

Personal Beliefs and Cultural Stereotypes About Racial Characteristics

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Social stereotypes may be expressed as personal beliefs about the characteristics of a group or as beliefs about the predominant cultural view of a group. In a study with a full intergroup design, Black and White participants rated Black and White racial groups. Results supported 3 sets of predictions derived from a projection model of stereotyping. First, participants' personal beliefs predicted their ratings of cultural stereotypes even when the group averages of personal beliefs and cultural stereotypes were statistically controlled. Second, interrater agreement in stereotype ratings was substantial for both rating tasks. Third, members of both groups underestimated how favorably their own group was rated by members of their respective out-group. Implications of the findings for the mental organizations of stereotypes, their measurement, and their consequences for social behavior are discussed.

According to most definitions, *social stereotypes* are beliefs about the characteristics of human groups (Ashmore & Del Boca, 1981; Judd & Park, 1993; Tajfel, 1981). Early authors considered stereotypes to be social in the sense that respondents agreed on the typical characteristics of salient social groups. Social learning theories and adjective checklist methods reflected the view of social stereotypes as "public attitudes" (Katz & Braly, 1933), "collective representations" (Katz & Schanck, 1938), or "shared understandings of social reality" (Tajfel, 1981). Changes in the content and the favorability of stereotypes across generations of college students (Karlins, Coffman, & Walters, 1969) highlighted the need for individualized assessment and theory (Brigham, 1971). Stereotypes were recast as "an individual's set of beliefs about characteristics or attributes of a group" (Judd & Park, 1993, p. 110). Rather than aggregating responses across participants to display social agreement, researchers turned to graded answer formats and within-subjects correlations between various sets of item ratings (e.g., typicality ratings and percentage estimates) or between item ratings and objective criteria of group characteristics (Judd & Park, 1993).

The idiographic approach presents new opportunities to examine the social dimension of stereotypes. Researchers now distinguish participants' personal beliefs about group characteristics from what participants *think* the social stereotypes about these characteristics are (Ashmore & Del Boca, 1981). Hort, Fagot, and Leinbach (1990) asked participants to rate men and women (a) "as they personally see them" and (b) "as society sees them" (p. 202). Esses, Haddock, and Zanna (1994) asked participants to (a) list and rate attributes "that *they* (emphasis added) would use to describe typical members of each group"

(p. 83), and (b) provide "consensual stereotypes" by listing characteristics "that people often attribute to members of the groups" (p. 87). Devine (1989) used the term *cultural stereotype* for the social or consensual dimension of intergroup beliefs and argued that cultural stereotypes are dissociated from personal beliefs, at least among low-prejudice people. To assess personal beliefs, Devine asked White participants "to list all of their thoughts in response to the social group *Black Americans*" (p. 13). To assess cultural stereotypes, she asked a different group of participants "to help researchers to better understand social stereotypes and that interest centered on the cultural stereotype of Blacks" (p. 7). Similarly, Augoustinos and Ahrens (1994) asked participants to "please write down what you think is the cultural stereotype of Australian Aborigines. We are not interested in what your own personal beliefs may be, but rather, how you think most Australians view them" (p. 127, original emphasis omitted). In these studies, cultural stereotypes were not assessed directly, but they were inferred from the averages of participants' perceptions of what these stereotypes were. Indeed, it may be impossible to assess cultural stereotypes independent of what people think they are.

What is the relationship between personal intergroup beliefs and cultural stereotypes? Can a person's intergroup beliefs predict his or her view of a cultural stereotype? Do people agree on cultural stereotypes more than they agree in their personal beliefs? What is the relation between the two types of ratings and judgments of stereotype favorability? In the present research I examined these questions in a biracial design in which Black and White Americans rated both Black and White Americans. A model of social projection provided the theoretical framework (Krueger & Clement, 1994, 1996; Krueger & Zeiger, 1993). Where appropriate, hypotheses were compared with predictions derived from dissociation theory (Devine, 1989). Note, however, that in contrast to the general applicability of the projection model, the intended scope of dissociation theory is limited to the responses of low-prejudice Whites to the Black target group.

Projection

People tend to believe that others feel, think, and act as they themselves do. Supporters of a certain policy (e.g., to legalize

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marijuana) tend to believe that support is more common in the population than opponents do (for a review see Marks & Miller, 1987). In stereotyping, projection may result in a positive correlation between a person's beliefs about the characteristics of a social group and the person's ratings of the cultural stereotype. Projection has long been considered irrational. In a between-rater design, where consensus estimates covary with the raters' own responses, "not everybody can be right" (Ross, Greene, & House, 1977). The sources of projection were sought in biased information processing or ego-protective motives. Recently, projection has been reinterpreted as a special case of inductive reasoning. It is not necessarily irrational to generalize from one's own responses to the prevalent responses in the population (Dawes, 1989, 1990; Hoch, 1987; Krueger & Zeiger, 1993). By definition, a person's attitudes are more likely to be common than uncommon. If most people hold Attitude A, the probability that a randomly selected person P holds Attitude A is greater than .5. For people who are uncertain about the actual responses of others, the optimal strategy is to assume that one is in the majority. If P indeed belongs to the majority, a high estimate will likely be accurate. If P belongs to the minority that rejects Attitude A but believes he or she is in the majority, P will assume that most people reject A. In this case, the low estimate for endorsement of Attitude A will be inaccurate. In the long run, however, the assumption of being in the majority is the optimal strategy. It accepts but minimizes error (Dawes, 1990; Einhorn, 1986). Consistent with this view, Krueger and Clement (1994) found a small positive correlation between projection and accuracy across participants ($r = .17$).¹

Because projection is a form of induction, social perceivers should base their estimates about prevalent cultural stereotypes on their personal beliefs. If one assumes that one's beliefs are more likely to be common than rare, one's perceptions of cultural stereotypes will be correlated with one's personal beliefs about group characteristics. The question of projective bias is not simply whether there are positive within-person correlations between personal beliefs and ratings of cultural stereotypes but whether these correlations are too high. In other words, do people project more than the actual representativeness of their own beliefs suggests?

When actual consensus data are available, one can test projective bias by correlating a person's item endorsements with the estimation errors (estimated minus actual consensus) across items. When responding to Minnesota Multiphasic Personality Inventory statements, most participants have shown projective bias (i.e., "truly false consensus effects" [TFCE], Krueger & Clement, 1994; Krueger & Zeiger, 1993). They have tended to overestimate the percentage of endorsers for items they themselves endorsed and have tended to underestimate consensus for items they did not endorse. How can projective bias be tested in racial stereotyping? Because there are no actual population data about cultural stereotypes, a different measure is needed.

The social nature of stereotyping may provide a criterion for the measurement of projective bias. Both personal beliefs and cultural stereotypes are—to a degree—shared among participants (see section below entitled Agreement). Because participants' ratings are intercorrelated across items, most participants' ratings are correlated with the average personal stereotypes and the average cultural stereotypes. These averages

represent the social (i.e., group) norms of stereotypic beliefs. Projective *bias* can be construed as any systematic within-subject pattern linking deviations from the social norm of personal beliefs to deviations from the social norm of cultural stereotypes. Within-subjects correlations controlling the two sets of group averages will capture such patterns. If the partial correlations are positive, the unique residuals of participants' personal beliefs predict the unique residuals of their perceptions of cultural stereotypes.²

In formal induction, sample data are used to infer the characteristics of the category from which the sample was drawn (Dawes, 1989). Sample data are not necessarily informative about other categories. Social projection reflects this rule in that people project more strongly to in-groups than to out-groups (Allen & Wilder, 1979; Krueger & Zeiger, 1993; Mullen, Dovidio, Johnson, & Copper, 1992; Spears & Manstead, 1990). In racial stereotyping, raters may not feel that their personal beliefs are informative about what members of the out-group perceive as the cultural stereotype.

Ironically, people know that others project from their (the others') own responses. They correctly infer, for example, that someone who thinks many favor the legalization of marijuana is more likely to favor legalization him- or herself than someone who thinks that only a few people favor legalization (Krueger & Zeiger, 1993). In stereotyping, raters may think the personal beliefs held by out-group members predict the cultural stereotypes held by out-group members.

Agreement

The projection model assumes that the social dimension of stereotypes is reflected in high degrees of interrater agreement for both personal beliefs and cultural stereotypes. If agreement were perfect, however, there could be no projective bias. The degree of agreement has indeed been a theoretical and empirical question of long-standing interest. I briefly review two common assessment tools, and then I propose two alternatives. Devine's (1989) work exemplifies the first method. She computed

¹ The correlation between projection and accuracy was computed from Krueger and Clement's (1994) data. It was not reported in their article. It was reported, however, that the mean within-subjects correlation between estimated and actual consensus (i.e., accuracy) shrank from $r = .07$ to $r = .01$ when participants' endorsements were statistically controlled. That is, participants would have been less accurate had they not projected.

² A rater's personal beliefs and cultural stereotypes can be regressed on the group averages of the personal beliefs and the group averages of the cultural stereotypes. The correlation between the two sets of residuals is the second-order partial correlation proposed for the present test of projective bias. This measure of bias is conceptually distinct from the difference score measure of TFCE (Krueger & Zeiger, 1993). The TFCE correlation, $r(\text{own response with estimated} - \text{actual consensus})$, captures whether the rater's estimation error is correlated with his or her own position on the item. In contrast, the *partial correlation*, $r(\text{own response with estimated group response by average group response by average estimate})$, captures whether the deviations of the rater's responses from the average responses in the group are correlated with the deviations of the rater's responses from the average estimates in the group. When the group averages are highly accurate estimates of the actual consensus, the two measures yield identical results.

within-item and between-groups tests for ratings of personal beliefs and cultural stereotypes. Devine compared the responses of White high- and low-prejudice participants and found differences in the personal beliefs but not in the cultural stereotype about Blacks. Unfortunately, this measure is insensitive to intragroup individual differences. If, for example, people do not agree on the stereotype content at all, ratings by both high- and low-prejudice participants have large variances and identical means. Nonreliable tests of differences in means would yield a false impression of stereotype agreement.³

Katz and Braly's (1933) checklist exemplifies the second method. On the checklist, participants nominate adjectives they consider characteristic of the target group. The higher the percentage of participants is who nominate an item, the greater the agreement is thought to be. Each participant then selects five of the nominated traits for each group, and "the least number of traits which have to be included to find 50% of the 500 possible votes cast by the 100 students in every racial and national group" indexes stereotype "definiteness" (Katz & Braly, 1933, p. 287). The fewer the traits necessary to meet that criterion, the more definite is the stereotype. Note that categorical response formats (trait is characteristic or uncharacteristic) do not imply categorical thinking (Brigham, 1971; Jackman & Senter, 1980). Suppose a person rates the trait *elegant* with respect to the French people. Rather than merely asking whether the trait applies, the person may ask to what extent it applies, or to what percentage of the French people it applies. That is, the person may invoke a graded multistep scale. The person then needs to convert this scale rating into a categorical response. To do this, he or she may choose a criterion or threshold above which to check the "yes" response rather than the "no" response. The probability of giving a "yes" response increases monotonically with the rating on the continuous scale (Goldberg, 1963). The crucial limitation of the checklist method is that inasmuch as people think dimensionally rather than categorically, the percentage measure confounds interrater agreement with stereotype strength (Rothbart & John, 1993).

To assess interrater agreement across items and within items, two alternative measures hold promise. First, consistent with the psychometric approach of the projection model, measurement focuses on correlations across items. The *mean interrater correlation* reveals the average similarity of rating profiles. Social psychologically speaking, this index expresses the strength of the social norm of describing a target group (Krueger, in press). Psychometrically speaking, this index expresses the reliability of raters as measurement instruments (Goldberg, 1981). Second, for individual items, the *standard deviation* of ratings on a graded scale indicates the degree of agreement. The lower the standard deviation, the higher is the within-item agreement. This index needs to be interpreted with caution, however, because ceiling and floor effects limit the variance around extreme means (Paunonen & Jackson, 1985).

Favorability

Differences in the favorability of intergroup beliefs lie at the heart of stereotyping. Anthropological observation (Freud, 1959/1921; Sumner, 1906) and laboratory experimentation (Rabbie & Horwitz, 1969; Tajfel, Billig, Bundy, & Flament, 1971) have demonstrated the power of in-group favoritism.

People belonging to a group view its members more positively than do outsiders. In contemporary race relations, however, overt in-group bias may not be symmetrical. In-group favoritism among Blacks has been interpreted as a response to recent norms of in-group assertion (Donnerstein & Donnerstein, 1973; Wilson & Rogers, 1975). Whites too, often rate Blacks more favorably than they rate Whites. This "reverse discrimination" may result from egalitarian self-concepts coexisting with the perceived threat of appearing prejudiced (Wilson & Rogers, 1975). To avert this threat, Whites may enhance their ratings of Blacks (Dutton, 1976; Rogers & Prentice-Dunn, 1981). Thus, personal beliefs, as held by Blacks and by Whites, may be more positive about Blacks than about Whites, whereas cultural stereotypes reveal the older pattern of more favorable views about Whites (Devine, 1989; Katz & Braly, 1933).

The contribution of the projection model to the study of in-group favoritism is twofold. First, whereas overt in-group favoritism may vary across target and participant groups, projective measures may reveal a general and robust form of bias. Holmes (1968) speculated that people project characteristics they do not know they possess (i.e., "similarity projection," p. 249). Ichheiser (1947) detailed how it might work. He suggested a "mote-beam" mechanism, a

distortion of social perception [that] consists of perceiving certain characteristics in others which we do not perceive in ourselves and thus perceiving those characteristics as if they were peculiar traits on the others . . . we all tend to perceive (and to denounce) in others certain characteristics, e.g., blind spots or ideologies or *ethnocentrism* [emphasis added], which, strangely enough, we ignore in ourselves. (p. 131)

The mote-beam mechanism suggests that members of both races project in-group favoritism to the other race. Blacks and Whites may assume their own group is rated less favorably by the out-group than is actually the case. This projection may occur on the level of personal beliefs and cultural stereotypes.

Recent research supports Ichheiser's (1947) hypothesis. Members in interacting laboratory groups evaluated the products of their own group more favorably than the products of other groups, and they expected that members of the other groups in turn preferred *their* own products (Vivian & Berkowitz, 1992). Most important, participants seemed unaware of their own in-group bias because each group expected impartial observers to consider their products better than their competitors' products. The projection of in-group bias to the out-group occurred only among participants who were themselves categorized as group members. Uncategorized participants expected members of both groups to treat their respective out-groups fairly (St. Claire & Turner, 1982).

Second, the projection model asserts that social projection is independent of the social desirability of the judgment items.

³ Devine (1989) did not report which statistic she used to test differences in the proportions of thoughts related to a category (e.g., "poor") listed by 21 high- and 19 low-prejudice participants. Chi-square tests are sensitive to sample size. With a sample of 100 participants, 4 of the 15 comparisons would have been significant assuming $p = .05$. Without a power analysis, attempts to confirm a hypothesis by nonsignificant comparisons of group differences are futile at best and misleading at worst.

Within-subjects projection correlations are only slightly reduced when social desirability ratings are statistically controlled (Krueger & Clement, 1994), and differences in projection to in-groups (high) and out-groups (low) remain unaffected. That is, differences in projection to in-groups and out-groups are not a byproduct of in-group favoritism (Krueger & Clement, 1996). Thus, projection from personal beliefs to cultural stereotypes can be expected to be independent of social desirability.

Hypotheses

Three sets of hypotheses were tested in a study with a full stereotype design (two groups of participants [Blacks, Whites], two target groups [Blacks, Whites], and two types of ratings [personal beliefs, cultural stereotypes]).

Three specific predictions followed from the *projection hypothesis*. First, people (over)project from their own personal beliefs about group characteristics to what they believe to be the cultural stereotype about that group. Within-subjects correlations between personal beliefs and cultural stereotype ratings will be reliable and remain so when the two sets of group averages are partialled out. Second, people project less (or not at all) when estimating how out-group members respond. For participants of both race groups, personal beliefs will not be correlated with what they believe the other group's ratings of cultural stereotypes are. Third, people expect others to project. Attributions about the out-group's personal beliefs will be correlated with attributions about the out-group's cultural stereotypes.

The *agreement hypothesis* was that there would be considerable degrees of interrater agreement for both kinds of ratings. According to dissociation theory, there should be higher agreement for cultural stereotypes than for personal beliefs because cultural stereotypes "are part of the social heritage of a society and *no one* (emphasis added) can escape learning the prevailing attitudes and stereotypes assigned to the major ethnic groups" (Devine, 1989, p. 5).

The *projected-favoritism hypothesis* was that participants in both groups would underestimate the favorability of the other group's personal beliefs and cultural stereotypes about their own (the participants') group. In line with dissociation theory, I expected that neither group would show direct in-group bias but that cultural stereotypes about Whites would be more favorable than cultural stereotypes about Blacks.

Black and White participants rated both racial groups on each of 20 person-descriptive trait adjectives. They rated personal beliefs, cultural stereotypes, and social desirability, and they predicted the ratings made by the other group. Finally, they completed Katz and Braly's (1933) checklist.

Method

Participants

Eighty-five undergraduate students (66% female) participated in exchange for \$5. Of these, 48 were Black and 37 were White. Age ranged from 18 to 39, with a median of 20. Academic concentrations were evenly divided among the natural sciences, social sciences, and the humanities. A 21-year old Black male experimenter recruited participants at various locations on the Brown University campus.

Procedures and Design

Twenty person-descriptive adjectives were taken from studies on racial stereotyping (Devine, 1989; Dovidio, Evans, & Tyler, 1986; Katz & Braly, 1933; Stangor, Sullivan, & Ford, 1991). In alphabetical order, these traits were: *aggressive, ambitious, arrogant, athletic, copying, family-oriented, friendly, hard-working, intelligent, lazy, materialistic, morally loose, musical, practical, prone to violence, self-confident, selfish, tolerant, unmotivated, and unreliable*. A Black and a White rater agreed that these traits included positive and negative characteristics, some stereotypic of Blacks and some stereotypic of Whites.

The race of the participant (Black or White) was a between-subjects variable, and the race of the target group (Black or White) was a within-subjects variable. Each participant completed a two-stage questionnaire that presented the 20 trait adjectives under different instructional sets. The first dependent variable at Stage 1 was the personal stereotype. Instructions read

We would like you to think about a number of attributes, and how they pertain to Blacks (African-Americans) [Whites (Euro-Americans)]. Rate the extent to which each adjective is *actually descriptive of Blacks* (African-Americans) [*actually descriptive of Whites* (Euro-Americans)]. Make your ratings by circling a number on the scale from -4 to $+4$. A $+4$ means that the attribute is very characteristic of the group. A -4 means that the opposite of the attribute is very characteristic. A rating of 0 indicates that neither the attribute nor its opposite are characteristic (emphasis in the original instructions).

The second dependent variable consisted of the ratings of the cultural stereotype. Instructions were similar to the instructions given in previous studies on cultural stereotypes (Augoustinos & Ahrens, 1994; Hort et al., 1990). Specifically, participants were asked to "think about the cultural stereotype of Blacks (African-Americans) [Whites (Euro-Americans)]. According to the cultural stereotype of Blacks [Whites], how characteristic is each of the following attributes?" Participants were informed that their ratings of the cultural stereotypes may or may not conform with their personal beliefs, that all responses were strictly anonymous, and that there were no objectively correct answers. Within each race group, the order of the four questionnaires (cultural Blacks, cultural Whites, personal Blacks, personal Whites) was varied randomly. After completing the four forms, participants took a short break (about 5 min).

Participants began Stage 2 by predicting the typical responses of the opposite racial group. Instructions for this third dependent variable read that participants would

again rate the cultural stereotypes and the descriptive characteristics of your own groups. Now, however, instead of giving *your* thoughts and beliefs, you will be asked to estimate the responses that were given by members of the opposite group. *Specifically, we would like you to guess the average of the ratings made by members of the other racial group that participated in this study*. For example, African-Americans would estimate the average of the ratings about African-Americans they believe were given by Euro-American participants. Euro-Americans, by contrast, would do the opposite, estimating the average of the ratings about Euro-Americans they believe were given by African-American participants. In other words, when completing this section, do your best to "think" as if you were a representative member of the opposite group.

At the top of each page, the original instructions given to the other racial group were repeated, and participants were reminded to guess how the average member of that group would respond. The order of ratings about cultural stereotypes and personal beliefs varied across participants. The fourth dependent variable again addressed personal be-

liefs. A forced-choice format of the kind typically used in adjective checklist studies allowed only "yes" (the attribute is characteristic) or "no" (the attribute is not characteristic) responses (e.g., Karlins et al., 1969; Katz & Braly, 1933). The order of ratings of Blacks and Whites varied across participants. Finally, participants rated the social desirability of each trait on a 9-point scale that ranged from -4 (*very undesirable*) to $+4$ (*very desirable*).

Results

Preliminary Analyses

The 2 (race of target group) $\times 2$ (race of participant) $\times 2$ (type of rating: personal or cultural) design yielded eight sets of 20 averages, displayed in Table 1 (the table also contains the average social desirability ratings for each trait). These aggregated data present first evidence for projection from personal to cultural ratings, agreement between groups of raters, and differentiation between groups of targets. A correlation matrix was computed for the eight sets of average stereotype ratings. Four of these correlations were relevant for projection (personal beliefs about Blacks [Whites] with cultural stereotypes about Blacks [Whites], computed for Black and White participants separately). As expected, the mean correlation was positive (mean $r = .40$, after r - Z - r transformations, McNemar, 1962). Four correlations were relevant for intergroup agreement (personal [cultural] ratings by Blacks with personal [cultural] ratings by Whites separately for both target groups). The mean was expectedly high (mean $r = .88$). Four correlations were relevant for differentiation between target groups (personal [cultural] ratings about Blacks with personal [cultural] ratings about Whites separately for Black and White participants). As expected, the two racial target groups were rated as possessing different attributes (mean $r = -.27$). The data in Table 1 also show that participants differentiated between racial groups more on the level of personal beliefs (mean absolute difference between average ratings = 1.49 and 0.66 for Black and White participants, respectively) than on the level of cultural stereotypes ($M_s = 2.39$ and 1.90). The direction of the differences was consistent with the findings of earlier studies from which the items had been selected.

Projection

Most of the following analyses involved within-subjects correlations or interrater correlations. Average Z scores were compared between conditions or against 0 (chosen $p = .01$, two-tailed, for all tests).

Figure 1 shows the mean correlations between the personal beliefs, cultural stereotypes, the group averages of the personal beliefs, and the group averages of the cultural ratings. In all four conditions, personal beliefs correlated reliably with cultural stereotypes, supporting the projection hypothesis. Recall, however, that the zero-order correlations do not necessarily reflect projective bias. To test bias, the within-subjects correlations were recomputed while statistically controlling for the average ratings of personal beliefs and the average ratings of cultural stereotypes. As expected, there was projective bias regardless of target group or participant group (Black participants: top panel of Figure 1; White participants: bottom panel). When corrected for the variance accounted for by the group averages, the

variance in participants' unique personal beliefs predicted the variance in their unique ratings of the cultural stereotypes. There were no reliable effects revealed by a 2 (race of participant) $\times 2$ (race of target group) mixed-design analysis of variance (ANOVA, all $p_s > .01$), supporting the expected generality of the projection hypothesis. To ensure that tests of projection were uncontaminated by differences in favorability, all correlations were computed again with social desirability also partialled out. The results were nearly identical to the data presented in Figure 1 (grand mean partial $r = .29$).

Projection from personal beliefs to cultural stereotypes was construed as a form of in-group projection. Inasmuch as people perceive themselves as more or less typical members of a society, projection provides a mechanism to infer prevalent cultural attitudes. If, however, people are to predict the responses of a specific out-group, projection may disappear even when that out-group is part of the same overall society. Recall that Blacks predicted Whites' ratings about Blacks, and Whites predicted Blacks' ratings about Whites. As expected, the correlations between personal beliefs and ratings of cultural stereotypes as attributed to the out-group were near zero among Blacks (mean $r = -.05$). Among Whites, however, these correlations were larger (mean $r = .43$), $t(83) = 7.2$, $p < .001$. That is, Whites, but not Blacks, seemed to feel that their own personal beliefs were related to how members of the out-group rated cultural stereotypes.

The idea that people are intuitively aware of social projection led to the prediction that participants of both races would expect members of their out-groups to project their personal beliefs to cultural stereotypes. For both participant groups, the zero-order correlations between predicted personal beliefs and predicted cultural stereotypes were highly reliable (Blacks: mean $r = .76$, Whites: $r = .56$). Blacks more than Whites ($p < .001$) seemed to expect their respective out-group to discriminate less between personal beliefs and cultural stereotypes than they themselves did (i.e., their own projection correlations were smaller [mean r for ratings of the out-group = .42]).

Agreement

I had hypothesized that participants would reliably agree on the characteristics of racial groups, regardless of the type of rating (personal or cultural). The first measures were the averages of the interrater correlations. Figure 2 shows the average Z scores and the corresponding correlation coefficients. Consistent with dissociation theory, the average interrater agreement was lower for personal beliefs (grand mean $r = .35$) than for cultural stereotypes (grand mean $r = .41$, $p < .01$). This effect was not evident in all conditions, however. When Blacks rated Blacks, agreement in personal beliefs was greater than agreement in cultural stereotypes. Moreover, the agreement in cultural ratings was far from perfect. To estimate the upper bounds of interrater agreement in social judgment, social desirability ratings were analyzed. The results (mean $r = .84$, see Figure 2) may present a ceiling for interrater agreement (see also Rothbart & Park, 1986), suggesting that the agreement in ratings of the cultural stereotypes was merely intermediate.

The second measure of agreement was the item-by-item standard deviations. This measure arose from the necessity of replacing the percentage score of trait designations, which, it has

Table 1
Mean Ratings of Cultural and Personal Stereotypes Made by Black and White Participants About Black and White Race Groups

Trait	Target				Social desirability
	Blacks		Whites		
	Personal beliefs	Cultural stereotypes	Personal beliefs	Cultural stereotypes	
Blacks					
Aggressive	2.00	1.70	2.27	2.04	2.12
Ambitious	2.17	-0.88	2.77	3.25	3.65
Arrogant	0.83	1.23	3.08	2.52	-1.19
Athletic	3.19	3.63	-0.25	-1.54	2.85
Copying	-0.75	0.28	1.75	0.04	3.33
Family-oriented	2.27	-0.04	1.29	2.23	3.46
Friendly	2.15	-0.35	0.00	1.58	3.88
Hard-working	2.77	-0.56	1.15	2.65	-1.92
Intelligent	3.02	-0.21	1.81	3.06	3.85
Lazy	-0.40	1.81	0.40	1.81	-3.33
Materialistic	2.65	2.71	2.46	0.02	-0.81
Morally loose	-0.34	1.58	2.04	1.63	-2.74
Musical	3.27	3.50	-0.27	-1.29	2.54
Practical	1.44	-0.27	1.13	2.15	2.94
Prone to violence	1.40	2.38	1.30	-1.02	-3.02
Self-confident	0.29	-1.06	2.52	3.19	3.52
Selfish	0.42	0.67	1.63	1.25	-1.87
Tolerant	1.23	-0.04	-0.96	0.04	2.87
Unmotivated	-0.16	2.00	-0.88	-2.50	-3.54
Unreliable	-0.98	1.67	0.19	-1.44	-3.65
Whites					
Aggressive	1.33	2.89	1.13	0.90	1.08
Ambitious	1.15	-0.92	1.33	2.59	2.87
Arrogant	0.69	1.49	1.72	2.08	-2.45
Athletic	1.95	3.26	0.77	-0.13	2.62
Copying	-0.23	0.26	0.69	0.15	2.97
Family-oriented	1.36	-0.45	1.05	2.23	3.33
Friendly	1.15	-0.16	0.58	1.31	3.44
Hard-working	1.42	-1.34	1.08	2.18	-2.26
Intelligent	1.15	-0.92	1.08	2.26	3.36
Lazy	-0.36	1.63	0.49	-0.67	-3.28
Materialistic	0.44	0.79	2.27	2.46	-3.28
Morally loose	-0.18	1.63	0.36	-0.23	-1.67
Musical	1.51	0.79	0.56	-0.21	-2.51
Practical	0.82	1.63	0.90	1.46	2.59
Prone to violence	0.74	2.76	0.67	0.05	-3.51
Self-confident	0.87	0.79	1.32	1.95	2.79
Selfish	0.05	0.79	1.63	1.58	-2.36
Tolerant	0.08	-0.39	-1.00	-0.56	3.08
Unmotivated	-0.62	1.55	-0.33	-1.15	-3.10
Unreliable	-0.98	1.68	-0.26	-1.26	-3.26

been argued, confounds stereotype strength with agreement. As expected, there were high within-subjects correlations between rating options (-4 to +4), and the probability of choosing a "yes" response in the categorical answering format was high (mean $r = .76$). These findings support Goldberg's (1963) threshold model of categorical responding.

Theoretically, standard deviations are independent of averages and of percentage scores, but it is possible that ceiling and floor effects limit the dispersions of ratings as they approach the ends of the scale. Indeed, standard deviations were smaller for large mean ratings ($r = -.49$) and high percentage scores ($r =$

$-.33$). The results obtained with the standard deviation measure showed some overlap with the mean-level measure. When Whites rated the cultural stereotype of Blacks, for example, agreement was highest (i.e., the standard deviation was lowest) for the traits *aggressive*, *arrogant*, and *friendly*. According to the mean-level analysis, however, they saw the traits *aggressive*, *athletic*, and *musical* as most descriptive. Figure 3 displays the means of the standard deviations, broken down by conditions. Higher bars indicate larger mean standard deviations, that is, less agreement.

A 2 (race of participant) \times 2 (race of target group) \times 2

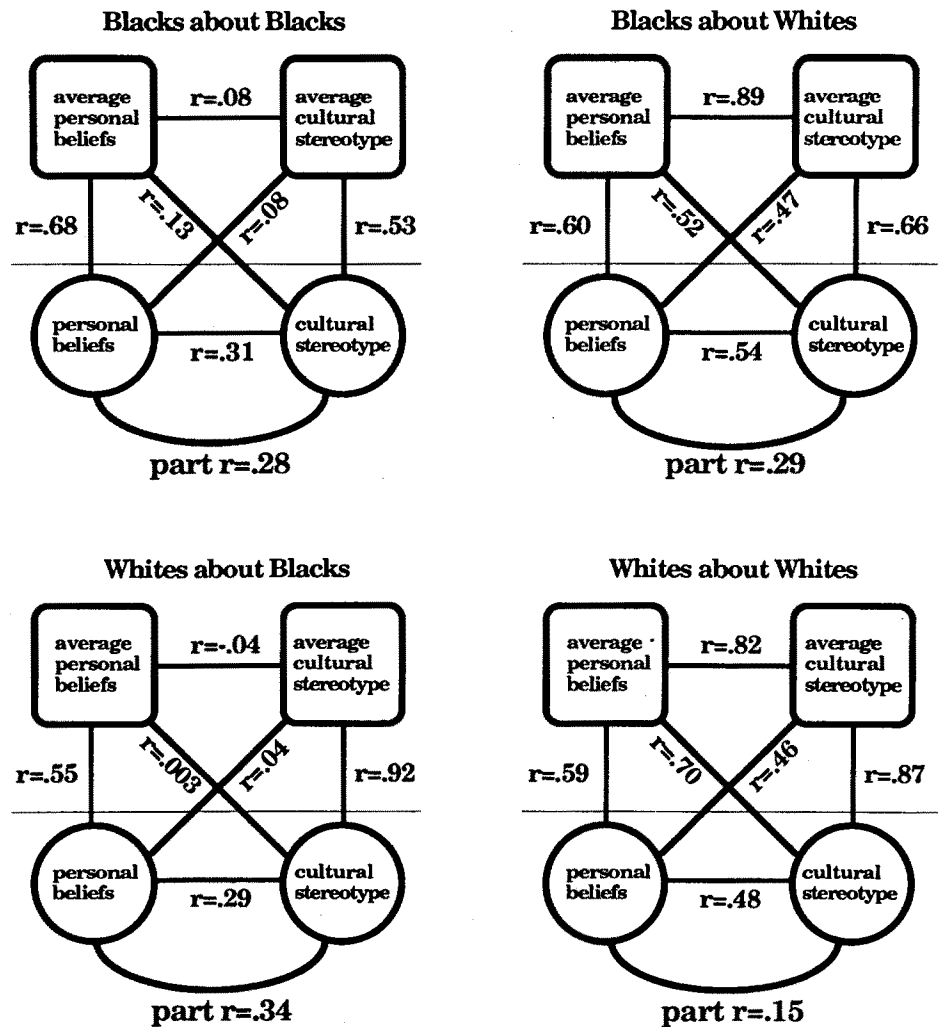


Figure 1. Projective bias assessed within subjects: Zero-order and partial correlations between personal and cultural stereotype ratings.

(ratings: personal or cultural) mixed-model ANOVA, in which the last two variables were within subjects, was performed with items, rather than participants, as cases. Agreement was lower among Black participants ($M = 2.10$) than among White participants ($M = 1.50$), $F(1, 19) = 103.6$, $p < .001$. Contrary to dissociation theory, agreement was lower for cultural stereotypes ($M = 2.04$) than for personal beliefs ($M = 1.56$), $F(1, 19) = 140.9$, $p < .001$. This effect was qualified by an interaction with participant race, $F(1, 19) = 20.1$, $p < .001$. Simple effects analyses revealed that even among White participants, for whom the effect of type of rating was weaker, it was reliable, $F(1, 19) = 31.8$, $p < .001$. No other effects were reliable.

Ratings of 0 were more frequent in ratings of personal beliefs (23%) than in cultural stereotypes (13%). Goldberg (1981) argued that ratings at the midpoint of the scale are confounded with the "I don't know" response if there is no separate response option indicating no judgment. In the present data, the greater number of 0s in ratings of personal beliefs may therefore have artifactually reduced the standard deviations. To test differences in agreement more rigorously, all 0s were treated as missing val-

ues, and analyses were repeated. With the 0 ratings removed, the average standard deviation was not larger ($M = 1.88$) than it was when the 0 ratings were included ($M = 1.80$). The difference in agreement was the same in both analyses ($M[\text{cultural}] - M[\text{personal}] = .48$). Thus, the conclusion holds that cultural stereotypes do not enjoy greater agreement across participants than do personal beliefs. Whereas in the interrater analysis agreement on social desirability was much higher than agreement on stereotype ratings, the standard deviation analysis showed no difference between agreement on personal beliefs and social desirability ($M = 1.43$).

Favorability

To examine the favorability of direct ratings of personal beliefs, cultural stereotypes, and predictions of out-group ratings, the three sets of stereotype ratings were correlated with social desirability ratings.

Direct stereotype ratings. The results for the direct ratings of personal beliefs and cultural stereotypes are displayed in Fig-

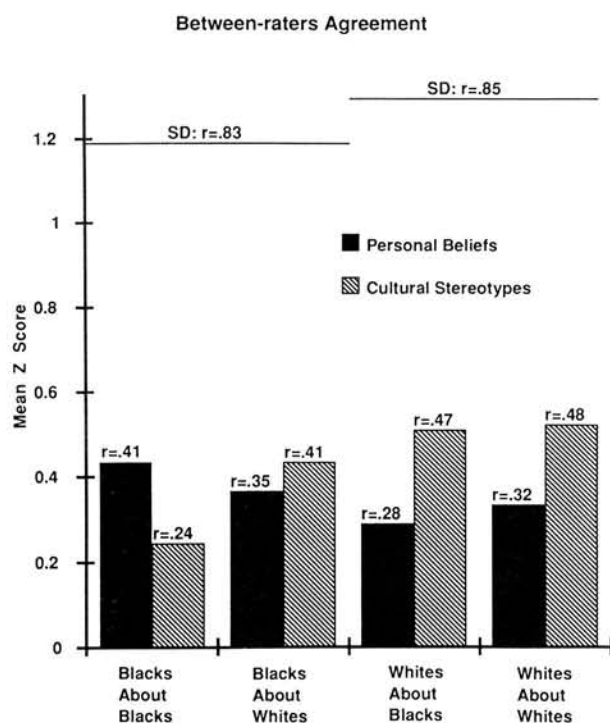


Figure 2. Between-subjects agreement in personal beliefs and cultural stereotypes. SD = social desirability.

ure 4. A 2 (participant race) \times 2 (target race) \times 2 (rating: personal or cultural) mixed-model ANOVA with within-subjects measures on the last two variables yielded no main effects of participant race or target race and no interaction (all p s $>$.03). That is, there was no evidence of direct in-group bias. Overall, personal beliefs (mean $r = .25$) were more positive than cultural stereotypes (mean $r = .06$), $F(1, 81) = 24.2$, $p < .001$. More important, this effect varied depending on the race of the target group, $F(1, 81) = 135.1$, $p < .001$. This interaction was a complete crossover and was not qualified by the race of the participants. As predicted, personal beliefs about Blacks (mean $r = .45$) were more favorable than cultural stereotypes about Blacks (mean $r = -.24$), $F(1, 81) = 133.8$, $p < .001$. For the White target group, personal beliefs (mean $r = .02$) were more negative than cultural stereotypes (mean $r = .35$), $F(1, 81) = 38.6$, $p < .001$.

Projected stereotype ratings. The hypothesis of projective in-group bias was that participants of both races would believe they were seen more negatively by members of the other race than was the case. As predicted, projected stereotype ratings were more negative than direct ratings. As Figure 5 shows, all mean correlations between projected ratings and social desirability ratings (mean $r = -.24$) were lower than their correspondent correlations involving direct stereotype ratings (mean $r = .13$). Blacks underestimated the favorability of Whites' personal beliefs about Blacks, $t(81) = 7.5$, $p < .001$. Whites, in turn, underestimated the favorability of Blacks' personal beliefs about Whites, $t(81) = 4.5$, $p < .001$. Similar, albeit less pronounced, differences emerged in ratings of cultural stereotypes. Blacks and Whites thought they were rated by the other group less favorably than was the case, $t(81) = 2.7$, $p < .01$, and $t(81)$

$= 2.3$, $p < .03$, for attributions made by Blacks and Whites, respectively. In sum, the hypothesized projection of negative stereotyping to the out-group was consistent across participant groups and across types of stereotype ratings (although the last comparison only approached the chosen level of statistical reliability).

Links Between Projection and Stereotype Favorability

Consistent with the projection hypothesis, personal beliefs predicted ratings of cultural stereotypes within subjects even when group averages and social desirability ratings were statistically controlled. Personal and cultural ratings differed, however, in their favorability. Is it possible that individual differences in the favorability of personal beliefs predicted individual differences in the favorability of cultural stereotypes? This idea is consistent with the projection hypothesis. To test it, the Z scores of the within-subjects correlations indicating favorability of the personal and cultural stereotype were correlated across participants (r s = .15, .13, .29, and .27 for Blacks judging Blacks and Whites, and for Whites judging Blacks and Whites, respectively). Although the individual coefficients were not reliable, their consistent positivity was probably not due to chance ($p = .54 = .0625$).

Did the favorability of participants' own ratings about the in-group predict the favorability of the ratings attributed to the out-group? Only one of the four across-participants correlations was reliable. The favorability of Whites' cultural stereotypes about Whites was correlated with the predicted favorability of Blacks' cultural stereotypes of Whites ($r = .65$, $p < .01$; all other p s $>$.10). Finally, the favorability of ratings about the out-group was not correlated with the favorability of ratings at-

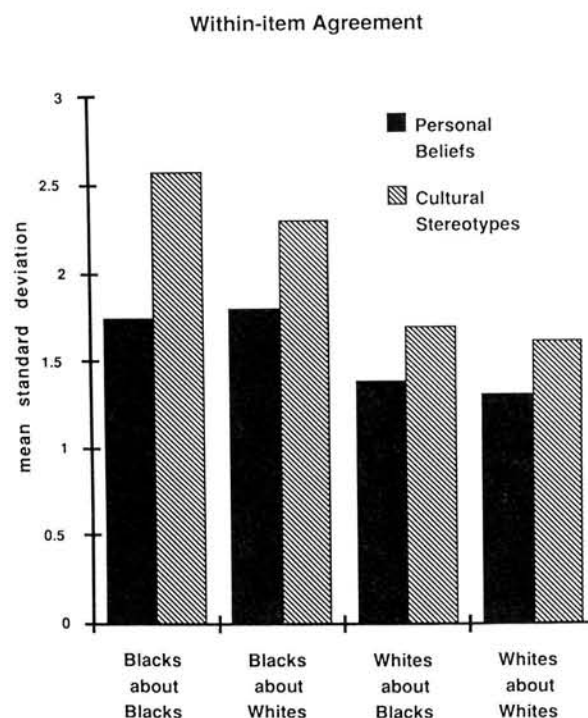


Figure 3. Average within-item agreement (standard deviations).

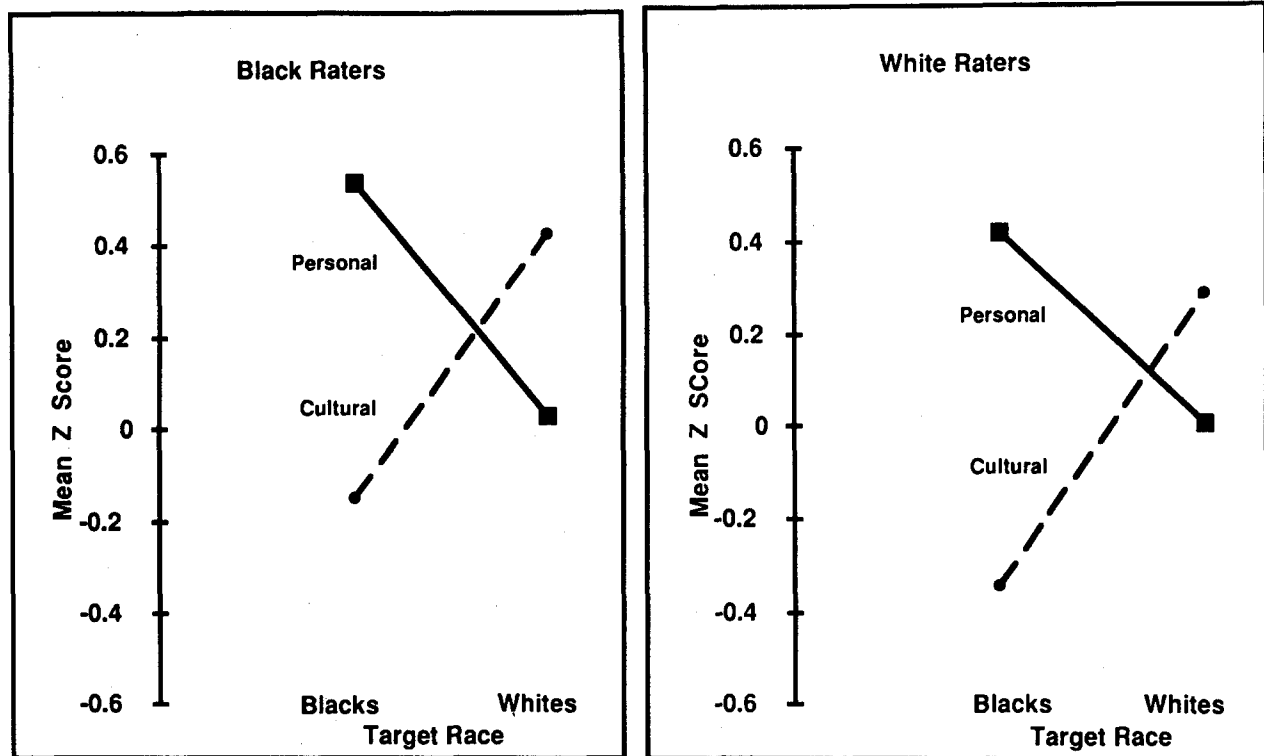


Figure 4. Direct stereotype favorability as expressed by average within-subjects correlations between ratings of groups and ratings of social desirability (left panel: Black participants; right panel: White participants).

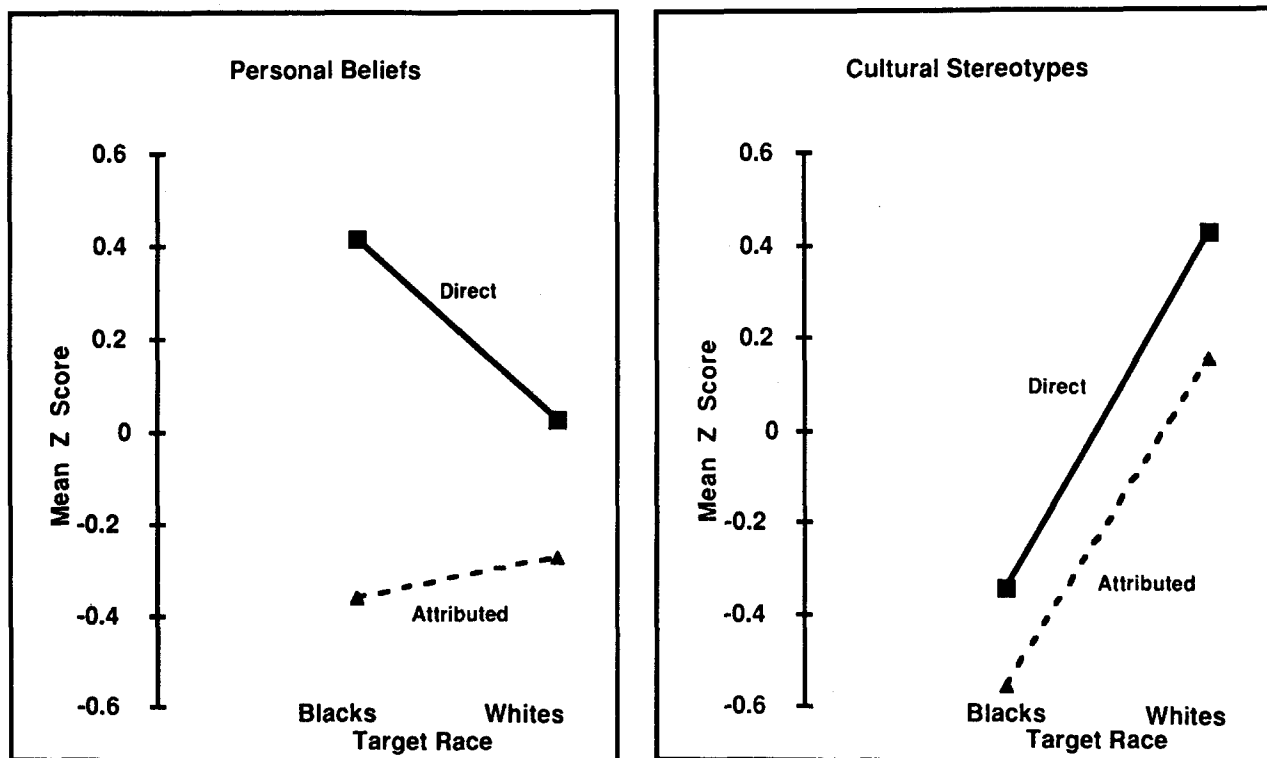


Figure 5. Stereotype favorability as attributed to out-group members (left panel: personal beliefs; right panel: cultural stereotypes).

Table 2
Hypothetical Data and Intercorrelations for Three Variables

Item	Social desirability	Personal beliefs	Cultural stereotypes
Hypothetical data			
1	4	2	-4
2	2	4	4
3	-2	-4	-2
4	-4	-2	2
Intercorrelations			
Social desirability	—	.8	-.3
Personal beliefs		—	.3
Cultural stereotypes			—

tributed to the out-group (all $ps > .10$). That is, on the level of individual differences, it was not the case that the participants with the most negative out-group stereotypes also had the most negative expectations regarding out-group attitudes.

Discussion

The present study used a full design required for stereotype assessment (Judd & Park, 1993). Members of two racial groups made a series of judgments about both groups. The findings supported the projection model of stereotyping. Personal beliefs predicted ratings of cultural stereotypes and, more important, these within-subjects correlations could not be reduced to similarities between personal beliefs and cultural stereotypes existing on the group level. In other words, participants showed *projective bias* by overestimating the degree to which their personal intergroup beliefs were shared by others. Also consistent with the model, social projection could not be explained by social desirability effects.

As expected, the average favorability of personal beliefs and cultural stereotypes varied drastically with the target group. Seventy-two percent of the White participants reported favorable personal beliefs about Blacks, and 84% rated the cultural stereotype of Blacks negatively. Still, projective bias was evident in 92% of Whites. The positive correlation between personal beliefs and cultural stereotypes is counterintuitive when one of the variables is positively correlated and the other is negatively correlated with a third variable (i.e., social desirability). The hypothetical data in Table 2 illustrate that this pattern is statistically unproblematic. In this example, one of the two favorable attributes is rated less characteristic, whereas the two unfavorable attributes are rated more characteristic in the cultural than in the personal condition. Ratings of one attribute are identical. This pattern is a simplified representation of Whites' ratings about Blacks. Personal intergroup beliefs predicted cultural stereotypes, and there was an additive negative component. Similarly, projection held for ratings about Whites, but the additional evaluative component was positive. This analysis suggests that the projection model captures the correlational linkages between the favorability of personal beliefs and cultural stereotypes, whereas dissociation theory captures the mean-level differences between the two.⁴

The prediction that participants would not project their per-

sonal beliefs to cultural stereotypes held by the out-group was supported for Black participants but not for White participants. The salience of social categorization was a likely moderating factor. Minority members tend to be more acutely aware of intergroup distinctions and their own position in the social fabric (Brewer, 1993). In laboratory groups, where the salience of social categorization was manipulated experimentally, projection to the out-group decreased with increases in salience (Krueger & Clement, 1996). In this study, social categorization may have been salient only for Blacks, the minority. Although Blacks projected their personal beliefs to society at large (i.e., cultural stereotypes), they did not use these beliefs to predict how the White out-group would rate the cultural stereotypes. The prediction that participants are aware of projection among out-group members was supported for both race groups. Blacks and Whites felt that the personal beliefs held by out-group members are closely related to ratings of the cultural stereotype made by that out-group.

Consistent with the agreement hypothesis, there were considerable levels of interrater agreement for both personal beliefs and cultural stereotypes. Stereotypes are not entirely idiosyncratic. They are social in the sense that people—to a degree—share them (Katz & Schanck, 1938). The two indexes of agreement yielded opposite results as to which type of rating was more socially shared. According to the interrater correlations, agreement on cultural stereotypes was greater than agreement on personal beliefs. Although this finding is consistent with dissociation theory, it should be borne in mind that agreement on cultural stereotypes was markedly smaller than agreement on the social desirability of traits. According to the standard deviations of the ratings, agreement on personal beliefs was greater than agreement on cultural stereotypes. This finding is inconsistent with dissociation theory.

Consistent with the projected-favoritism hypothesis, a mote-beam phenomenon appeared in stereotype ratings attributed to the out-group. Whereas in-group favoritism did not emerge for all types of direct ratings, participants of both races underestimated how favorably their own race was rated by members of the other race. Support for the projected-bias hypothesis was remarkably consistent across groups of participants and types of ratings. It is particularly noteworthy that participants of both races underestimated the favorability of the cultural stereotypes held by members of the other race. If cultural stereotypes were truly collective representations, as suggested by dissociation theory, in-group members would have accurately postdicted how favorably or unfavorably they were rated by the out-group.

The mote-beam mechanism of projected in-group bias has been replicated in the area of national stereotypes. Italian and American students showed in-group bias when rating the two

⁴ Dissociation theory makes no attempt to address the predictability of individual differences within a group of participants. The purpose of the theory is to explain the overall mean-level difference between positive personal beliefs and negative cultural stereotypes as shown in the ratings that low-prejudice Whites make about Blacks. To use a term by Dawes and Smith (1985), dissociation theory is concerned with a "structural inconsistency" between personal beliefs and cultural stereotypes. The projection model suggests, and this study has shown, that within a group of participants there are correlational consistencies that explain individual differences.

groups on a series of trait-descriptive adjectives (Krueger, 1996). Mean within-subjects correlations between stereotype and social desirability ratings were higher for in-group than for out-group ratings. When American students attempted to predict the ratings made by the Italians, they overestimated the degree of in-group favoritism and of out-group derogation among Italians.

Direction of Projection

What is the nature of the linkages between personal and cultural stereotypes? I have suggested that people are uncertain about how intergroup attitudes are distributed in society. To infer prevalent cultural attitudes, people may rely in part on their personal attitudes. The idea that personal responses guide group estimates underlies much of the work on consensus bias. In a classic demonstration, participants who agreed to carry a sandwich board with the words "Eat at Joe's" estimated that 63% of students complied with this request, whereas participants who did not agree estimated that 37% of students complied (Ross et al., 1977). Note that this finding has been termed a *false consensus effect* instead of a *true conformity effect*. Because the data were correlational, however, an alternative interpretation is that participants who thought compliance likely chose to comply, and those who thought compliance unlikely chose not to comply.⁵

A modification of Ross et al.'s (1977) classic study suggested that the false consensus effect indeed results from projection and not from conformity (Krueger & Clement, 1994, Experiment 3). Participants learned about Ross et al.'s study and reported whether they would have agreed to carry the board had they been in the study. The percentage of actual compliance was similar to the percentage reported by Ross et al. What is more important is that the rate of participants' own intended compliance did not reliably increase when participants learned that 1, 3, or ultimately 20 randomly selected Stanford University students had all agreed to comply. Moreover, the size of the consensus bias remained stable (see also Alicke & Largo, 1995) regardless of the size of the provided sample. When estimating the responses of the group, participants put much more weight on their own responses than on the sampled responses of others.

Other studies have involved a variety of direct tests of the causal relevance of participants' own responses. Participants take less time to decide whether a trait adjective describes themselves than to decide whether the trait describes most people (Clement, 1995). Even participants who were arbitrarily categorized into groups have assumed that in-group members, but not out-group members, would share their attitudes (Allen & Wilder, 1979; Krueger & Clement, 1996, Messé & Sivacek, 1979). That is, social projection operates in minimal group situations in which no information about the responses of others is available. Sherman and his collaborators (Agostinelli, Sherman, Presson, & Chassin, 1992; Sherman, Presson, & Chassin, 1984) manipulated participants' responses experimentally by providing feedback about performance. Particularly after ostensive failure, participants assumed that most others received similar feedback.

Because the present study was correlational, it remains possible to argue that a person's unique ratings of cultural stereotypes influenced his or her unique personal beliefs, rather than

the reverse. A cautious interpretation of the observed correlations is that the relationship between personal and cultural stereotypes is continuous and dynamic. Affective orientations toward members of certain groups emerge early in life. Preceding direct experience, these cultural stereotypes (at this stage, mere affective orientations) may be accepted as valid. With age, experience, and direct interracial contacts, personal views may supplement, challenge, and perhaps alter cultural stereotypes. Lacking reasonably precise, "poll-like" data on society's attitudes, people resort to their personal convictions when trying to estimate the attitudes of others. The two levels of stereotyping can inform each other over time, rather than follow a unidirectional path of influence.

Origin and Consequences of In-Group Bias

Why did in-group favoritism reliably emerge in projections to the out-group but not in direct ratings? Is it likely that the results were a sampling artifact? Perhaps the participating students constituted a particularly unprejudiced group. When predicting the responses of students of the opposite race, they may have thought of racial attitudes in society at large. Instructions attempted to guard against such contamination: They stated clearly that the task was to guess the ratings made by members of the other race who participated in this study. Because the study was conducted at a university, and participants took part in groups, they were aware of the composition of the sample. More important, the sample-bias argument is weakened by the consistency of projected in-group favoritism across rating types. According to dissociation theory and the present results on interrater agreement, cultural stereotypes are less sensitive to sampling biases than are personal beliefs. Therefore, sampling bias is a particularly unsatisfactory explanation for the finding that participants of both races underestimated the favorability of the other group's cultural stereotype about themselves.

Perhaps participants faked direct stereotype ratings but accurately predicted the ratings made by the other group. Egalitarian norms may exert a greater influence on direct ratings than on projected ratings. With continuing racial bias in society, people may be intent on avoiding overt derogatory statements about the out-group. This argument is consistent with dissociation theory. In particular, how Whites think about Blacks may have been more accurately expressed in what Blacks claimed Whites thought than in what Whites reported they thought. Historically, however, the faking argument has been raised to explain only the favorability of Whites' personal beliefs about Blacks (Sigall & Page, 1971). There is no rationale for why people should portray cultural stereotypes more favorably than they believe they are. In fact, if Whites were motivated to present themselves as more accepting of the out-group than they really were, they should rate the cultural stereotype of Blacks even more negatively than Blacks would. In contrast to a very

⁵ There were no experimental manipulations of participants' intended actions or their estimates in Ross et al.'s (1977) study. The correlational nature of the results would have been more apparent if consensus bias had been reported as a point-biserial correlation between intended action (comply vs. not comply) and their consensus estimates (see Hoch, 1987).

negative cultural stereotype, one's personal beliefs would look more positive. Hence, exaggerated expectations of in-group bias among out-groups appears to be a real projective phenomenon rather than an artifact. Its consequences are more likely to be negative than positive, ranging from distrust to self-fulfilling prophecies and conflict escalation.

Conclusions

Writing in *Public Opinion*, journalist Walter Lippmann (1922) gave social psychology the term *stereotype*. Using the platonic idea that no one can perceive reality directly, he suggested that people construct "pseudo-environments." Just as ancient troglodytes gazed at the dancing shadows projected to the wall of the Socratic cave, contemporaries respond to stereotypic "pictures in their heads" rather than directly to social reality. According to the present analysis, some of these pictures are unrealistically negative projections. These projections present a problem for intergroup relations because "different groups construct different pseudo-environments" (Rothbart & Lewis, 1993). Or, in Lippmann's words:

[We] . . . have to account for such facts as two nations attacking one another, each convinced that it is acting in self-defense; or two classes at war, each certain that it speaks for the common interest. They live, we are likely to say, in different worlds. More accurately, they live in the same world, but they think and feel in different ones. (p. 20)

There is substantial experimental evidence for the idea that people (a) accentuate real intergroup differences and (b) interpret these differences in ways that derogate the out-group (see Krueger, 1992, for a review). During the Vietnam war, Dawes, Singer, and Lemons (1972) found that self-professed "Hawks" and "Doves" expected their respective out-groups to endorse attitude statements that were more extreme than the ones that Hawks and Doves were actually willing to endorse. Robinson, Keltner, Ward, and Ross (1995) found that partisan group members (liberals and conservatives) not only construed contentious issues (e.g., abortion, racial violence) differently but also overestimated the degree of these differences when inferring the attitudes of others. When groups are in conflict, the leaders of the out-group seem particularly power hungry (Winter, 1987) and the media hostile to the in-group (Vallone, Ross, & Lepper, 1985). Sadly, people expect coercion (e.g., to threaten punitive strikes) to be more effective in influencing the behavior of the out-group, whereas they consider conciliation (e.g., appeasement) the appropriate strategy to induce cooperation by the in-group (Rothbart & Hallmark, 1988). Such asymmetrical assumptions about "our" and "their" motivational systems facilitate the escalation of conflicts and hinder their reduction. Assuming that "they" hold more extreme views than they actually do or say they do, or assuming that "they" need to be treated more harshly than they think they should be treated, may create the same conflict that the intergroup behavior was meant to prevent. The attitude that "we like them, but we know that they do not like us" implies an attribution of unfairness to the out-group. This projective attribution facilitates the interpretation of ambiguous behavior as hostile and rationalizes harsh responses or even preemptive aggression.

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