



Will a Category Cue Affect You? Category Cues, Positive Stereotypes and Reviewer Recall for Applicants

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Abstract. Most empirical research on stereotypes and recall has examined how a single social category of a target can influence a perceiver's recall. Will subtle cues of one or another social category of a target lead reviewers to markedly different recall? In this study one of two social categories of an applicant was subtly cued for reviewers – gender or ethnicity. Common cultural stereotypes hold that Asians have superior quantitative skills compared to other ethnic groups and that women have inferior quantitative skills compared to men. Participants reviewed the college application of a female Asian American high school senior, which included her score on the math scholastic aptitude test (SAT). In a recall task, cues of her gender category resulted in participants recalling significantly lower math performance for the applicant, while cues of her ethnic category resulted in participants recalling significantly higher math performance, compared to a control condition for which neither category was cued. Thus, positive stereotypes can influence reviewer recall, and subtle category cues can result in markedly different recall of an applicant. Findings suggest that category cues and multiple social categories are under-appreciated aspects of stereotyping in general and stereotyping in educational processes in particular.

1. Introduction

Psychologists have long known that people simplify their social environments by using features, such as gender and ethnicity, to categorize others into groups and reduce the complexity of their social world (Hamilton, 1981; Hamilton & Trolier, 1986). Allport (1954) first suggested that categorization of people into groups is necessary for adaptive functioning. Yet while categorization may facilitate information processing, other less desirable consequences such as stereotyping and biased recall may result (Fiske & Taylor, 1991). Stereotypes can be particularly consequential because certain social categories can be highly accessible to perceivers and may implicitly influence recall even in the absence of explicit intentions and awareness (Banaji & Greenwald, 1995).

An appreciation for how stereotypes may influence recall in educational contexts derives from the more general evidence that stereotypes can distort a perceiver's recall of information about a target (e.g., Duncan, 1976; Hamilton & Rose,

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1980). In many educational contexts, such as university admissions processes, individuals must be careful to avoid stereotyping an applicant on the basis of a social group to which they belong. Stereotypes may be of particular concern in application processes because many do not involve face-to-face contact between applicant and reviewer, and because stereotypes may have their greatest impact when a perceiver does not know a target personally.

The individuals we encounter each day, in face-to-face interactions and through mediated channels such as an application process, have many different features and simultaneously belong to many different social categories (Deaux, 1993). Social perception is complicated by the fact that people belong to multiple social categories, such as ethnic, gender, and socio-economic class categories. Some categories which may lead to stereotyping may be readily apparent to a perceiver while others may be less readily apparent (Frable, 1993).

Surprisingly, while much attention has been directed to theoretical and empirical research on stereotyping, little attention has been directed to stereotyping in light of multiple social categories. In fact, in most stereotype research paradigms, a single social category of a target is explored. More recently, psychologists have begun to empirically investigate how perceivers negotiate the many social categories of targets. Advances on this front have been made by social cognition researchers who are conducting research to improve our understanding of how perceptual categorization unfolds when there are multiple possible bases for categorization (see, for example, Macrae, Bodenhausen, & Milne, 1995; Pendry & Macrae, 1996; Smith & Zarate, 1992; Stangor, Lynch, Duan, & Glas, 1992; Zarate & Smith, 1990). Stangor et al. (1992, p. 207) expressed surprise that "the question of which of the many different features of target persons that present themselves are used in social categorization, by which people, under which conditions, and how the use of different features are combined," has only recently come to be a focal interest of social psychologists. Kunda and Thagard (1996) underscored the lack of research on how a perceiver chooses among the many possible categorizations of a target. Kihlstrom and Hastie (1997) warned that "models of social cognition developed to characterize the formation and maintenance of mental representations of stable (laboratory) entities are bound to provide inadequate accounts of social cognition."

Indeed, in order to understand the social and cognitive process involved in stereotyping, psychologists must understand when and why each of a target's many social categories affect a perceiver's impression of, and recall of, a target. For example, we must understand when and why an application reviewer may attend to one or another of an applicant's multiple social categories and how this may differentially affect his or her recall of details about the applicant.

Much of the limited attention given to categorization in light of multiple potential bases for categorization has addressed the question: "Which of competing categorizations will come to dominate a perceiver's evaluation of another?" (Bargh, Bond, Lombardi, & Tota, 1986; Brewer, 1988; Devine, 1989; Fiske & Neuberg, 1990; Hamilton & Sherman, 1994). Stangor et al. (1992) considered several factors

that might influence categorization, including the momentary accessibility of a feature (Higgins & King, 1981), the relative salience or uniqueness of a feature (Fiske, 1980; McGuire, McGuire, Child, & Fujioka, 1978), and the affective or motivational importance of a feature to the perceiver (Erber & Fiske, 1984; Hansen & Hansen, 1988). Perhaps surprisingly, little experimental attention has been paid to understanding the role of category cues – features of the environment or the behavior of an actor which may explicitly or implicitly draw a perceiver to one of a target's many social categories. Can subtle cues lead reviewers to stereotype the same target in different ways and exhibit significantly different recall about a single target?

Concurrent with lack of attention to category cues, and more generally to multiple categories of targets, little empirical work has been directed to understanding positive stereotypes about gender and ethnic groups and the power of positive stereotypes to affect recall. Recent research (Shih, Pittinsky, & Ambady, 1999) found that positive stereotypes such as 'Asians have superior skills in math' can lead to boosts in the academic performance of Asian Americans. While most research focuses on the threatening nature of negative stereotypes, stereotypes which leave their targets vulnerable to self-application and self-confirmation (Steele & Aronson, 1995), this work found that individuals are more generally susceptible to stereotypes. At times they are threatened by, and vulnerable to, negative stereotypes, but at other times they are susceptible to the self-application and self-confirmation of positive stereotypes. Will positive stereotypes influence a reviewer's recall of details about an applicant?

This study examined whether subtle cues of a target's different social categories, gender and ethnic categories, will make salient different stereotypes about the target and influence reviewer recall during an application review. The term 'category cue' is used to refer to a feature of the environment or a behavior of an actor which either explicitly or implicitly draws the attention of a perceiver to one of a target's many social categories. Salience, a property of a stimulus in a particular context (McArthur, 1981; Taylor & Fiske, 1978), is a term researchers use to describe which external objects capture a perceiver's attention. Here the term 'category salience' refers to an instance in which one of many social categories of a target captures a perceiver's attention.

It is important to recognize that a category cue will not eliminate or completely overshadow other influences on perception. For example, the chronic accessibility of some categories may cause them to affect recall independent of the presence or absence of cues of that category. The goal of the present work is to examine swings which may result from cues, not to test hypotheses about the more general accuracy or inaccuracy of person perception.

In this study, participants reviewed the college application materials of an Asian American female. Reviewers had either her gender category (female), her ethnic category (Asian American), or neither category cued. A common stereotype about Asian Americans is that they have superior quantitative skills compared to other

ethnic groups (Oyserman & Sakamoto, 1997; Shih et al., 1999). A common stereotype about women is that they have inferior quantitative skills compared to men (Shih et al., 1999). We hypothesized that reviewers would recall lower math SAT scores if the applicant's gender category was cued, compared to reviewers who had her ethnic category or neither category cued. We further hypothesized that reviewers would recall higher math SAT scores if the target's ethnic category was cued, compared to reviewers who had her gender category or neither category cued. Thus this study investigated:

- (a) whether a positive stereotype about an ethnic group would affect reviewers' recall, and
- (b) whether different category cues would result in very different recall of details about a single applicant by reviewers.

2. Method

The college application of a female, Asian American college-bound high school senior was reviewed by 109 participants (52 female and 57 male undergraduates). Participants were led to believe that they would be reviewing the actual materials of several college applicants and were told that they would be asked to make a series of assessments of each applicant. The participants then read the application materials of an Asian-American high-school senior, Emily Chen.

The application that participants read was a slightly modified version of the Common Application and included the applicant's math SAT score (670 out of a possible 800). The Common Application is the recommended standardized application form of 181 selective, independent colleges and universities, including the school attended by study participants. The application materials, which participants were led to believe were the actual materials of a recent college applicant, were written by an Asian American research assistant.

After finishing reading the application materials, participants were asked to recall several details about the applicant, including her math SAT score, under one of the three conditions:

- (a) 'Female cue,' in which the applicant's gender category was cued;
- (b) 'Asian American cue,' in which the applicant's ethnic category was cued;
- (c) and 'Control' condition, in which neither category was cued.

All participants reviewed the same application materials, with the only differences being those of the experimental manipulation. Across conditions, the manipulation was one of emphasis, through cuing, rather than the presence or absence of information about the applicant's gender or ethnicity.

In the Female cue condition the gender category of the applicant was subtly cued. This was done in two ways. First, instead of appearing at the end of a line in which other information was solicited, the application section in which the applicant reported his or her sex was moved to the beginning of a line. Second, the set of

follow-up questions for reviewers in the Female cue condition was introduced with a paragraph including the sentence: "Please answer the following questions for the female high school student whose materials you just read."

In the Asian American cue condition the ethnic category of the applicant was subtly cued. This was done in two ways. First, the application section in which the applicant reported his or her ethnicity was set off in a box. Also, in addition to a question asking the applicant to voluntarily identify his or her ethnicity which appeared in all conditions, this application included two additional questions related to the applicant's ethnicity: "Is English your first language?" and "Were you born in the United States?" Second, the set of follow-up questions for reviewers in the Asian American cue condition was introduced with a paragraph including the sentence: "Please answer the following questions for the Asian American high school student whose materials you just read".

In the Control condition neither category was cued. The application section in which the applicant reported his or her sex was not moved to the beginning of a line. The application section in which the applicant reported his or her ethnicity was not set off in a box, nor were the two additional ethnicity-related questions included. The set of follow-up questions for reviewers in the Control condition was introduced with a paragraph including the sentence: "Please answer the following questions for the high school student whose materials you just read."

3. Results

Participants in each of the three conditions recalled lower math SAT performance for the applicant than had been presented. In the Control condition, for example, the condition in which neither category was cued, the score recalled was nine points below the actual score presented. Yet, as hypothesized, cuing different social categories of the applicant without introducing any new information led reviewers to stereotype the target in different ways, and to recall significantly different math SAT performance. An ANOVA revealed an effect of participant condition on math SAT score recalled, $F(2, 106) = 3.79, p = 0.02, \eta = 0.27$.

As hypothesized, reviewers for whom the applicant's gender category was cued recalled lower math SAT scores, relative to the reviewers for whom her ethnic category, or neither category, was cued. Reviewers for whom the ethnic category of the applicant was cued recalled higher math SAT scores, relative to the reviewers for whom her gender category, or neither category, was cued. A contrast analysis conducted to test this pattern of results, using lambda weights $-1, 0, +1$ for Female cue, Control, and Asian American cue, respectively, was significant: $t(106) = 2.74, p = 0.008$ (one tailed), $r = 0.26$ (see Table I and Figure 1).

Male and female reviewers responded similarly to category cues. *T*-tests revealed no sex differences within each of the three conditions. A *t*-test by sex for participants in the Control condition was not significant: $t(34) = 1.11, p = 0.27$ (two tailed). A *t*-test by sex for participants in the Female cue condition was not

