

Stereotyping the Stereotypic: When Individuals Match Social Stereotypes

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This research examines how attention and accuracy motivation moderate stereotyping in person perception. Hypotheses were derived from the stereotype validity model, which proposes that perceivers are more likely to use a stereotype as the basis of their impressions when they believe that the generalized beliefs contained within it are valid for the particular target whom they are judging. Consistent with the model's predictions, high attention and high accuracy motivation produced stronger label effects when a target's individuating information matched a stereotype's content. Also consistent with the model's predictions, the opposite pattern was found when a target's individuating information did not match a stereotype's content. Under conditions of a poor match, high accuracy motivation produced weaker label effects. The authors discuss these findings with respect to accuracy and bias in the impression-formation process.

Stereotypes are generalized beliefs about social groups. Stereotypes can bias impressions of target individuals, a process referred to as *stereotyping*. Stereotyping often occurs because of cognitive capacity limitations. When forming impressions of others, perceivers frequently are exposed to a complex array of social information, but have only limited cognitive resources with which to process this information. One way that perceivers reduce the complexity of incoming social information is by using stereotypes to judge targets (Fiske & Neuberg, 1991). Stereotypes can provide ready-made impressions that can free perceivers from having to carefully process a target's personal or individuating information. Thus, stereotyping can help perceivers to form impressions with ease and efficiency.

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The idea that stereotyping occurs in response to cognitive capacity limitations has a long and rich history in social psychology. It has roots in the work of James (1890/1950), was discussed explicitly by Lippmann (1922) and Allport (1954), and is reflected in prominent and contemporary theories of social perception and stereotyping (Chaiken & Trope, 1999). There also exists an impressive body of empirical work demonstrating that cognitive capacity limitations increase stereotyping. Studies repeatedly show that stereotyping is stronger when motivational or situational factors reduce perceivers' attention to targets' individuating information (for reviews, see Brewer, 1988; Fiske, Lin, & Neuberg, 1999; Hilton & Darley, 1991; Leyens, Yzerbyt, & Schadron, 1994; Spears & Haslam, 1997; von Hippel, Se-quaptewa, & Vargas, 1995).

However, most studies demonstrating that cognitive capacity limitations increase stereotyping have focused on targets whose individuating information did not closely match a stereotype's content, such as targets with ambiguous, irrelevant, or mixed individuating information (for a review, see Kunda & Thagard, 1996; for discussions on this topic, see Nolan, Haslam, Spears, & Oakes, 1999; Spears, Haslam, & Jansen, 1999). Whether similar or different patterns emerge under conditions of a good match has not been specified clearly by current models of stereotyping. For example, although the continuum model of impression formation (Fiske & Neuberg, 1991) predicts that stereotyping is more likely when targets display stereotype-consistent individuating information, and less likely when perceivers attend closely to a target's individuating information or when they are highly motivated to form accurate impressions, it does not explicitly specify how these factors interact to influence stereotyping; that is, how attention and accuracy motivation moderate stereotyping when targets display stereotype-consistent individuating information.

The empirical literature has also not provided a strong basis on which to draw a conclusion about this issue. Although a host of studies have examined stereotyping in the context of stereotype-consistent targets (for reviews, see Fiske & Neuberg, 1991; Kunda & Thagard, 1996), only a few have examined how motivational and situational factors moderate stereotyping under this condition. Moreover, these few have produced mixed results, with some showing that increasing cognitive expenditures has no effect on stereotyping when targets match social stereotypes (e.g., Neuberg & Fiske, 1987), and others showing that increasing cognitive expenditures exacerbates stereotyping when targets match social stereotypes (Nolan et al., 1999; Pratto & Bargh, 1991; for a review, see Spears & Haslam, 1997). The inconsistency of the empirical record highlights the need for further investigation of how motivational and

situational factors moderate stereotyping in the context of stereotypic targets.

With this goal in mind, the current research examines how attention and accuracy motivation moderate stereotyping when a target's individuating information matches the content of a social stereotype. We address this issue from the perspective that stereotyping can serve an elaborative function. We use the term *elaboration* to refer to an individual-level, social-cognitive process wherein a perceiver applies a stereotype's content to a particular target to generate a fuller impression of that target. Although the idea that stereotypes can elaborate impressions is consistent with current social-cognitive models of stereotyping (e.g., Fiske & Neuberg, 1991), such models typically assume that elaboration occurs in the service of cognitive economy. However, recent research has suggested that the process of stereotyping sometimes may be an effortful process (Nolan et al., 1999; Oakes, Haslam, & Turner, 1994; Ryan, 2002; Ryan, Robinson, & Hausmann, 2004). Drawing on this emerging literature, we propose a model of stereotyping in person perception, referred to as the stereotype validity model.

Stereotype Validity Model

The *stereotype validity model* proposes that perceivers are more likely to use a stereotype as an elaborative mechanism when they believe that the generalized beliefs contained within it are valid for the particular target whom they are judging. According to the model, therefore, perceivers' willingness to judge a target in line with a stereotype's content is hypothesized to vary depending on the stereotype's perceived validity for the particular target being judged. Thus, in contrast to models that propose that perceivers primarily use stereotypes when their cognitive resources are limited, the stereotype validity model proposes that perceivers use stereotypes primarily when those stereotypes appear to provide valid information about individual targets.

Figure 1 depicts the stereotype validity model. "Path a" represents the model's premise that the more valid a stereotype appears for a particular target, the more perceivers are expected to use the stereotype as the basis of their impressions of that target. The model further proposes that three variables influence stereotyping via their effect on the perceived validity of a stereotype: (a) the match between a target's individuating information and a stereotype's content (Path b), (b) the extent to which perceivers attend to a target's individuating information (Path c), and (c) situational and motivational factors affecting perceivers during the impression-formation process (Path d).

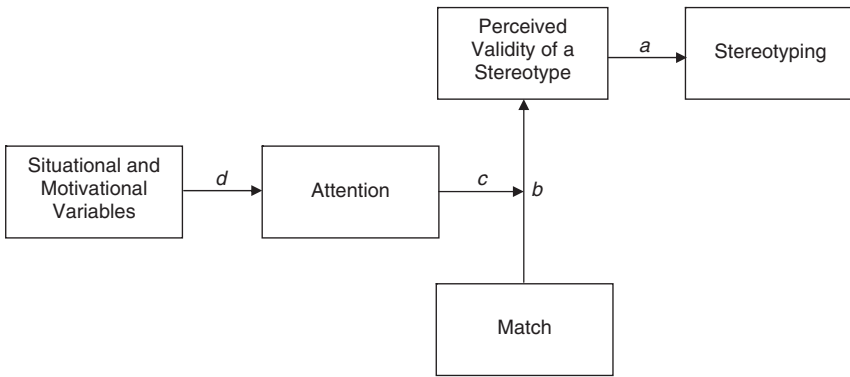


Figure 1. The stereotype validity model. The model proposes that the more valid a stereotype appears for a particular target, the more perceivers use the stereotype as the basis of their impressions about that target. Three variables are predicted to influence stereotyping via their effect on the perceived validity of a stereotype: match, attention, and situational and motivational factors. Stereotyping is hypothesized to be stronger the more closely a target's individuating information matches a stereotype's content (Path b). High attention is predicted to increase stereotyping when the match between a target's individuating information and a stereotype is good, but decrease stereotyping when the match is poor (Path c). Situational and motivational variables are posited to directly influence attention (Path d) and to influence stereotyping indirectly via attention.

Match

A target's individuating information may match a stereotype's content to a greater or lesser extent.² For example, a woman who is nurturing and feminine matches sex stereotypes better than does a woman who is competitive and masculine. The stereotype validity model proposes that the match between a particular target's individuating information and a stereotype's content directly influences the extent to which a stereotype is viewed as a generally valid predictor of the target's other attributes (Path b).

According to the model, perceivers assume that a target who matches a stereotype in some respects will also match it in other respects, but that a target who does not match a stereotype in some respects will probably not

²We define the match between a target's individuating information and a stereotype as the degree to which that target's individuating information fits the attributes associated with the target's social group. This differs from the concept of normative fit, which is proposed by self-categorization theory. According to Spears and Haslam (1997, pp. 205–206), "Self-categorization theory ... does not define fit in terms of the match of an individual exemplar to a category prototype Fit is thus not a property of the stimulus defined in relation to a category, but a property of the context-specific relation between stimuli (i.e., plural) and category."

match it in other respects. Thus, the extent to which a target's individuating information matches a stereotype is predicted to influence perceivers' confidence about whether the generalized beliefs contained within the stereotype generally will apply to the target being judged. Stereotyping is hypothesized to be stronger the more closely a target's individuating information matches a stereotype's content because the better the match, the more valid the stereotype will appear for that particular target.

Attention

The model also proposes, however, that the extent to which a target is perceived as matching a stereotype partly depends on perceivers' ability to attend to the target's individuating information (Path c). Low attention is posited to interfere with perceivers' ability to assess the match between a particular target's individuating information and a stereotype's content (Nolan et al., 1999; Spears & Haslam, 1997). As a result of this interference, perceptions of the match are hypothesized to regress to the mean (Fiedler, 1991). Perceivers are expected to judge the match between a stereotype and a stereotype-consistent target as better under conditions of high attention, and as worse under conditions of low attention. Likewise, perceivers are expected to judge the match between a stereotype and a stereotype-inconsistent target as worse under conditions of high attention, and as better under conditions of low attention. Based on these hypothesized relations, the model predicts that high attention increases stereotyping when the match between a target's individuating information and a stereotype is good, but decreases stereotyping when the match is poor.

Situational and Motivational Variables

The model also predicts that the extent to which perceivers attend to a target's individuating information differs depending on the influence of a variety of situational (e.g., time pressure) and motivational (e.g., accuracy motivation) variables (Fiske & Neuberg, 1991). For example, attention to a target's individuating information is predicted to be higher when perceivers have unlimited time to form their impressions or when they are motivated to form accurate impressions, but lower when perceivers have limited time to form their impressions or when they are not motivated to form accurate impressions. Thus, the moderating influence that situational and motivational variables have on stereotyping is posited to be indirect and mediated via attention (Fiske & Neuberg, 1991). As such, any situational or motivational variable that increases perceivers' attention to a target's individua-

ting information should increase stereotyping the more closely a target's individuating information matches a stereotype's content, but decrease stereotyping the less closely a target's individuating information matches a stereotype's content.

Hypotheses

The current research includes two experiments that test core predictions of the stereotype validity model. Experiment 1 examines how attention to a target's individuating information moderates stereotyping when a target's individuating information matches a stereotype's content. It is hypothesized that under conditions of a good match, perceivers will stereotype a target more strongly when their attention to the target's individuating information is high versus low.

Experiment 2 examines how accuracy motivation moderates stereotyping when a target's individuating information either does or does not match a stereotype's content. Accuracy motivation is predicted to increase stereotyping when the match between a target's individuating information and a stereotype's content is good, but to decrease stereotyping when the match is poor.

Experiment 1

Experiment 1 examines how attention to a target's individuating information moderates stereotyping in the context of a stereotype-consistent target. Participants formed impressions of a male target who was labeled as either a Republican or a Democrat. In both cases, the target's individuating information closely matched the Republican male stereotype. The experiment utilizes a distraction task to manipulate participants' attention to the target's individuating information. Participants reported their impressions of the target by rating him on traits associated with the male Republican stereotype.

Method

Participants

Participants included 90 undergraduates (59 female, 29 male, 2 gender not reported) from introductory psychology courses who participated as a way to fulfill a course requirement. The sample included 5 African Americans, 10 East Indians, 16 Asians, 45 Caucasians, 4 Latino/Hispanics, 8 participants who categorized their ethnicity as "other," and 2 participants who omitted ethnicity information.

Design and Manipulations

Participants were randomly assigned to a 2×2 (Label: Republican vs. Democrat \times Attention: Low vs. High) between-subjects experimental design. Participants read a description supposedly written by a male target who labeled himself as either a Republican ($n = 45$) or a Democrat ($n = 45$). Participants read the description while an eight-digit number was recited on audiotape. Attention was manipulated by instructing low-attention participants ($n = 43$) to pay closer attention to the number, and instructing high-attention participants ($n = 47$) to pay closer attention to the written description.

Procedure

An experimenter informed participants that the study examined perceivers' ability to concentrate on two simultaneous tasks, and that they would have 30 s to listen to an eight-digit number that would be recited on audiotape while also reading a description of a person. Participants were instructed to attend to both the number and the description. However, low-attention participants were told that remembering the number was their primary task, whereas high-attention participants were told that remembering the description was their primary task.

The experimenter then distributed folders that contained the experimental materials. Participants were not permitted to read the target's description until the experimenter began the audiotape, at which point participants simultaneously listened to the audiotape and read the description. After 30 s, the experimenter stopped the audiotape and participants closed the folder containing the target's description. Participants then completed the remaining materials contained in the additional folders. Participants were not permitted to refer back to the description while completing these materials.

Experimental Materials

Audiotape. The audiotape began with a short beep, followed by the presentation of an eight-digit number that was recorded in a male voice. The number was repeated three times at a rate of 1 digit per s with a 3-s pause between each repetition. A second beep signaled the end of the tape.

Target description. The content of the target's description was determined on the basis of a pretest. The pretest identified attributes that are irrelevant to, stereotypic of, or counterstereotypic of male Republicans. Pretest participants (73 female, 41 male) indicated the extent to which 95 attributes characterized male Republicans.

Pretest attributes included personality traits from Gough and Heilbrun's (1983) adjective checklist; free responses obtained from a previous study (Robinson, Montiel, Jakubowski, & Madon, 1996); and attributes generated by the researchers that related to ethnicity, religion, employment, physical appearance, and behaviors. Each attribute was rated on a 5-point scale: 1 (*very uncharacteristic of male Republicans*), 2 (*somewhat uncharacteristic of male Republicans*), 3 (*no more characteristic of male Republicans than of any other group*), 4 (*somewhat characteristic of male Republicans*), 5 (*very characteristic of male Republicans*).

Based on criteria set forth by Ashmore, Del Boca, and Wohlers (1986), an attribute was considered *irrelevant* if 65% or more of pretest participants indicated that it was *no more characteristic of male Republicans than of any other group*. An attribute was considered *stereotypic* if at least 60% of pretest participants judged it as *very characteristic* or *somewhat characteristic of male Republicans*, and 10% or fewer participants judged it as *very characteristic* or *somewhat uncharacteristic of male Republicans*. An attribute was considered *counterstereotypic* if at least 60% of pretest participants judged it as *very characteristic* or *somewhat uncharacteristic of male Republicans*, and 10% or fewer participants judged it as *very characteristic* or *somewhat characteristic of male Republicans*.

Of the attributes fitting these criteria, we selected six to use in the target's description in Experiment 1. These attributes included one irrelevant attribute (i.e., cheerful) and five stereotypic attributes (i.e., traditional, support the death penalty, persistent, assertive, and look out for own personal gain). Each attribute was embedded in the following description that was handwritten by a male experimenter.

I guess the most important thing to know about me is that I am 32 years old and I am a [*Democrat/Republican*]. I am also a cheerful person. I tend to be traditional, and I support the death penalty. I am also persistent and assertive, and look out for my own personal gain.

Questionnaire

A questionnaire assessed participants' impressions of the target by having them rate him on seven stereotype-relevant attributes. These seven attributes were identified by the pretest described earlier as being either counterstereotypic (i.e., is a hairdresser, follows fads) or stereotypic (i.e., clean-shaven, well-groomed, is White, reads the newspaper, formal) of male Republicans. Participants judged how "clean-shaven," "well-groomed," and "formal" the target was on a 7-point scale ranging from 1 (*not at all*) to 7

(*very*). They judged how likely it is that the target “is White” and “is a hairdresser” on a 7-point scale ranging from 1 (*not at all likely*) to 7 (*very likely*). Finally, participants rated how often the target “reads the newspaper” and “follows fads” on a 7-point scale ranging from 1 (*never*) to 7 (*very often*).

Participants also judged the target on seven fillers that were either part of the target’s description (e.g., supports the death penalty) or that were identified by the pretest as being unrelated to the male Republican stereotype (e.g., understanding). The fillers were not used in any of the analyses and are not discussed further.

The questionnaire also included items designed to assess the effectiveness of the label and attention manipulations. Participants indicated the target’s category membership on a checklist that included the labels “Republican” and “Democrat,” plus eight filler labels (e.g., animal lover, student).

Four items assessed the effectiveness of the attention manipulation. Participants were asked to (a) recall as much of the target’s description as they could remember, (b) indicate how much they had attended to the description on a 7-point scale ranging from 1 (*very little*) to 7 (*a lot*), (c) recall as many digits of the number as they could, and (d) indicate how much they had attended to the number on a 7-point scale ranging from 1 (*very little*) to 7 (*a lot*).

Dependent Variable

Ratings of the target on the counterstereotypic attributes were reverse scored. Ratings were then averaged across the seven stereotype-relevant attributes to create the dependent variable. Greater values on the dependent variable corresponded to impressions that were more consistent with the male Republican stereotype.

Results and Discussion

Manipulation Checks

Label. Frequencies indicate that the label manipulation was effective. All 90 participants correctly identified the target as either a Democrat or a Republican.

Attention and gender. Four separate 2×2 (Attention \times Gender) ANOVAs examined the effectiveness of the attention manipulation among women and men. The dependent variables in these analyses were the four attention manipulation-check items described earlier.

Results indicate that the main effect of attention was significant across all four analyses. High-attention participants (who were instructed to attend more closely to the description than to the number) recalled more attributes from the target's description ($M = 1.98$) than did low-attention participants ($M = 1.33$), $F(1, 84) = 9.57$, $p < .05$ ($d = 0.64$); reported attending more closely to the target's description ($M_s = 4.19$ vs. 3.28), $F(1, 84) = 8.06$, $p < .05$ ($d = 0.68$); recalled fewer digits from the eight-digit number ($M_s = 2.47$ vs. 3.28), $F(1, 84) = 3.84$, $p = .05$ ($d = 0.34$); and reported attending less closely the eight-digit number ($M_s = 3.66$ vs. 5.16), $F(1, 84) = 21.45$, $p < .05$ ($d = 1.01$). The Attention \times Gender interaction was not significant in any of these analyses, indicating that the effectiveness of the manipulation did not differ for women and men, all $F_s(1, 84) \leq .52$, $p_s \geq .47$.

Main Analysis

Data were analyzed with a 2×2 (Label \times Attention) ANOVA in which the dependent variable was the average impression of the target on the stereotype-relevant attributes. Stereotyping was operationalized as the effect of the label on impressions. The results yielded a significant main effect for label, $F(1, 86) = 16.94$, $p < .01$ ($d = 0.92$). Impressions of the Republican target ($M = 5.58$) were more consistent with the male Republican stereotype than were impressions of the Democratic target ($M = 4.91$).

The main effect for attention was not significant, $F(1, 86) = 1.29$, $p = .26$ ($d = 0.26$). However, consistent with the prediction that stereotypes would bias impressions more strongly when attention to a stereotypic target was high versus low, the Label \times Attention interaction was significant and in the expected direction, $F(1, 86) = 7.31$, $p < .01$ (Table 1). Comparisons reveal that when attention was high, impressions of the Republican target ($M = 5.86$) were significantly more consistent with the male Republican stereotype than were impressions of the Democratic target ($M = 4.80$), $t(88) = 4.94$, $p < .01$ ($d = 1.45$). In contrast, when attention was low, impressions of the Republican ($M = 5.26$) and Democratic ($M = 5.04$) targets did not differ significantly, $t(88) = 0.98$, $p = .33$ ($d = 0.30$).³

Results from the label manipulation check, in which all participants correctly indicated the target's social group membership, indicates that the

³An additional analysis that included participant gender as a factor reveals that gender did not have a significant main effect on impressions, nor was it involved in any significant interactions, all $F_s(1, 80) \leq 1.83$, $p_s \geq .18$. Moreover, including gender in the analysis did not change the main finding of this study. Both the pattern and the significance level of the two-way interaction between label and attention remained stable, $F(1, 80) = 5.48$, $p = .02$.

Table 1

Cell Means and Standard Deviations: Experiment 1

Attention	Democrat		Republican	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Low	5.04	0.60	5.26	0.80
High	4.80	0.80	5.86	0.72

Note. $N = 90$. Higher values reflect impressions that are more consistent with the male Republican stereotype.

tendency for high attention to increase stereotype in these data does not reflect a failure on the part of low-attention participants to notice the target's group membership as a result of having been instructed to attend more closely to the number than to the description that contained the label. An additional analysis that included participants' memory for the target's individuating information as a covariate in the 2×2 (Label \times Attention) ANOVA described earlier shows that the Label \times Attention interaction remained significant, even when controlling for memory, $F(1, 85) = 7.50$, $p < .01$. This suggests that the pattern of label effects also does not reflect differential memory of the stereotypic individuating information on the part of low- and high-attention participants. Thus, the results of this experiment support the stereotype validity model by showing that the degree to which participants relied on a stereotype to form an impression of a stereotypic target was greater the more closely they attended to the target's individuating information.

Experiment 2

The results of Experiment 1 were consistent with the stereotype validity model. The more participants attended to a target whose individuating information matched a stereotype's content, the more they relied on a stereotype to form an impression of that target. Experiment 1 did not, however, examine the model's predictions with respect to a target whose individuating information did not closely match a stereotype's content. Therefore, in Experiment 2, we further test the model by examining stereotyping in the context of a target whose individuating information varies with respect to its stereotypicality.

The moderator examined in this study is accuracy motivation. *Accuracy motivation* refers to perceivers' motivation to form an accurate impression of

a target. Past research has indicated that accuracy motivation affects attention to individuating information; that is, perceivers attend more closely to those targets about whom they want to form accurate impressions (Fiske & Neuberg, 1991; Neuberg & Fiske, 1987). Drawing on this work, the stereotype validity model proposes that the moderating effect of accuracy motivation on stereotyping mirrors the moderating effect of attention on stereotyping. That is, the motive to form an accurate impression is predicted to increase stereotyping when the match between a target's individuating information and a stereotype's content is good, but to decrease stereotyping when the match is poor.

The model proposes that this pattern of relations stems from differences in the perceived validity of the stereotype. By virtue of attending more closely to a target, high accuracy motivation perceivers are predicted to view a good match between a target's individuating information and a stereotype as being better than do low accuracy motivation perceivers, and to view the stereotype as more valid for this particular target as a result. Likewise, by virtue of attending more closely to a target, high accuracy motivation perceivers are predicted to view a poor match between a target's individuating information and a stereotype's content as being worse than do low accuracy motivation perceivers, and to view the stereotype as less valid for this particular target as a result.

Experiment 2 tests the model's predictions by having participants read handwritten self-descriptions of three different targets. After reading each description, participants were asked to judge each target on a series of personality traits by responding to questions displayed on a computer. The first and second targets were the same for all participants and were included as part of the accuracy motivation manipulation. The third target was the target of interest. This target was labeled as either *gay* or *heterosexual*, and was described with individuating information that either did or did not match the content of the gay male stereotype. Participants reported their impressions of the third target by rating him on traits associated with the gay male stereotype.

Method

Participants

Participants were 250 undergraduates (187 female, 63 male) who participated in exchange for extra credit in their psychology class. The sample included 9 African Americans/Blacks, 18 Asians, 214 Caucasians, 4 multi-ethnic participants, and 5 participants who categorized their ethnicity as "other."

Experimental Design

Participants were assigned randomly to a $2 \times 2 \times 2$ (Label: Father vs. Gay Male \times Match: Good vs. Poor \times Accuracy Motivation: Low vs. High) between-subjects experimental design. The manipulations apply only to the third target, who is the target of interest.

Manipulations

Label. The label was manipulated by having the third target describe himself either as *gay* ($n = 125$) or as having recently had a baby with his wife, subsequently referred to as the *father* target ($n = 125$). The father designation (i.e., having a wife and child) implies that the target was heterosexual, and thereby minimized the likelihood that participants would infer that he was gay on the basis of his individuating information, which sometimes matched the gay male stereotype.

Match. The third target's description either matched ($n = 125$) or did not match ($n = 125$) the gay male stereotype. In the good match condition, the description included three attributes identified by past research (Madon, 1997) as stereotypic of gay men (i.e., warmhearted, sentimental, artistic):

I suppose that the most important thing to know about me is that [*my wife and I recently had a baby or I am gay*]. That has had a big impact on my life. My experience as a college student is not typical because I am an older student. I attended a different college for a couple of years and then took some time off to work. I just returned to school this semester. So far, it's been a good experience. I would describe myself as a warmhearted person. I am the kind of person who easily gets sentimental about things. I have always been an artistic person, and I enjoy painting with watercolors.

In the poor match condition, the description included three attributes identified by past research (Madon, 1997) as counterstereotypic of gay men (i.e., traditional, not emotional, hunts animals):

I suppose that the most important thing to know about me is that [*my wife and I recently had a baby or I am gay*]. That has had a big impact on my life. My experience as a college student is not typical because I am an older student. I attended a different college for a couple of years and then took some time off to work. I just returned to school this semester. So far, it's been

a good experience. I would describe myself as a traditional person. I am the kind of person who does not easily get emotional about things. I have always been an outdoors person, and I like to camp and hunt deer.

Accuracy motivation. Accuracy motivation was manipulated by giving low- and high-accuracy motivation participants ($n = 126$ and 122 , respectively) different expectations about their likelihood of having to answer additional questions about the three targets. Low accuracy participants expected to answer additional questions about one target. High accuracy motivation participants expected to answer additional questions about each target whom they judged inaccurately. High accuracy motivation participants also believed that they could avoid these questions altogether by making accurate judgments of each target at the outset.

All participants answered the additional questions about the second target immediately after having made their judgments about him. Whereas low accuracy motivation participants expected to answer the additional questions one time during the study, high accuracy motivation participants believed that they were asked the additional questions at this time because their judgments of the second target had been inaccurate, and that they would be asked similar questions about the third target if they judged that target inaccurately. Thus, low accuracy motivation participants attributed the presentation of the additional questions to study procedures, whereas high accuracy motivation participants attributed the presentation of the additional questions to the inaccuracy of their impressions. The additional questions were designed to be mildly unpleasant, so that high accuracy motivation participants would be motivated to judge the third target accurately as a way to avoid the personal cost of having to answer the additional questions again.

Procedure

After obtaining informed consent, a female experimenter informed participants that they would each read descriptions of three different people, and then rate each person on a series of personality traits by responding to questions on a computer. The experimenter then delivered the accuracy motivation manipulation. She told low accuracy motivation participants that they would answer additional questions about one of the three targets to obtain more information about the impression-formation process. In contrast, she told high accuracy motivation participants that each target previously had taken a highly accurate personality test, and that the computer would assess how accurately they had judged each target by comparing their ratings to each target's personality test responses.

High accuracy motivation participants were further told that if their ratings of a target were accurate, they could proceed immediately to the next target without answering any additional questions. However, if their ratings were not accurate, they would be required to complete additional questions about the target whom they had judged inaccurately to obtain more information about the impression-formation process before proceeding to the next target. After receiving this information, participants were escorted to individual rooms, each equipped with a personal computer. The computer provided instructions, collected responses, and informed participants when to obtain materials from the experimenter. The computer also delivered bogus feedback to high accuracy motivation participants indicating how accurately they had judged each target.

All participants then read the first target's description and rated the target on 15 traits by responding to questions on the computer. Upon completing their ratings, participants in the low and high accuracy motivation conditions received different information from the computer. Participants in the low accuracy motivation conditions received a computer message instructing them to proceed to the second target by obtaining the second target's description from the experimenter. Participants in the high accuracy motivation condition received a computer message informing them that their impressions of the first target were accurate and that they could, therefore, proceed directly to the second target by obtaining the second target's description from the experimenter. Thus, high accuracy motivation participants were led to believe that they did not have to answer the additional questions about the first target because their impressions had been accurate.

All participants then read the second target's description, after which they rated this target on a new set of 15 traits by responding to questions on the computer. After the participants completed these ratings, the computer again provided different information to participants in the low and high accuracy motivation conditions. Participants in the low accuracy motivation conditions received a computer message indicating that it was now time for them to answer the additional questions that they had been expecting. Participants in the high accuracy motivation condition received a computer message informing them that their impressions of the second target were inaccurate and that they would, therefore, be asked additional questions about that target. Thus, high accuracy motivation participants were led to believe that they had to answer the additional questions because their impressions of the second target had been inaccurate.

All participants then answered 45 repetitive, *Yes-No* questions about the second target that required approximately 7 min to complete. The questions asked participants whether or not 15 traits described the second target

according to their own opinion, according to the average opinion of people living in their state, and according to the average American's opinion. The traits were presented individually on the computer for 4 s. If a participant did not provide a valid response during this window, the computer beeped and repeated the question until it was answered in the time allotted. When they had completed the additional questions about the second target, high accuracy motivation participants had personally experienced the benefit of developing accurate impressions (Target 1) and the personal cost of developing inaccurate impressions (Target 2). Therefore, they should have been motivated to judge the third target accurately as a way to avoid further personal costs. Judgments of the first and second target were not used in any of the analyses and are not discussed further.⁴

At this point in the study, participants obtained and read the third target's description, after which they judged him on a new set of 15 traits that were selected on the basis of past research (Madon, 1997). Of these traits, 10 related to the gay male stereotype, including 9 that are stereotypic of gay men (i.e., affectionate, fashionable, understanding, sensitive, liberal, different, individualistic, open-minded, feminine) and 1 that is counterstereotypic of gay men (i.e., old-fashioned). The remaining 5 traits were fillers (e.g., absentminded) that have been shown to be unrelated to the gay male stereotype (Madon, 1997). The fillers were not used in any of the analyses and are not discussed further.

After rating the third target on these traits, the computer informed high accuracy motivation participants that their impressions of the third target were accurate, and instructed all participants to inform the experimenter that they had completed the computer portion of the experiment. At this point, the experimenter distributed a questionnaire. Upon completion of the questionnaire, participants were debriefed and dismissed.

Questionnaire

The questionnaire included manipulation checks for the label, match, and accuracy motivation manipulations. The label manipulation check assessed whether participants were aware of the third target's category membership by having them indicate his social group membership on a checklist that included the labels "gay male" and "father," plus eight filler social labels (e.g., "student," "police officer").

The match manipulation check assessed the extent to which participants perceived the third target to be similar to gay men in general. Participants

⁴Target 1 was labeled as a female college student, while Target 2 was labeled as a male college student.

responded on a 7-point scale ranging from 1 (*not at all similar*) to 7 (*very similar*). The accuracy motivation manipulation check assessed the extent to which participants felt that it was important for them to rate the third target accurately. Participants responded to this item on a 7-point scale ranging from 1 (*not at all important*) to 7 (*very important*).

Dependent Variable

Ratings of the third target on the counterstereotypic attribute were reverse-scored. Ratings were then averaged across the 10 stereotype-relevant attributes to create the dependent variable. Greater values on the dependent variable corresponded to impressions that were more consistent with the gay male stereotype.

Results and Discussion

Manipulation Checks

Label. Frequencies indicate that 248 participants correctly identified the target as either a father or as a gay male on the label manipulation-check item. The 2 participants who did not correctly identify the target's social group membership were excluded from all subsequent analyses.

Match. A 2×2 (Match \times Gender) ANOVA examined the effectiveness of the match manipulation among women and men. The dependent variable was the extent to which participants perceived the third target to be similar to gay men in general. Results indicate that the main effect of match was significant, $F(1, 244) = 17.85, p < .01$; but the Match \times Gender interaction was not, $F(1, 244) = 0.12, p = .73$. These results provide evidence that the match manipulation was effective and that its effectiveness did not differ for women and men.

Accuracy motivation and gender. A 2×2 (Accuracy Motivation \times Gender) ANOVA examined the effectiveness of the accuracy motivation manipulation among women and men. The dependent variable was participants' self-reported level of accuracy motivation assessed by the accuracy motivation manipulation check.

Results indicate that the main effect for accuracy motivation was marginally significant, providing evidence that the manipulation was moderately effective, $F(1, 242) = 3.20, p = .08$. The results also reveal that the accuracy motivation manipulation did not interact with participant gender, indicating that its effectiveness did not differ across women and men, $F(1, 242) = 0.67, p = .41$. All subsequent analyses were collapsed across gender.

Main Analyses

Data were analyzed with a $2 \times 2 \times 2$ (Label \times Match \times Accuracy Motivation) ANOVA. The dependent variable was participants' average impression of the third target on the stereotype-relevant traits. Stereotyping was operationalized as the effect of the label on impressions. This analysis tested the prediction that high accuracy motivation increases stereotyping when a target's individuating information matches a stereotype's content, but decreases stereotyping when a target's individuating information does not match a stereotype's content.

Consistent with the prediction, there was a significant three-way interaction among the label, match, and accuracy motivation, $F(1, 240) = 4.20$, $p = .04$ (Figure 2). Comparisons of the cell means (Table 2) indicate that when the match between the target's individuating information and the gay male stereotype was good, the label influenced impressions more strongly when accuracy motivation was high, $t(240) = 4.74$, $p < .01$ ($d = 1.20$), than when it was low, $t(240) = 3.27$, $p < .01$ ($d = 0.83$). In contrast, when the match between the target's individuating information and the gay male stereotype was poor, the label influenced impressions less strongly when accuracy motivation was high, $t(240) = 5.82$, $p < .01$ ($d = 1.51$), than when it was low, $t(240) = 8.68$, $p < .01$ ($d = 2.18$).⁵

These results suggest that accuracy motivation influenced stereotyping differently depending on the match between the target's individuating information and the stereotype's content. The stereotype validity model proposes that this finding reflects the differential perceptions that low and high accuracy motivation perceivers develop regarding the match between a target's individuating information and a stereotype's content. High accuracy motivation perceivers are hypothesized to form more extreme perceptions of the match than are low accuracy motivation perceivers by virtue of attending more closely to a target's individuating information. Although we did not measure how closely participants in this study attended to the target, we did assess their perceptions of the match via the match manipulation-check item.

⁵We also performed an additional analysis in which we included participant gender as a factor. Results indicate that the main effect of gender on impressions was significant, $F(1, 232) = 6.71$, $p = .01$; with men rating the third target more consistent with the gay male stereotype ($M = 4.80$) than women ($M = 4.55$). The Gender \times Match interaction was marginally significant, $F(1, 232) = 3.61$, $p = .06$. There was a tendency for match to have a stronger effect on women's impressions than on men's. Gender was not involved in any other interactions, all $F_s(1, 232) \leq 1.85$, $p_s \geq .18$; and its inclusion in the analysis did not qualify the Label \times Match \times Accuracy Motivation interaction, which remained stable in terms of both its pattern and significance level, $F(1, 232) = 5.23$, $p = .02$.

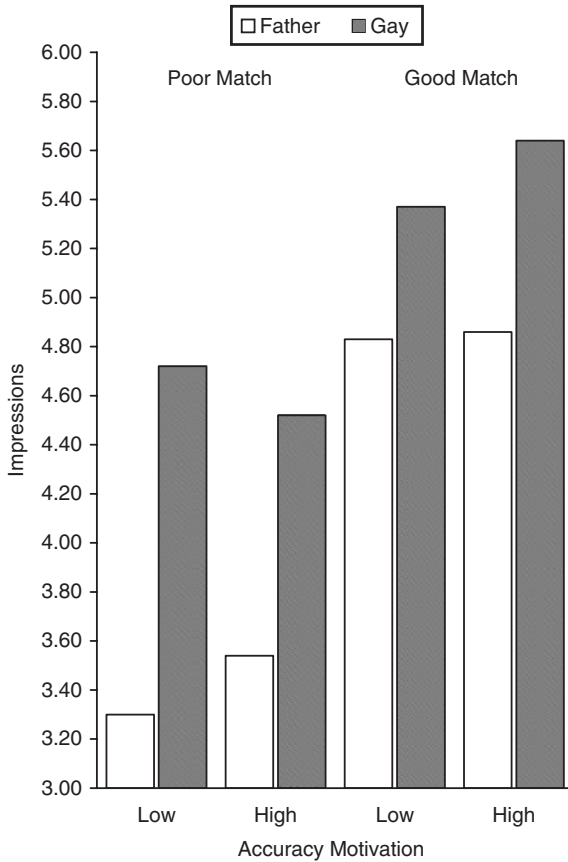


Figure 2. Experiment 2 ($N = 240$). Effect of the label, match, and accuracy motivation. Higher values reflect impressions that are more consistent with the gay male stereotype.

Therefore, as an additional test of the model, we examined participants' perceptions of the match between the third target's individuating information and the gay male stereotype with a $2 \times 2 \times 2$ (Label \times Match \times Accuracy Motivation) ANOVA in which the dependent variable was how similar participants believed the third target was to gay men in general. The only significant interaction to emerge was between match and accuracy motivation, $F(1, 240) = 5.25, p = .02$. Comparisons reveal that the match between the target's individuating information and the gay male stereotype influenced perceptions regarding the target's similarity to gay men less strongly when accuracy motivation was low versus high. Specifically, the extent to which the target was perceived as being similar to gay men in the good and

Table 2

Cell Means and Standard Deviations: Experiment 2

	Father		Gay	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Low accuracy motivation				
Good match	4.83	0.37	5.37	0.67
Poor match	3.30	0.63	4.72	0.94
High accuracy motivation				
Good match	4.86	0.58	5.64	0.64
Poor match	3.54	0.53	4.52	0.69

Note. $N = 240$. Higher mean values reflect impressions that are more consistent with the gay male stereotype.

poor match conditions was more extreme when accuracy motivation was high ($M = 4.27$ vs. 2.90), $t(240) = 6.79$, $p < .01$ ($d = 1.22$) than when it was low ($Ms = 3.97$ vs. 3.08), $t(240) = 4.49$, $p < .01$ ($d = 0.79$). The fact that accuracy motivation did not interact with the label in this analysis, $F(1, 240) = 0.00$, $p = .97$, suggests that it was participants' attention to the target's individuating information (rather than to the label) that influenced their perceptions of his similarity to gay men.

To further examine the degree to which perceptions of the target's similarity to gay men was responsible for the pattern of label effects on impressions in this study, we also performed a $2 \times 2 \times 2$ (Label \times Match \times Accuracy Motivation) ANOVA in which participants' impressions of the third target was the dependent variable, and their perceptions of the target's similarity to gay men was included as a covariate. Although the interaction among the label, match, and accuracy motivation remained significant, $F(1, 239) = 4.75$, $p = .03$, comparisons of effect sizes indicate that the inclusion of participants' perceptions of the target's similarity to gay men as a covariate substantially reduced the effect of the label on impressions.

Specifically, when accuracy motivation was low, the inclusion of the covariate reduced the label's effect by 76% in the good match condition (from $d = 0.83$ to 0.20), and by 33% in the poor match condition (from $d = 2.18$ to 1.45). When accuracy motivation was high, the inclusion of the covariate reduced the label's effect by 52% in the good match condition (from $d = 1.20$ to 0.58), and by 49% in the poor match condition (from $d = 1.51$ to 0.77). These results, in conjunction with those reported earlier, suggest that accuracy motivation influenced stereotyping, at least in part,

because it affected perceivers' perception of the match between the target's individuating information and the stereotype's content. This, in turn, may have influenced their beliefs about the stereotype's validity for that particular target.

Floor and Ceiling Effects

In the analysis that examined participants' impressions of the target, the pattern of means involved in the significant interaction among the label, match, and accuracy motivation suggests that the label may have created floor and ceiling effects. For example, when the match between the target's individuating information and the gay male stereotype was poor, participants were quite willing to form impressions that opposed the gay male stereotype when the target was labeled as a father, but resisted doing so when the target was labeled as gay (a floor effect). Thus, the gay label appears to have created a floor that participants were not willing to dip below (Figure 2). In contrast, when the match between the target's individuating information and the gay male stereotype was good, participants were quite willing to form impressions that were consistent with the gay male stereotype when the target was labeled as gay, but resisted doing so when the target was labeled as a father (a ceiling effect). In this case, the father label appears to have acted as a ceiling above which participants were not willing to go (Figure 2). Although floor and ceiling effects do not vitiate the conclusion that accuracy motivation influenced stereotyping differently depending on the match between the target's individuating information and the stereotype's content, they do suggest that a target's social group membership can set upper and lower boundaries that restrict the power of individuation processes.

General Discussion

This article presented two experiments that tested predictions of the stereotype validity model. The model proposes that perceivers are more likely to use a stereotype as the basis of their impressions when they believe that the generalized beliefs contained within it are valid for the particular target whom they are judging. The experiments tested the model's predictions by manipulating variables that are posited to influence the perceived validity of a stereotype.

Experiment 1 manipulated participants' attention to individuating information that matched a stereotype's content. Experiment 2 manipulated participants' motivation to form an accurate impression of a target whose individuating information either matched or did not match a stereotype's content.

The results of these experiments yielded three main findings, all of which are consistent with the model's predictions. First, high attention produced stronger label effects in the context of a good match between a target's individuating information and a stereotype's content. Second, high accuracy motivation also produced stronger label effects in the context of a good match, but produced weaker label effects in the context of a poor match. Third, participants' motivation to form an accurate impression influenced the extent to which they perceived a target's individuating information as matching a stereotype's content. We discuss the implications of these findings with respect to accuracy and bias in the impression-formation process.

Moderators of Stereotyping: A Reversal of Effects

Past research has indicated that encouraging perceivers to attend closely to a target's individuating information and motivating them to form accurate impressions typically reduces stereotyping (for reviews, see Fiske et al., 1999; Fiske & Neuberg, 1991). However, this pattern has been observed most often in the context of targets whose individuating information did not closely match the content of a stereotype.

In this article, we found that attention and accuracy motivation had different effects on stereotyping when a target's individuating information matched a stereotype's content. Experiment 1 found that label effects were stronger when attention to a stereotypic target was high versus low. Experiment 2 found that, in the context of a good match, high accuracy motivation increased label effects; whereas in the context of a poor match, high accuracy motivation reduced label effects. These findings provide preliminary evidence that the moderating effect that situational and motivational variables have on stereotyping may vary according to the match between a target's individuating information and a stereotype's content.

The stereotype validity model explains these findings as arising from differences in the perceived validity of a stereotype. According to the model, perceivers view a stereotype as more valid for a particular target the more closely the target's individuating information matches the stereotype's content. The more valid the stereotype is perceived, the more perceivers are hypothesized to use it as the basis of their impressions. The findings of this research were consistent with this prediction and suggest, therefore, that high attention and high accuracy motivation may not always reduce stereotyping. In fact, the results suggest that high attention and high accuracy motivation can increase stereotyping when the match between a target's individuating information and a stereotype's content is good.

However, the potential for high attention and high accuracy motivation to increase stereotyping under conditions of a good match need not lead to

bias. If a stereotype is accurate for a particular target being judged, then its use could result in more accurate impressions than would its nonuse. That is, a perceiver who bases her or his impression of a target on a stereotype that truly describes that target will likely form a more accurate impression than will a perceiver who completely ignores the stereotype.

However, it is also the case that sometimes perceivers perceive a better match between a target's individuating information and a stereotype's content than actually exists because of the influence of a variety of cognitive biases (Hilton & von Hippel, 1996; Snyder, 1992; von Hippel et al., 1995). For example, attributional biases can lead perceivers to interpret a target's individuating information as confirming a stereotype, even when it does not (Miller & Turnbull, 1986), and hypothesis-confirming strategies can lead perceivers to search for individuating information that confirms their pre-existing expectations (Snyder, 1992; Snyder & Swann, 1978). Our data suggest that when such biases are operating, high attention and high accuracy motivation may reduce the accuracy of perceivers' impressions by leading perceivers to rely on a stereotype to a greater extent than is warranted.

Other Influences on a Stereotype's Perceived Validity

The stereotype validity model proposes that several variables influence stereotyping by affecting perceptions about the validity of a stereotype (i.e., match, attention, situational and motivational variables). It seems plausible that additional variables also might influence stereotyping in this way. For example, prejudiced perceivers might perceive stereotypes to be more valid than do less prejudiced perceivers, and might be more likely to engage in stereotyping as a result. Likewise, perceivers who view members of a social group as highly homogeneous with respect to stereotype-relevant attributes may perceive the stereotype associated with that group as more valid than perceivers who view the group as more heterogeneous (Judd, Ryan, & Park, 1991). Understanding these possible relations and how they manifest themselves in the context of a good and poor match between a target and a stereotype might help to illuminate further the conditions that promote stereotyping.

Limitations

Manipulation of Accuracy Motivation

In Experiment 2, high accuracy motivation participants received false feedback that their impressions of a target had been inaccurate, and that as a result of this inaccuracy they had to answer additional questions about that

target. Because the feedback was not contingent on the impressions that participants formed, one might wonder whether it had some unintended effects on participants' impressions. Although we cannot address this issue with our data, we can be fairly certain that any unintended effects that the feedback might have had did not differentially affect high accuracy motivation participants in the good and the poor match conditions because they all received the same feedback. Therefore, even if the noncontingency of the feedback had unintended consequences on participants' impressions, it cannot explain why high accuracy motivation increased label effects in the good match condition, but reduced label effects in the poor match condition.

Another concern that arises from our manipulation of accuracy motivation centers on its potential effects on participants' self-image. Research has indicated that negative feedback can threaten perceivers' self-image, and that perceivers sometimes will engage in stereotyping as a way to restore a positive self-image (Fein & Spencer, 1997). This raises the possibility that the stronger label effects in the good match/high accuracy motivation condition might have reflected a threatened self-image, rather than the effect of accuracy motivation per se.

However, there are two aspects of our research that argue against this interpretation. First, had negative feedback been responsible for the observed label effects in the good match/high accuracy motivation condition, then we would have expected a similar pattern of label effects in the poor match/high accuracy motivation condition. Participants in this condition also received negative feedback and should have, according to the self-image hypothesis, engaged also in more stereotyping as a way to repair their damaged self-image. However, that pattern did not emerge. In the poor match conditions, label effects were weaker when accuracy motivation was high versus low. Also arguing against the self-image hypothesis are the results of the first experiment showing that increased attention to stereotypic individuating information resulted in stronger label effects in the complete absence of feedback. Thus, the results of both experiments lend no support to the idea that a threatened self-image was responsible for the main findings of this research.

Avoidance of Personal Costs

Experiment 2 manipulated accuracy motivation through the avoidance of personal costs. However, perceivers can be motivated to form accurate impressions for reasons other than avoidance of personal costs. Perceivers whose outcomes depend on a target's outcomes may want to arrive at an accurate impression as a way to increase their own chances for success (Neuberg & Fiske, 1987). Perceivers also may be motivated to form accurate

impressions because of the consequences that their impressions have for targets. For instance, jurors make decisions that have profound consequences for defendants (e.g., imprisonment, execution), but that have comparatively minor consequences for their own outcomes. Because our research did not address these kinds of situations, it is impossible to know whether the effects of accuracy motivation observed in our research generalize to situations in which accuracy motivation varies because of personal benefits to perceivers or costs to targets.

Consistency Effects

Both experiments operationally defined stereotyping as the effect of the label on impressions. The pattern of label effects that emerged across the experiments led us to conclude that both high attention and high accuracy motivation resulted in greater stereotyping when a target's individuating information matched the content of a social stereotype. This interpretation implicitly assumes that participants in different experimental conditions relied on similar impression-formation processes.

However, it is also possible that participants utilized different impression-formation processes depending on the consistency between the label and the individuating information with which they were presented. For example, participants may have relied especially strongly on individuating information to form their impressions when it matched the target's label and relied less strongly on it when it did not match the target's label. In other words, a consistency effect may have occurred such that the pairing of a label with consistent individuating information caused the individuating information to appear especially credible and useful, thereby leading participants to rely more strongly on it. If this occurred, then what we interpreted as stereotyping actually may have reflected individuation. We cannot rule out this alternative explanation with our data. However, our operationalization of stereotyping as the effect of a label on impressions is typical (for a review, see Leyens et al., 1994), and our interpretation of the data is more parsimonious than the alternative interpretation that participants used different impression-formation processes, depending on the target's label.

Conclusion

This research examined how attention and accuracy motivation moderated stereotyping in the context of targets whose individuating information varied with respect to its stereotypicality. The results show that in the context of a good match between a target's individuating information and a stereotype's content, the target's social group membership tended to bias

impressions more strongly when participants attended closely to the target's individuating information and when participants were motivated to judge the target accurately.

Although these results may appear to be inconsistent with the conceptualization of stereotyping as a cognitive saving strategy, stereotyping is a complex process that may serve multiple functions (e.g., Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950; LaPiere, 1936; Snyder & Miene, 1994; Tajfel & Turner, 1986). It is conceivable, therefore, that perceivers sometimes may engage in stereotyping to cope with limited cognitive resources, but other times engage in stereotyping because they believe that a stereotype is valid for the particular target whom they are judging. Identifying when these various motives have the greatest effect on the process of stereotyping and how they influence stereotyping in naturalistic contexts are important issues for future research to address.

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