, 1992; Sellers et al., 1997, 1998). African Americans who possess a strong ethnic-racial identification should especially benefit from in-group exemplars—exposure to exemplars should attenuate mental associations between the self-concept and stereotypes. Consistent with this hypothesis, the Main Experiment demonstrated that in the absence of exposure to any African-American exemplars, strongly identified African-American adult participants exhibited relatively high levels of self-stereotyping. However, exposure to one or more successful in-group exemplars led strongly identified African Americans to exhibit lower levels of self-stereotyping. Finally, the self-concepts of weakly identified African Americans were unaffected by positive in-group exemplars. Collectively, the results of the present two experiments add to a growing body of literature on the social cognitive processes underlying in-group exemplars by demonstrating the conditions under which they can benefit individuals from stigmatized ethnic-racial groups (e.g., see Ong et al., this issue).

The present research may shed some light on the mixed evidence on the role of the Obama effect in buffering African Americans from stereotype threat effects (e.g., Aronson et al., 2009; Marx et al., 2009). As noted earlier, Marx et al. (2009) found that the performance gap between African-American and White-American participants in a stereotype threat situation was smaller when Obama's election success was salient, compared with when before he was elected. However, Aronson et al. (2009) found that the performance of stereotype-threatened African Americans (relative to White Americans) did not benefit from exposure to information about Obama (pictures and quotes) plus participants' own reflections of him

(e.g., “he is the ideal president”) compared to control conditions. Notwithstanding the methodological differences between the above studies (e.g., a controlled experiment in Aronson et al. vs. a quasi-experiment in Marx et al.) that might explain the mixed results (for discussions, see Aronson et al., 2009; Schmitt & Nosek, 2010), our Main Experiment suggests that an Obama effect on stereotype threat may depend on how strongly (vs. weakly) African Americans identify with their ethnic-racial group. The performance drop of stereotype-threatened African Americans may be alleviated by a single in-group exemplar such as President Obama but only for individuals who consider ethnicity to be a central and important part of their self-concept. Past studies were unable to test this prediction because they did not measure participants’ subjective ethnic-racial identification. If, as our research has shown, exposure to successful African Americans alleviates stereotype-consistent self-evaluations among highly identified African Americans, then such an effect could extend to stereotype-consistent behaviors such as academic performance in a domain in which African Americans are stereotyped to do poorly (cf. Shapiro & Neuberg, 2007). Consistent with this hypothesis, but in the domain of the gender stereotype that women perform poorly in math, Schmader (2002) found that stereotype threat affected female participants’ performance on a math test, but only if they strongly identified with their gender group. No effect emerged among weakly identified female participants or male participants in general.

## IMPLICATIONS FOR LITERATURE ON ROLE MODELS

The present research may also shed some light on the social cognitive processes underlying the influence of role models in the life of an individual from a historically disadvantaged and stigmatized group. In the literature, the definition of a role model lacks consensus (just like that of a mentor, which overlaps to some extent with role model; Eby, Rhodes, & Allen, 2007). However, two main features of a role model are that she or he must be perceived as a primary source of influence within academic, social, career, and personal domains and that one’s relation to a role model can be formal (e.g., an interpersonal introduction and subsequent meeting) or informal (e.g., reading about a person via mass media); of note, a real interaction and relational emotional closeness are not prerequisites for an individual to serve as a role model. Based on this definition, role model studies have demonstrated that the real or imagined presence of a single role model or multiple role models can ameliorate stigmatized individuals’ self-perceptions and performance behaviors (Asgari, Dasgupta, & Gilbert-Cote, 2010; Lockwood, 2006; Marx & Goff, 2005; Marx & Roman, 2002; McGlone, Aronson, & Kobrynowicz, 2006; McIntyre, Paulson, & Lord, 2003; but see McIntyre et al., 2005).

Consistent with the above definition and research, the present research suggests that Obama (and similarly successful African Americans) may serve as a role model to fellow African Americans. It further suggests that a key ingredient in maximizing the benefits of a role model is the shared social identity between the perceiver and the role model, a hypothesis that is consistent with the role model

literature in psychology (Lockwood, 2006; Marx et al., 2009). The assumption here is that shared group membership enhances feelings of inspiration because perceivers' self-concept is inextricably linked to their in-group (i.e., perceivers identify strongly with their in-group). Indeed, this would be consistent with anecdotes asserting that African Americans see Obama as the "perfect role model" and an "inspiration" (Gomstyn, 2008; Murdoch, 2009).

## LIMITATIONS AND FUTURE RESEARCH

Although the present data are consistent with the social cognition, social identity, and role model literatures, one limitation of the present research is the relatively small sample sizes across the experiments, which makes it difficult to draw strong conclusions from the data. One particular concern is that the main effect of exposing a single in-group exemplar (Obama) on self-stereotyping was inconsistent across the two experiments. Because the Pilot and Main Experiments had a similar Obama single exemplar condition (and control condition), we re-tested for an Obama effect on self-stereotyping by combining the data from both experiments and subjecting the self-stereotyping scores (standardized) to a contrast analysis. Consistent with an Obama effect, participants in the Obama single exemplar condition exhibited lower self-stereotyping than those in the control condition,  $t(89) = 2.61, p < .05, d = .64$  (medium effect size). Furthermore, post-hoc analysis yielded power = .82, adequate statistical power. In summary, a mini meta-analysis of the two experiments suggests a meaningful Obama effect on African American's stigma-based social cognitive processes.

The present research tests the effect of in-group exemplars on *explicit* self-stereotyping, so it raises the question whether an in-group exemplars effect will similarly lower *implicit* self-stereotyping. We suspect that this hypothesis would be supported based on recent research on the role of associative versus propositional processes in changing attitudes (Dasgupta & Rivera, 2006, 2008; Gawronski & Bodenhausen, 2006). Most relevant to the present research, Dasgupta and Rivera (2008) suggest that one mechanism that drives changes in implicit attitudes involves variations in the accessibility of group-attribute associations because of exposure to group exemplars via mass media. Once learned, these automatic associations are activated in the presence of a relevant target person irrespective of their perceived "truth value" (i.e., whether or not perceivers consider these evaluations accurate). We suggest that just as short-term exposure to admired out-group members are likely to influence implicit out-group attitudes by tapping into this mechanism, frequent exposure to successful individuals from one's in-group might enhance the accessibility of associations between a stigmatized in-group and counter-stereotypical attributes, thereby producing lower implicit stereotype-based evaluations of the self. Our research further suggests that it is plausible that a single in-group exemplar as successful and admired as Obama may be effective in lowering implicit self-stereotyping. Future research would need to directly in-

investigate the effect of single and multiple exemplars on implicit self-stereotyping and its proposed underlying associative mechanism.

## THE LEGACY OF BARACK OBAMA FOR SOCIAL COGNITION

The election of Barack Obama as the first African American to be president of the United States was a momentous and historical event. Media exposed the world to Obama, a member of a historically disadvantaged ethnic-racial group who is smart, ambitious, and successful. Because the United States constituency (including its majority, Whites) elected an individual who defied negative stereotypes, many pundits concluded that the United States had begun to move from its atrocious history of slavery to a new “post-racial” era (King, 2012). Indeed, social cognition scientists adopted the phrase “Obama effect” to classify the beneficial effects that a single significant, positive African-American exemplar can have on person perception (e.g., Columb & Plant, 2011; Plant et al., 2009). The present research adds to the psychological legacy of Obama by suggesting that the Obama effect extends to fellow African Americans’ social cognition about themselves—namely, the benefit of briefly reminding African Americans of his successes (and of other successful African Americans like Obama) on their self-perception and self-concept (also see Ong et al., this issue). Furthermore, we highlight subjective identification with one’s ethnic-racial group as an important ingredient to maximizing Obama’s impact on social cognition.

As we come to the end of Obama’s presidency, one might wonder about its potential long-term implications. The pervasiveness of prejudice and discrimination has spurred a line of intervention research on reducing negative intergroup attitudes (Paluck & Green, 2009). It is plausible that part of Obama’s legacy will partly be based on the notion that thoughts of him—the challenges of his childhood, his experiences with racism, and, in spite of these adversities, his astounding achievements—can undermine widespread prejudice and discrimination. Moreover, Obama’s historical success may prove over time to chronically inspire African Americans to look to their own group and its members when needing a buffer against the impact of experiencing institutional, intergroup, and interpersonal prejudice and discrimination. In this way, interventions to reduce stigma that include structural changes may also consider the powerful impact of the mere presence of fellow group members who are inspirational.

We conclude this article with the voice of a schoolteacher that foretells what might be the historical and psychological legacy of Obama. From Alcindor (2016):

...after Mr. Obama’s election, a woman who had been teaching for more than two decades in Atlanta [stated] that her black students had started saying, for the first time, that they wanted to be president.

“That was the first time that any class had been able to think about that, that they wanted to be president.”

## APPENDIX A

### PILOT EXPERIMENT: BIOGRAPHY OF OBAMA AS A SINGLE AFRICAN-AMERICAN EXEMPLAR

In November 2008, Barack Obama was elected the first African-American president of the United States of America. Obama was one of the youngest elected presidents. “Change” was his campaign theme, which was a message that deeply touched the country during a time of bad wars in Iraq and Afghanistan and the worst economic period since the Great Depression. Even the politicians who ran against Obama stated that he had run an amazing campaign.

In his *New York Times* best-selling book, *Dreams From My Father*, Obama writes honestly and openly about his life as a young man. These experiences greatly shaped his adult life successes. He received a college degree from Columbia University and a law degree from Harvard Law School, where he became the first African-American editor of the *Harvard Law Review*, the most influential law journal in the country. In the summer 1989, he met and fell in love with another young Harvard Law graduate, Michelle Robinson or, as she is now known, First Lady Michelle Obama. The couple has two daughters, Malia and Sasha.

Before becoming the president, Obama was a lawyer in Chicago, a professor of law at the prestigious and famous University of Chicago Law School, and served as a state senator of Illinois. In 2004, he was honored with being selected to give a keynote speech at the Democratic convention. There he “set the place on fire” with his youthful energy and powerful speech. In January 2005, Obama was elected as the United States senator from Illinois. Senator Obama helped create laws aimed at fighting crime, addressing climate change, protecting against terrorism, and improving care for U.S. military officers returning from Iraq and Afghanistan.

In just his first term as United States senator, Obama resigned after being elected U.S. president in 2008. Four years later, in November 2012, Obama was re-elected president. Across his first and second terms, President Obama has had many successes, including:

- The number of Americans who received health insurance increased by approximately 10–12 million.
- The economy has gained five times more jobs under President Obama than it did under former President George W. Bush, and unemployment is at its lowest since 2007.
- The stock market has also grown during Obama’s presidency, and wind and solar generated electricity is up 248% since 2008.

On the night of his first election, Obama stated:

*"It's been a long time coming, but tonight,  
because of what we did on this date in this  
election at this defining moment,  
change has come to America."*

There is no doubt that Obama's presidency has brought positive change to this country in many, many ways.

## APPENDIX B

### Pilot and Main Experiments: Sample Biographies of Flowers in the Control Condition

**Lily of the Valley.** The Lily of the Valley has broad, spear-like leaves and fragrant little white bell-shaped flowers. While it is a popular garden flower, it has seen increasing popularity for use in wedding bouquets. Also, the lily of the valley is grown as a plant in the Appalachian Mountains. The flower was long used for medicine for heart disorders and it is a symbol of humbleness in religious paintings.

**Lily.** The lily is a trumpet-shaped flower that grows to a 6-inch diameter. Stems grow to 3 feet long, carrying four to eight blossoms. Because blooms open at various times, most lilies live one to two weeks. Colors include white, yellow, pink, red, and orange; many have a deeper color (freckles) on the inner petal. Because the lily is known as a symbol of purity, it is a popular flower used in wedding bouquets throughout the world.

**Rose.** With almost 120 varieties available, roses are a classic favorite. Roses span the color spectrum with varieties available in all shades of red, pink, purple, orange, and white. Roses are especially abundant in Eastern Asia, Europe, and North America. Interestingly, many roses have thorns on their stems, which may cause discomfort to those individuals who believe that the rose is the ultimate symbol of love.

**Sunflower.** The unique sunflower we all recognize has an open flower face that averages 5–6 inches in diameter and a center that takes up about 60 percent of the flower. The sunflower has a distinctly American flavor, and understandably so. The wild sunflower probably originated in North America and its image is part of our country's early history. The American Indians used sunflowers as a source of food by grinding them into flour.

## APPENDIX C

### Main Experiment: Sample Biographies of Multiple African-American Exemplars

**Barack Obama.** In 2008, Barack Obama became the first African American to be elected president of the United States. His campaign theme was "change." It was a message with deep significance for the U.S.A. because it was trapped in unpopular wars in Iraq and Afghanistan, and was in the worst economic times since



the Great Depression. Obama graduated from Columbia University and Harvard Law School, where he became the first African-American editor of the *Harvard Law Review*.

**Oprah Winfrey.** Oprah Winfrey became famous because of her talk show, *The Oprah Winfrey Show*. It remains the highest-rated talk show and has earned multiple Emmy Awards. Winfrey received the "Broadcaster of the Year" Award in 1988, the youngest person ever to receive the honor. She is an Academy Award nominated actress and a magazine publisher. She is considered the most influential woman in the world, the richest African American, and was the world's only Black billionaire.

**Martin Luther King, Jr.** Martin Luther King, Jr. was an African-American clergyman and civil rights activist. His main legacy was to secure progress on civil rights and is frequently referred to as a human rights icon. In 1963, Dr. King led the March on Washington, where he delivered his famous "I have a dream" speech. At 35, he was the youngest man to receive the Nobel Peace Prize. He was named "Man of the Year" by *Time* magazine.

**Venus Williams.** Venus Williams was the first African-American female tennis player to reach world number 1. In 2000 at Wimbledon, the most prestigious tennis tournament in the world, she became the first Black female champion. Since, she has won the Wimbledon title five times. Williams has won over 65 titles, including 16 Grand Slams and four Olympic gold medals. In 2005, Williams successfully fought for female players to be paid as much as males at Wimbledon.

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