FlashReport

Performance boosts in the classroom: Stereotype endorsement and prejudice moderate stereotype lift

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A B S T R A C T

The present study ($N = 293$) examined whether stereotype endorsement and prejudice moderate stereotype lift (i.e., a performance boost caused by the salience of a negative out-group stereotype in the testing situation). The stereotype in the focus of inquiry was the belief that immigrant students have lower intellectual ability than native students. French native high school students performed an intellectual test in a condition of low stereotype salience (the test was presented as assessing individual differences) or in a condition of high stereotype salience (the test was presented as assessing group differences between African immigrants and native students). As expected, results indicated that native students high in stereotype endorsement and those high in prejudice performed better in the high than in the low stereotype salience condition, whereas those low on these constructs did not. By identifying two moderators of stereotype lift, this study sheds new light on the achievement gap between immigrant and native students in educational institutions.

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Research has consistently documented that negative in-group stereotype salience in testing situations can generate a performance decrease (*stereotype threat*, Steele, Spencer, & Aronson, 2002). This line of work suggests that the achievement gap between low- and high-status groups may partly stem from the tendency of low-status group members to perform poorly when negative in-group stereotypes are salient. The present study adopts a complementary approach, arguing that this achievement gap may also partly stem from high-status group members' tendency to perform better when a negative out-group stereotype is salient.

This approach is mainly based on Walton and Cohen's (2003) meta-analysis, which shows that negative out-group stereotype salience can boost performance (*stereotype lift*). Although reliable, however, this effect was of rather small size. One way to explain this is that it is moderated by some yet unidentified variables. If some individuals are more susceptible to show this effect than others, then it is not surprising that the overall effect size is not substantial. In this optic, the present study examines for the first time the role of beliefs about low-status group members' ability (stereotype endorsement) and prejudice towards these groups in boosting high-status group members' performance.

Previous research has documented that stereotype endorsement moderates stereotype threat among low-status group members, the performance decrease generally being stronger for participants who endorse stereotypes than for those who do not (see Schmader, Johns, & Barquissau, 2004). Likewise, stereotype endorsement might moderate stereotype lift. As Walton and Cohen (2003) argued, people who endorse stereotypes may be especially likely to experience a confidence boost when stereotypes are salient, resulting from a favorable comparison with low-status group members. This may foster performance, especially on difficult tests, necessitating persistence and effort. Although implied by previous work, the moderation of stereotype lift by stereotype endorsement is not demonstrated to date. This hypothesis was tested in the present study on the immigrant student underachievement stereotype.

In a similar vein, Danso and Esses' (2001) study suggests that negative attitudes towards low-status groups held by high-status group members can also boost performance. These authors had White-Canadian students perform an intellectual test when evaluated either by a Black or a White experimenter. Their results show that social dominance orientation (SDO; Sidanius & Pratto, 1999), that is, the extent to which people support hierarchical relations among social groups, was positively related to comparatively better performance in the presence of the Black experimenter. Since SDO has been documented as a potent predictor of prejudice, this research suggests that prejudice towards low-status groups might also moderate stereotype lift. In line with Danso and Esses' (2001) theorizing, highly prejudiced individuals may be especially motivated to perform when a negative out-group stereotype is salient, in order to maintain and justify social arrangement and hierarchy (Jost & Banaji, 1994; Sidanius & Pratto, 1999).

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In sum, previous research *suggests* that stereotype endorsement and prejudice might moderate stereotype lift. However, the respective roles of these variables in producing stereotype lift have yet to be systematically explored. In the current study, we hypothesized that stereotype endorsement and prejudice towards low-status groups would moderate stereotype salience effects on performance, such that being high in stereotype endorsement would increase stereotype lift, as would being high in prejudice. Concerning the combined influence of stereotype salience, stereotype endorsement and prejudice, different predictions seem equally plausible. Participants high in both stereotype endorsement and prejudice may be even more motivated to perform than those high in only one of these constructs, when a negative out-group stereotype is salient. This could lead either to even more enhanced performance or to an extra pressure to perform, resulting in a performance drop (choking under pressure, Baumeister, 1984). Finally, being high in either stereotype endorsement or prejudice may suffice to produce a ceiling effect on performance. In this case, being high in both constructs would not add anything to being high in only one of them. Given that it was not clear what to expect from the combined influence of the three factors, we abstained from predicting a three-way interaction, but we expected two two-way interactions: stereotype salience × stereotype endorsement and stereotype salience × prejudice.

Methods

Participants

Participants were 293 French high school students. There were 167 boys, 122 girls, and 3 gender-unspecified participants (mean age = 14.18, *SD* = .92). Four participants were excluded from the analyses for failing to indicate their nationality and/or the nationality of their parents. There were 225 French national and/or European background students, 57 students with at least one "African immigrant" parent, and 7 with at least one parent coming from another continent. Because they were too few, these participants were excluded from the main analyses. The study was presented as a general survey of high school students. Groups of 20–25 participants were run in a regular classroom, simultaneously by two experimenters. Participants were randomly assigned to two experimental conditions (low vs. high stereotype salience) within classes.

Stereotype salience manipulation

Participants were given a booklet containing all the necessary material. On the first page, they were informed that they would perform an IQ test. In the low stereotype salience condition, the test was said to examine "individual differences in intellectual performance". This test presentation as diagnostic of ability was not expected to generate performance boost, because, as Marx and Stapel (2006) recently demonstrated, high-status group members need a stronger prime to activate negative out-group stereotypes (see also Shih, Ambady, Richeson, Fujita, & Gray, 2002). Therefore, in the high stereotype salience condition, the test was told to examine "whether there are differences in intellectual performance between children from African and European parents". This test presentation was modeled after previous research (see Walton & Cohen, 2003). In both conditions, the test was presented as assessing intellectual ability in order not to induce different motivations to perform.

IQ test

Ten of the Raven's Progressive Matrices (Raven, Raven, & Court, 1998) adapted for participants' age were used. Each matrix is composed of 8 geometric figures, the 9th one being missing. Participants have to choose among 8 proposed solutions the one which most fits the whole pattern (i.e., the one that should be in the 9th place). They were given 10 min to perform the test, which rendered it quite difficult. Their responses were coded such that 0 = incorrect answer, and 1 = correct answer. Following Raven et al. (1998) recommendations, performance was indicated by the sum of correct solutions ($M = 4.50$, $SD = 1.77$).

Stereotype endorsement and prejudice

Stereotype endorsement and prejudice toward African immigrants were assessed at the end of the questionnaire (after a distractive task) to ensure that participants would not have these constructs primed before the test. Stereotype endorsement was assessed with two items: "I think that children from French families are better at school than children from African immigrant families", and "I think that children from French families are more intelligent than children from African immigrant families" (1 = completely disagree, 7 = completely agree; $r = .48$, $p < .0001$). Responses were averaged to indicate stereotype endorsement ($M = 2.06$, $SD = 1.33$). The prejudice measure was based on Dambrun and Guimond's (2001) scale, developed and validated in France. Four items were used (e.g., "I think that the French government should be stricter on African immigration"; 1 = completely disagree, 7 = completely agree; alpha = .79, M = 2.67, $SD = 1.41$). Prejudice and stereotype endorsement scores were significantly related, $r = .40$, $p < .0001$. Because we were interested in their independent contributions to performance, they were corrected for each other (the shared variance was removed from stereotype endorsement, such that $r = 0.00$).

Participants then completed demographic information (sex, nationality, and socioeconomic status). In addition, students' grades were collected from the school official records to control for possible effects of prior achievement on performance. They were matched to each questionnaire by an anonymous code. After completing the booklet, participants were debriefed and thanked for their participation.

Results

Preliminary analyses

Prejudice and stereotype endorsement were regressed on condition (coded $-.5$ = low and $.5$ = high stereotype salience), performance (continuous, centered), and their product term. No significant effects ($ps > .10$) were found, ensuring that these variables were unaffected by the earlier measures. Furthermore, gender, socioeconomic status, or their interaction did not impact performance ($ps > .10$).

Main analyses

Prejudice and stereotype endorsement were predicted to moderate stereotype salience effects on performance. A multiple regression was run to predict performance from condition, stereotype endorsement (corrected for prejudice), prejudice, and all the interactions among these variables. Students' grades were also included in the analysis to control for prior achievement (all variables were centered). The results of this analysis are presented in Table 1.

There was a significant positive effect of student's grades on performance. There was also a significant negative effect of the product term between stereotype endorsement and prejudice. This indicates that the higher were the participants

Table 1
Intellectual performance as predicted by stereotype salience, stereotype endorsement and prejudice

	B	SE	t	p
Intercept	4.52	.11		
Students' grades	.20	.05	4.02	.001
Stereotype salience (condition)	.38	.22	1.69	.092
Stereotype endorsement	−.07	.09	−.78	.433
Prejudice	.03	.08	.42	.669
Stereotype endorsement × prejudice	−.13	.06	-2.27	.024
Condition × stereotype endorsement	.41	.19	2.08	.039
Condition × prejudice	.38	.16	2.33	.021
Condition × stereotype endorsement × prejudice	−.06	.12	−.55	.582

Note. R^2 of the model = .16.

on both of these measures, the worse they performed on the test.

As expected, stereotype endorsement significantly moderated the effect of condition on performance. The more participants believed in immigrant students' inferior ability, the better they performed in the high compared to the low stereotype salience condition (see Fig. 1). Simple slope analyses (computed at ±1 SD) indicated that participants high in stereotype endorsement performed better in the high than in the low stereotype salience condition, $B = .88$, $SE = .33$, $t(206) = 2.62$, $p < .01$, while those low in stereotype endorsement did not, $B = −.12$, $SE = .32$, $t(206) = −.38$,

Fig. 1. Predicted performance means (adjusted for previous grades). The horizontal line ($Y = 3.37$) represents African immigrant students' performance (adjusted for previous grades), unaffected by any of the variables in the present study ($ps > .10$).

ns. Likewise, prejudice scores significantly moderated the effect of condition on performance (see Fig. 1). Highly prejudiced participants (computed at +1 SD) performed better in the high than in the low stereotype salience condition, $B = .91$, $SE = .32$, $t(206) = 2.84$, $p < .01$, while those lowly prejudiced (computed at −1 SD) did not, $B = −.15$, $SE = .32$, $t(206) = −.48$, *ns.* The three-way interaction was not significant, suggesting that the effect of experimental condition on performance was independently moderated by stereotype endorsement and prejudice.

Complementary analyses

Consistent with previous research (e.g., Shih et al., 2002), we also examined whether similar results could be found on the number of items attempted and accuracy (number of items correctly answered divided by the number of items attempted). We thus reproduced the precedent analysis on these dependent variables. Although we found no significant effects on the number of items attempted ($ps > .17$), results observed on accuracy were very close to those reported above. Stereotype endorsement and prejudice scores significantly moderated the effect of condition on accuracy, $B = .07$, $SE = .02$, $t(206) = 2.76$, $p < .01$, and $B = .05$, $SE = .02$, $t(206) = 2.29$, $p < .03$, respectively. With the exception of students' grades, no other effects reached significance in this analysis.

Discussion

The goal of the present study was to explore stereotype endorsement and prejudice as stereotype lift moderators. As predicted, the more participants endorsed the stereotype and the more prejudiced they were, the better they performed in the high compared to the low stereotype salience condition. The fact that stereotype endorsement and prejudice were found as independent moderators of the stereotype lift effect suggests that high-status group members who endorse the stereotype may benefit from stereotype salience even if they are not prejudiced towards low-status groups. In the same way, even if high-status group members do not endorse negative stereotypes about low-status groups, they can experience stereotype lift if they are prejudiced. These findings contribute to the emerging study of negative out-group stereotypes' facilitating effects on performance (e.g., Mendoza-Denton, Kahn, & Chan, 2008) by documenting individual differences that foster these effects.

From a theoretical viewpoint, our results are consistent with Walton and Cohen's (2003) theorizing that stereotype lift effects are influenced by negative beliefs and attitudes towards low-status group members. They also parallel Danso and Esses' (2001) work, corroborating their assumption that it is the salience of a negative out-group stereotype, rather than the presence of a Black experimenter per se, that boosts performance among high-status group members. The present findings also support the ideas that stereotype endorsement contributes to system-justifying behaviors (Jost & Banaji, 1994); and that prejudice fosters concerns with maintaining the in-group in a dominant position (Sidanius & Pratto, 1999).

We may notice that participants who endorsed the stereotype, and those highly prejudiced, reached the lowest performance in the low stereotype salience condition. Although we did not specifically predict this effect, it is in line with previous research documenting that prejudice is negatively related to intellectual performance (e.g., Kutner & Gordon, 1964). However, given that performance depended on the experimental condition, it is suggested that these effects can hardly be attributed to an underlying ability. Rather, experimental conditions probably induced motivational variations as a function of stereotype endorsement and prejudice, resulting in performance variations.
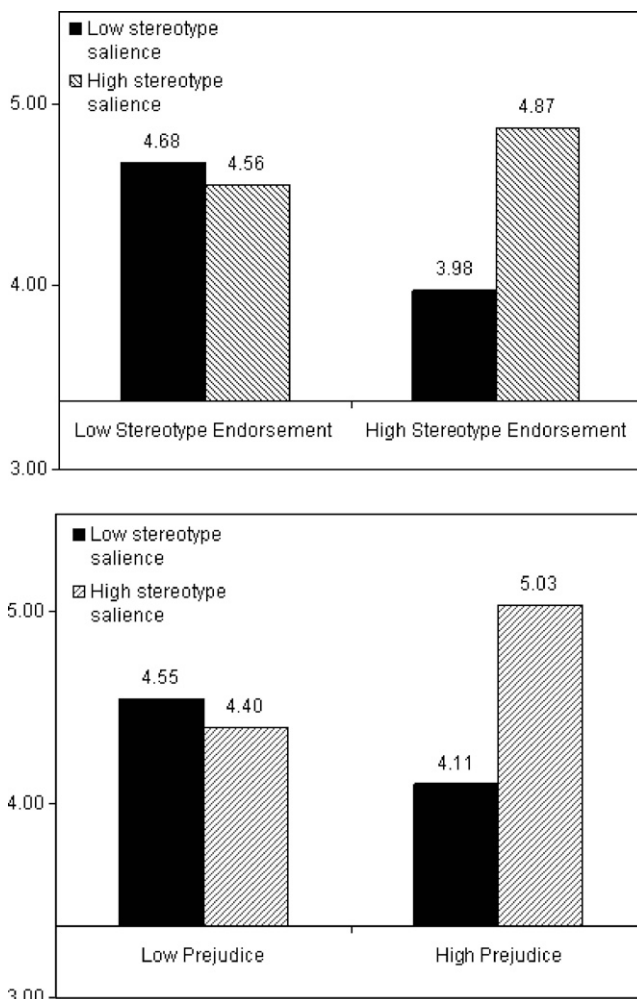
Somewhat surprisingly, our predictions were verified on accuracy but not on the number of items attempted. This may be seen as contradicting our assumption that motivation should be an underlying process. However, in our view it remains somewhat unclear whether or not the number of items attempted should be considered as a proxy of motivation (some participants may seek to find the correct responses without reporting any, while others may give random answers). In addition, motivation is often under-appreciated in social psychology (Baumeister & Vohs, 2007), and some authors have convincingly argued that it should be further considered in current research and theorizing (e.g., Jost, Banaji, & Nosek, 2004). We thus suggest that progress will now come from efforts at identifying which motivational and/or cognitive variables mediate the moderation effects found here.

That being said, we believe that the present study sheds new lights on the boundary conditions of stereotype lift, i.e., a stereotype-related performance effect that has received surprisingly little attention in the past. Early research revolved around the reactions of minority group members to their stigmatized status. However, it appears that stereotyped beliefs and prejudiced attitudes can contribute to high-status group members' performance and widen the achievement gap with minority groups. Clearly, this offers another look at the nature of the differential achievement among social groups in our educational institutions.

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