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FlashReport

The "Obama Effect": How a salient role model reduces race-based performance differences ☆

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ABSTRACT

Barack Obama, the first Black-American president, has been widely heralded as a role model for Black-Americans because he inspires hope. The current study was conducted to assess whether, beyond simply inspiring hope, this "Obama Effect" has a concrete positive influence on Black-Americans' academic performance. Over a three-month period we administered a verbal exam to four separate groups of Black- and White-American participants at four predetermined times. When Obama's stereotype-defying accomplishments garnered national attention – just after his convention speech, and election to the presidency – they had a profound beneficial effect on Black-Americans' exam performance, such that the negative effects of stereotype threat were dramatically reduced. This effect occurred even when concerns about racial stereotypes continued to exist. The fact that we found performance effects with a random sample of American participants, far removed from any direct contact with Obama, attests to the powerful impact of ingroup role models.

On the 45th anniversary of Martin Luther King's "I have a dream speech" Barack Obama accepted the Democratic National Committee's (DNC) nomination for the US presidency. Sixty-eight days later, Obama became the first Black-American to be elected president. Because of the historic nature of Obama's candidacy, and subsequent election, the popular media has long paid considerable attention to how Obama serves as a symbol of hope and inspiration and how he will be "a worthy role model" for Black-Americans (Reyes, 2008; see also, Gomstyn, 2008; Miller, 2008; Pitts, 2008; Smith, 2009). Although Obama's status as a role model is undoubtedly clear, it remains to be seen whether the "Obama Effect" can go beyond simply increasing inspiration to creating more objective, positive outcomes for Black-Americans in domains where they have often contended with negative racial stereotypes. In particular, are there specific time points (e.g., being named the first Black-American presidential candidate from a major political party) where Obama's stereotype-defying accomplishments garner focused national attention, and thus have a pronounced positive effect on Black-Americans' academic performance?

One widely accepted explanation that accounts for some of the race-based performance differences on academic tests is the theory of stereotype threat (Steele, 1997; Steele & Aronson, 1995). Stereotype threat is the concern a person has about confirming a negative stereotype about his or her social group. In evaluative testing situations, such as taking a challenging exam, this concern may lead them to perform worse than their abilities would suggest. Recent laboratory work has demonstrated that ingroup role models may be capable of buffering stereotyped targets from the adverse effects of stereotype threat when targets attend to these role models' counter-stereotypic behaviors (e.g., Marx & Goff, 2005). In this article we investigate whether Obama's accomplishments and status as a real world role model can help Black-Americans combat the adverse effects of racial stereotypes and consequently perform better on an academic exam, even under stereotype threat conditions.

Role models in stereotyped domains

The effectiveness of role models for boosting the academic performance of stereotyped individuals is based on three assumptions. First, a role model must be perceived as competent (e.g., Marx, Stapel, & Muller, 2005). Second, stereotyped individuals need to perceive the role model as an ingroup member. For example, past work has shown that role models are most effective when stereotyped individuals and role models share the same gender or racial group membership (e.g., Lockwood, 2006; Marx & Roman, 2002; Marx & Goff, 2005; McIntyre, Paulson, & Lord, 2003) because these role models inspire belief that they can overcome the negative stereotypes associated with their group (Marx & Goff, 2005; see also, Lockwood & Kunda, 1997). Third, individuals need to be acutely

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aware of the role model's success in domains where the role model's group is negatively stereotyped (what we label as success salience) for it to have a positive impact on performance. However, direct contact with the role model is not a necessary condition for the role model's success to be impactful (e.g., Marx & Roman, 2002). What is most critical is that the role model's record of success be readily and explicitly available regardless of whether individuals have direct contact or not with the role model (Buunk, Peiro, & Griffioen, 2007).

Although Obama clearly embodied all three of these assumptions during the course of the presidential election, we argue that there are specific markers of Obama's success that will be particularly powerful in boosting Black-Americans' academic performance. Indeed, Obama may be considered a role model in general, and thus increase hope and inspiration. However, during those times when his stereotype-defying accomplishments are concrete and salient, his success may be capable of shielding stereotyped targets from the negative effects of stereotype threat.

Present study

In this article we capitalized on Obama's role model status as a way to provide the first real-world documentation of how specific markers of Obama's success can positively impact Black-Americans academic performance. Based on past laboratory research on role models (see Marx & Goff, 2005; Marx et al., 2005) and our current theorizing we made the following predictions. When Obama's stereotype-defying successes are pronounced he should boost Black-Americans' exam performance (i.e., Obama Effect) and thus reduce race-based performance differences even when exams are given under stereotype threat conditions. However, the Obama Effect should not prevent ingroup members from being concerned about confirming the negative racial stereotype. Rather, it should shield them from the detrimental effects of the concern about stereotypes on their performance. This is because Obama's success sends a powerful—albeit implicit—message to fellow Black-Americans that they can do it too despite deep-rooted racial stereotypes suggesting otherwise (Marx et al., 2005).

Method

Overview

The present research tested the Obama Effect using an online quasi-experimental design that drew from a large, nationwide sample of Black and White-American participants.[1] A total of 472 participants (Black-American = 84, White-American = 388) took part for a chance to win one of four $100 prizes for their participation. At each data collection time our sample included about one fourth of the participants. Our sample of Black and White participants was matched on age and English proficiency. We also controlled for education level to ensure that differences in ability among our participants was not confounded with our effects, but rather due to the salience of Obama's success.

Data collection

There were four predetermined data collection times, half of which occurred when Obama's success was concrete and salient (*Times* 2, 4) and half when his success was less salient (*Times* 1, 3). Specifically, *Time* 1 (August 22–24) occurred prior to the convention, when Obama had yet to be officially named as the Democratic Party's candidate for president. *Time* 2 (August 28–September 2) occurred just after Obama's nomination and historic convention speech that captured the attention of audiences in the US and abroad. *Time* 3 (October 1–4) occurred at the midpoint between the convention and Election Day, when attention on Obama's stereotype-defying success had waned somewhat, reducing the focus on Obama's historic nomination. *Time* 4 (November 5–7) occurred just after Obama's election to the presidency when again he captured worldwide attention. While the election of any US president would receive worldwide attention, that attention was amplified due to the historic and stereotype-defying nature of his accomplishment.

Procedure and materials

At each data collection time participants were recruited via automated email prompts.[2] Once participants logged on to the study website they were informed that the purpose of the study was to examine how people with different experiences solve problems. They were then told about the verbal exam.

Verbal exam description

For each data collection time we activated stereotype threat in two ways. First, participants were told that the verbal exam was "created by the *Massachusetts Aptitude Assessment Center*, and is used as a diagnostic tool to assess verbal problem-solving ability." They were further told that "the exam is accurate in identifying a person's intellectual strengths and weaknesses". Second, participants indicated their race before taking the exam (e.g., Steele & Aronson, 1995). Both of these manipulations have proven successful in prior research on stereotype threat.

Verbal exam

The verbal exam consisted of 20 problems that were drawn from actual Graduate Record Exams (GREs). The format was identical to the GRE and consisted of three sections: reading comprehension, analogies, and sentence completions. Participants were only allowed 15 min to complete the exam. Scores could range from 0 to 20.

Stereotyped concerns

To assess whether Black-Americans were concerned about confirming the negative stereotype about their group's intellectual ability, participants responded to three statements (e.g., "I worry that if I perform poorly on this test, others will attribute my poor performance to my race" on a 1–7 scale [$\alpha = .88$]). For further details see Marx & Goff, 2005.

After completing the stereotyped concerns measure and demographics questions, participants received a full written debriefing.[3]

Results

Verbal exam performance

Time 1

The purpose of this data collection time was twofold. First, it allowed us to get a baseline measure of race-based performance dif-

[1] Participants were part of a pre-existing pool of American adults who had agreed to regularly take part in experiments presented via e-Lab, which is an online web-based research site hosted by Vanderbilt University.

[2] Participant recruitment involved randomly e-mailing a large number of White and Black participants. No participant took part in more than one data collection time.

[3] Participants also responded to questions about their income and gender.

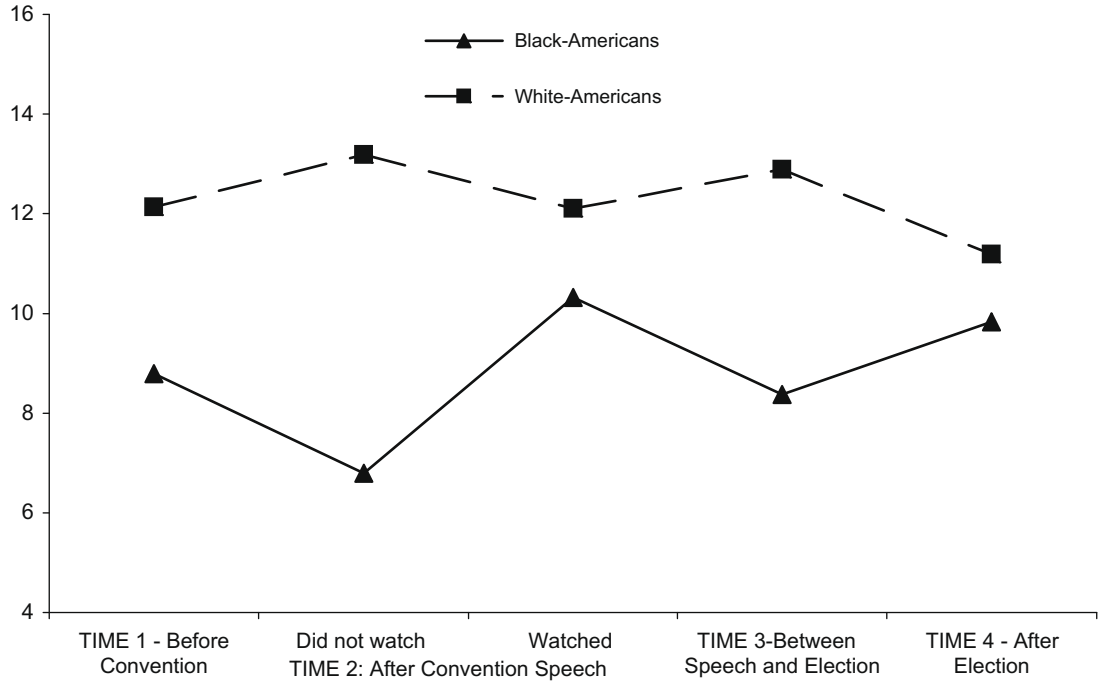

Fig. 1. Participants' mean verbal exam performance as a function of whether Barack Obama's success was salient (*Times* 2 and 4) or not (*Times* 1 and 3), adjusted for education level.

ferences in our real-world population. Second, it served to establish that performance differences can be captured using an online exam procedure. *Time* 1 occurred just prior to the DNC when Obama had not yet accepted the Democratic Party's nomination for president. We analyzed verbal exam performance as a function of participant race, controlling for education level (see Fig. 1). As expected, we found a performance difference between White- ($M = 12.14$) and Black-Americans ($M = 8.79$), $F(1, 128) = 14.67$, $p < .05$, $\eta = .32$. This effect represents the often-found race-based performance difference when racial stereotypes are activated (Steele & Aronson, 1995), plus demonstrates that this effect can be captured online.

Time 2

This data collection occurred immediately after Obama's acceptance speech at the convention. It allowed us to investigate how the stereotype-defying nature of Obama's success via his historic nomination would positively affect Black-Americans' exam performance. Our sample of participants at *Time* 2 included both those who watched and those who did not watch Obama's acceptance speech. If our reasoning about the salience of Obama's success is correct, then only those Black-Americans who watched his speech should benefit. Exam performance was analyzed using a 2 (Participant Race: Black, White) × 2 (Watched Obama Speech: yes, no) between-participants ANCOVA, controlling for education level. Results showed a race main effect, such that White-Americans ($M = 12.65$) performed better than Black-Americans ($M = 8.56$), $F(1, 123) = 17.96$, $p < .05$, $\eta = .36$. But more central to our reasoning was the significant race by success salience interaction, $F(1, 123) = 5.70$, $p < .05$, $\eta = .21$. Simple comparisons revealed that among those participants who *did not* watch Obama's speech (success not salient), White-Americans ($M = 13.19$) outperformed Black-Americans ($M = 6.79$), $F(1, 123) = 16.74$, $p < .05$, $\eta = .35$. However, among those participants who *did* watch Obama's speech (success salient), Black and White-Americans' performance did not differ significantly, $F(1, 123) = 2.50$, $p = .12$, $\eta = .14$, ($M = 10.32$ vs. $M = 12.11$).[4] Importantly, this last effect is consistent with past laboratory research (see Marx & Goff, 2005) and supports our assertion that Obama's success needs to be highly salient for his success to shield Black-Americans from the negative effects of stereotype threat on their test performance.

Time 3

Data were again collected when media attention had shifted somewhat from Obama's historic nomination to the on-going presidential race. At this time Obama's success was uncertain because the election had yet to take place. As before, we analyzed exam performance as a function of participant race, controlling for education level. We found the expected effect of race, such that White-Americans outperformed Black-Americans ($M = 12.89$ vs. $M = 8.37$), $F(1, 95) = 10.19$, $p < .05$, $\eta = .32$. This effect demonstrates that although Obama had achieved more than any other Black-American presidential candidate, his impact on Black-Americans' performance may only occur when his stereotype-defying success is concrete.

[4] Although we matched participants on age, English proficiency, and education level, given the quasi-experimental nature of our design, one could argue that participants who did and did not watch Obama's speech differed in their interest in the presidential race and that this difference could have driven the performance effects. To address this possibility we had participants complete two items ($r = .91$) to assess their interest in the presidential race (viz. "I spend a great deal of time following the 2008 US Presidential Election"; "I am highly engaged in the 2008 US Presidential Election."). We then correlated this political interest variable with participants' performance. Resulted showed no correlation among Black ($r = .23$, $p = .25$) or White ($r = .00$, $p = .96$) participants. To examine political interest further we re-ran the analysis from Time 2 controlling for both political interest and education level. The results were virtually identical to when we only controlled for education level, plus political interest was not a reliable predictor of test performance. Hence, our performance effects appear to be driven by the salience of Obama's success and not to differences in political interest among the participants at Time 2.

Time 4

Our final data collection time came just after the election, when Obama's stereotype-defying accomplishments and status as a role model were once again highlighted in the media. Exam performance was analyzed as a function of participant race, controlling for education level. As predicted, White- and Black-Americans' performance was equivalent ($M = 11.19$ vs. $M = 9.83$), $F(1, 112) = 1.01$, $p = .32$, $\eta = .09$, demonstrating that Obama's impact as a role model, due to the salience of his concrete success, again reduced race-based performance differences.[5]

Stereotyped concerns

Having established that Obama's success translates into positive objective outcomes for Black-Americans, we turned to the question of whether Obama's success likewise reduces concerns about the negative racial stereotype. To answer this question we first compared Black and White-Americans' stereotyped concern scores, controlling for data collection time.[6] Results showed that Black-Americans were indeed more concerned about the stereotype ($M = 3.27$) than were White-Americans ($M = 1.58$), $F(1, 465) = 136.10$, $p < .05$, $\eta = .48$. Next, we compared the stereotyped concern scores of Black participants as a function of the salience of Obama's success (i.e., *Times* 2 and 4 vs. *Times* 1 and 3). Results revealed that regardless of whether Obama's success was salient or not, Black-Americans' concern scores were equivalent, $F(1, 82) = .013$, $p = .91$, $\eta = .48$ ($M = 3.24$ vs. $M = 3.28$). This effect clearly confirms our assertion that role models, such as Obama, can effectively improve performance without needing to eliminate the racial stereotype or the worry that others will attribute a poor performance to their race (see also Marx et al., 2005).

Discussion

These findings provide strong evidence for the notion that the Obama Effect can reduce the adverse effects of stereotype threat, even when concerns about racial stereotypes continue to exist. Hence, the Obama Effect embodies the ability of Black-American role models to buffer Black-Americans academic performance from the negative effects of racial stereotypes. Our work has wide applicability because it demonstrates the powerful impact role models have in the real world (Buunk et al., 2007; Singh, Vinnicombe, & James, 2006). The fact that we found effects with a random sample of American participants, far removed from any direct contact with Obama, attests to the positive impact of role models. At the same time, this research provides evidence that real world role models, such as Obama, can trump racial stereotypes only when their success and accomplishments are especially salient to fellow ingroup members.

One may wonder why Obama did not serve as a role model at all times given that he received extensive media coverage throughout the election period. Indeed, being named as a candidate for the Democratic Party could be perceived as sufficient proof that Obama has successfully overcome negative racial stereotypes. Yet, based on past work (e.g., Marx & Goff, 2005), we argue that salience *per se* is not enough for targets to benefit from the role model's success. Rather, the role model must also have successfully achieved something concrete in the relevant domain. This is why the Obama Effect only occurred just after the DNC and the election since those were times when Obama clearly and successfully achieved a concrete goal. In the other two times, Obama's achievements were too general and hence not as clear an instantiation of a success that defies racial stereotypes.

The Obama Effect also provides hope for a longer-term intervention. If sporadic exposure to someone as removed and physically distant as Obama can positively impact targets even to this extent, then imagine how much more people—such as teachers, neighbors, and older peers—with closer ties to the targets may be able to help if they are perceived as role models. Continued exposure to "close" role models may result in shrinking the race-based performance gap more permanently (Marx, 2009). Consequently, they may also play a hand at dispelling the negative stereotype about Black-Americans' intellectual ability.

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[5] In addition to our primary analyses we found that there was a bigger average performance difference between Black and White participants when Obama's success was less salient (4.76) compared to when it was more salient (1.58), $F(1, 461) = 57.69$, $p < .05$, $\eta = .33$.

[6] Mean stereotyped concern scores by time and race. *Time 1*: Black = 3.39, White = 1.36; *Time 2 (Did not watch)*: Black = 2.42, White = 1.29; *Time 2 (Watched)*: Black = 3.26, White = 1.90; *Time 3*: Black = 3.70, White = 1.59; *Time 4*: Black = 3.17, White = 1.82.