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3 Implicit Stereotyping and Prejudice

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The world Gordon Allport wrote about in *The Nature of Prejudice* provided impressive illustrations of prejudice and discrimination—of lynchings and the KKK, of religious persecution and Nazism, of political repression and McCarthyism. In contemporary American society, such overt expressions are vastly diminished, although even superficial analyses reveal that disturbing expressions of prejudice and resulting inequities are pervasive. All sciences of society recognize that inequities in access to human rights and justice significantly track demarcations of social categories (e.g., race/ethnicity, gender, socioeconomic class, religion), and conspicuous challenges to barriers that preserve systems of discrimination have recently been proposed (see, Galbraith, 1983; MacKinnon, 1989; Sen, 1985; Thompson, 1992).

In approaching the 21st century, it is timely for social psychology to define and, as necessary, refine the theoretical, empirical, and applied considerations of research on the nature of prejudice. One such refinement, we believe, is the exploration of the *unconscious*[1] operation of stereotyped beliefs, prejudicial attitudes, and discriminatory behavior. With greater ease than the social psychologist of Allport's time, contemporary social psychologists can identify and ap-

[1]Terminology. The term unconscious is used to refer to processes or events of which the actor is unaware. Two senses of the term unconscious have been identified to refer to (a) processes that occur outside of attention (preattentive) and (b) processes that are unreportable or not accurately reportable (see Bargh, 1989; Greenwald, 1992). In this chapter, it is largely the second sense of the term unconscious that is invoked in our discussions of *implicit* stereotyping and discrimination. We borrow the term implicit from recent research on memory in which that term describes effects attributed to unreportable residues of prior experiences (see Richardson-Klavehn & Bjork, 1988; Roediger, 1990; Schacter, 1987).

preciate the powerful influence of indirect, subtle, and seemingly innocuous expressions of stereotypes and prejudice (e.g., Bem & Bem, 1970; Brewer, 1988; Crosby, Bromley, & Saxe, 1980; Devine, 1989; Dovidio, Evans, & Tyler, 1986; Fiske, 1989a; Geis, in press; Perdue & Gurtman, 1988; Pratto & Bargh, 1991; Snyder, 1981; Word, Zanna, & Cooper, 1974). Yet, current theories and measurement techniques largely ignore the potential unconscious operation of this fundamental evaluation system (see the analysis of this point by Greenwald, 1990).

In this chapter, our concern lies chiefly with the unconscious operation of beliefs about social groups in judgments of individual members of the group, namely, unconscious stereotyping. We cannot deny the important advances in the understanding of stereotyping and attitudes that has resulted from the almost exclusive consideration of their conscious operation. Explicit theoretical attention to unconscious processes, however, is necessary if discoveries of their increasingly prominent role in cognition is to be integrated into theories of social judgment. The central goals of this chapter are to: (a) argue that examinations of stereotyping and prejudice can be profitably pursued by focusing on their unconscious operation, (b) identify recent empirical effects of unconscious stereotyping by locating their causal role in biases in perception and memory, and (c) propose that the pervasive nature of such unconscious influences calls for more radical corrective procedures than are generally acknowledged. If stereotyping and discrimination operate outside of conscious awareness, changing consciously held beliefs may be ineffective as a corrective strategy.

To accomplish these goals, we examine the involvement of unconscious cognition in stereotyping, discuss the role of implicit memory in revealing stereotypes, provide evidence from our recent research on implicit gender stereotypes and others' research on implicit race stereotypes, and speculate about the implications of implicit stereotyping for producing social change and the role of intention and responsibility in social action.

INVOLVEMENT OF UNCONSCIOUS COGNITION IN STEREOTYPING

Definitions of stereotypes and stereotyping offered by prominent theorists (see Tab. 3.1) reveal that the question of conscious versus unconscious operation is typically ignored in identifying the central features of the construct. Neglecting the possible unconscious operation of stereotypes and stereotyping appears to be true for selected definitions that emphasize the inaccuracy in such judgments as well as those that emphasize the categorization aspect of stereotyping. In attempting to determine the credit given to conscious versus unconscious cognition in analyses of stereotypes, we searched the subject indices of prominent social psychological texts on stereotyping and prejudice, looking for entries that would

TABLE 3.1
Definitions of Stereotypes and Stereotyping

A. Emphasis on Inaccuracy of Judgment
"A stereotype is a fixed impression, which conforms very little to the fact it pretends to represent, and results from our defining first and observing second" (Katz & Braly, 1935, p. 181).
"... a stereotype is an exaggerated belief associated with a category" (Allport, 1954, p. 191).
"An ethnic stereotype is a generalization made about an ethnic group, concerning a trait attribution, which is considered to be unjustified by an observer" (Brigham, 1971, p. 13).
"A generalization about a group of people that distinguishes those people from others. Stereotypes can be overgeneralized, inaccurate, and resistant to new information" (Myers, 1990, p. 332).
B. Emphasis on Categorization in Judgment
"... a categorical response, i.e., membership is sufficient to evoke the judgment that the stimulus person possesses all the attributes belonging to that category" (Secord, 1959, p. 309).
"A set of beliefs about the personal attributes of a group of people" (Ashmore & Del Boca, 1981, p. 16).
"In stereotyping, the individual: (1) categorizes other individuals, usually on the basis of highly visible characteristics such as sex or race; (2) attributes a set of characteristics to all members of that category; and (3) attributes that set of characteristics to any individual member of that category" (Snyder, 1981, p. 183).
"Stereotypes, the cognitive component of group antagonism, are beliefs about he personal attributes shared by people in a particular group or social category" (Sears, Peplau, Freedman, & Taylor, 1988, p. 415).
"... a collection of associations that link a target group to a set of descriptive characteristics" (Gaertner & Dovidio, 1986, p. 81).
"... a cognitive structure that contains the perceiver's knowledge, beliefs, and expectancies about some human group" (Hamilton & Trolier, 1986, p. 133).
"To stereotype is to assign identical characteristics to any person in a group, regardless of the actual variation among members of that group" (Aronson, 1988, p. 233).

reveal treatment of the role of consciousness (*conscious/unconscious, intentional/unintentional, aware/unaware, explicit/implicit, controlled/automatic, mindful/mindless, voluntary/involuntary, effortful/effortless*). This search included works by Allport (1954), Bettelheim and Janowitz (1964), Dovidio & Gaertner (1986), Hamilton (1981), Katz and Taylor (1988), and Miller (1982). It is revealing that only one volume (Dovidio & Gaertner, 1986) included a single entry for one of the terms (unintentional).

In modern social psychological thinking, however, some attention to unconscious processes is present even if investigators sometimes avoid use of the term *unconscious* (Bargh, 1989; Fazio, Sanbonmatsu, Powell, & Kardes, 1986; Higgins, 1989; Langer, 1978; Nisbett & Wilson, 1977; Wilson, Dunn, Kraft, &

Lisle, 1986). Postattentive unconscious processes (i.e., those based on unreportable residues of previously attended events—see Bargh, 1989; Greenwald, 1992) in stereotyping and prejudice can be observed in several important experimental demonstrations (Darley & Gross, 1983; Goldberg, 1968; Hamilton & Gifford, 1976; Snyder, Tanke, & Berscheid, 1977), although these investigators were not interested in unconscious processes per se. A renewed interest in unconscious cognitive processes (Brody, 1987; Greenwald, 1992; Jacoby & Kelley, 1987; Kihlstrom, 1987, 1990; Marcel, 1988; Uleman & Bargh, 1989) provides new opportunities for theoretical and methodological advances in experiments on the social psychology of stereotyping and prejudice.

We endorse Ashmore and Del Boca's (1981) synthesis of various definitions proposed by social psychologists that a stereotype is "a set of beliefs about the personal attributes of a group of people" (p. 16). Thus, stereotyping is the application of beliefs about the attributes of a group to judge an individual member of that group. Unlike other conceptions of stereotyping (Allport, 1954; Katz & Braly, 1935; Lippmann, 1922; Myers, 1990), this definition assumes that beliefs about the attributes of the group may be derived from accurate knowledge of a group or differences between two or more groups (e.g., the belief that "more men than women are famous"). Although stereotyping can involve the use of incorrect or distorted knowledge in the judgment of groups, we refer to it more generally as the unconscious or conscious application of (accurate or inaccurate) knowledge of a group in judging a member of the group.

It is in the theory underlying measurement and in the specific techniques used to measure stereotypes that the tacit assumption of their conscious operation is most obvious. In spite of well-publicized warnings about the limitations of introspective self-reports (Nisbett & Wilson, 1977) and appeals in favor of indirect methods of measuring attitudes (Campbell, 1950; Dovidio & Fazio, 1992; Gaertner, 1976; Webb, Campbell, Schwartz, & Sechrest, 1966), direct self-report measurement of stereotyping and prejudice remain dominant in practice. We partition measures that have been used to study stereotyping into three general classes to point out their varying reliance on the assumption of conscious operation.

Adjective Check List and Adjective-Rating Measures of Stereotypes and Stereotyping. As several reviews document, adjective check lists and rating scales have been used almost exclusively in the history of research on stereotyping and continue to be used (Brigham, 1971; Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972; Ehrlich & Rinehart, 1965; Harding, Kutner, Proshansky, & Chein, 1954; Judd & Park, 1988; Judd & Park, 1993; Katz & Braly, 1933; Karlins, Coffman, & Walters, 1969; Linville, Fisher, & Salovey, 1989; Ruble & Ruble, 1982; Sherif & Sherif, 1969). In the paper credited as the first empirical demonstration of stereotypes, Katz and Braly (1933) noted, "Stereotyped pictures of racial and national groups can arise only so long as individuals accept *consciously or unconsciously* the group fallacy attitude toward place of birth and skin color" (pp. 288–289, italics added). This statement of the possible unconscious status of stereotypes is rare and particularly ironic because Katz and Braly's (1933) adjective check-list technique became the method of choice for the assessment of consciously available and socially acceptable expressions of stereotypes. That measurement tradition continues today, with rare explicit acknowledgment of the unconscious operation of stereotyping and prejudice. (e.g., Brown & Geis, 1984). Contemporary measures of stereotypes and stereotyping continue to place the target of evaluation (a group or a group member) at the conscious focus of the respondent's attention.

Attitude Scales as Measures of Stereotypes and Stereotyping. Arguably the oldest measure used in social psychology—the attitude scale—is routinely used in studies of stereotyping and intergroup relations. Some examples that focus on race/ethnicity, political ideology, and gender as attitude objects are the Modern Racism Scale (McConahay, 1986), the Right Wing Authoritarianism Scale (Altemeyer, 1988), the Attitudes Toward Feminism Scale (Smith, Ferree, & Miller, 1975), the Sex-Role Inventory (Bem, 1974), the Attitudes Toward Women Scale (Spence & Helmreich, 1972), and the Personal Attributes Questionnaire (Spence, Helmreich, & Stapp, 1974). All these instruments make the respondent explicitly aware of the object of the attitude or stereotype that is being assessed. It is of some interest that even those who are specifically interested in the shifting trends in white American racism from open bigotry to more symbolic forms of racism (McConahay, 1986; Kinder & Sears, 1981) adopt explicit measurement techniques such as the following items: "Blacks shouldn't push themselves where they're not wanted" or "Over the past few years, Blacks have got more economically than they deserve" (Sears, 1988).

Experimental Measures of Stereotyping. In some experimental investigations of stereotyping and prejudice, the stigmatizing feature of the stimulus object is often kept out of the respondent's awareness, by using unobtrusive measures (e.g., Jahoda, Deutsch, & Cook, 1951; Webb et al., 1966). These experiments stand in contrast to the vast majority of explicit measures of stereotyping, although again, the interest in implicit manipulations does not stem from a theoretical interest in unconscious processes themselves. For example, Goldberg (1968) asked subjects to judge an essay attributed to a female or male author. The finding, striking because it was obtained from female judges, was that male-attributed essays were rated as more competent than female-attributed essays. The name of the author (which conveyed knowledge of author's gender) was not at the focus of subjects' conscious attention. Nevertheless, author's gender influenced judgments in a way that indicated discrimination against fe-

males. In another experiment, subjects rated behaviors performed by Black targets as representing greater aggression than the same behaviors performed by White targets (Sagar & Schofield, 1980; see also, Duncan, 1976). Similarly, Darley and Gross (1983) manipulated cues denoting socioeconomic class and found that such knowledge, although it alone did not bias subjects' judgments of the target's future academic performance, dramatically influenced judgment if the target was observed in a test-taking situation. Here, identical test performance led to predictions of better future performance if subjects believed the target to be from a high rather than a low socioeconomic class. In each of these examples, a stigmatizing feature of the target (gender, race, or social class), even though not at the focus of conscious attention, led to a stereotype-influenced judgment.

IMPLICIT MEMORY REVEALS GENDER STEREOTYPES

Although interest in the role of memory in stereotyping and prejudice is not new (see Allport, 1954, pp. 483–499), a concerted effort to understand the role of memory in stereotyping has been undertaken only recently, as part of a general development of information-processing interpretations of social cognition (e.g., Bellezza & Bower, 1981; Cohen, 1981; Hamilton & Gifford, 1976; Hamilton & Trolier, 1986; Rothbart, Evans, & Fulero, 1979; Snyder & Uranowitz, 1978; Taylor, 1981). Using nearly exclusively explicit (conscious recollection) memory measures such as free recall, cued recall, and recognition, these investigations revealed errors at both encoding (initial exposure to information) and retrieval that result in stereotype-reflecting judgments.

Studies of implicit memory have produced surprising and exciting discoveries that may represent a paradigm shift in understanding the role of unconscious cognition in human memory (see Greenwald, 1992; Jacoby, Lindsay, & Toth, 1992; Kihlstrom, 1987). In a typical experiment to demonstrate implicit memory, subjects are exposed to a series of stimuli, such as a list of words, and are later asked to perform an ostensibly unrelated second task on a new stimulus set. The new stimuli contain, perhaps in modified form, both previously seen (old) and new items. Subjects' performances at the second task on the old versus new items are compared to reveal the effects of prior exposure (i.e., implicit memory). Performances that provide such implicit measures of memory include perceptual identification, lexical decisions, word-fragment completions, and evaluative judgments; these tasks often reveal data patterns that contrast with the traditional explicit measures of free recall, cued recall, and recognition (Graf & Schacter, 1985; Merikle & Reingold, 1991; Richardson-Klavehn & Bjork, 1988; Roediger, Weldon, & Challis, 1989; Schacter, 1987; Smith & Branscombe, 1988). Studies using these procedures regularly demonstrate striking dissociations (i.e., evidence for implicit [unconscious] memory in the absence of explicit [conscious] recollection.

An Implicit Memory Effect: "Becoming Famous Overnight"

Jacoby, Kelley, Brown, and Jasechko (1989; Jacoby & Kelley, 1987) reported a provocative demonstration of the operation of implicit memory in fame judgments. Their basic procedure involved a two-phase experiment. On Day 1, subjects read a list that contained names of both famous and nonfamous people. On Day 2, 24 hours later, the same subjects were presented with a list containing previously seen (old) and new (unseen on Day 1) nonfamous names, interspersed with old and new famous names. Subjects judged each name on the new list in response to the question: Is this person famous? (to be answered "*yes*" or "*no*"). Jacoby et al. (1989) hypothesized that although episodic (i.e, explicit) memory for the nonfamous names would fade over the 24-hour delay, some residual (perceptual) familiarity for the previously seen (but not explicitly remembered as seen) nonfamous names should lead to false judgments of fame. That is, subjects should mistakenly judge more old (than new) nonfamous names as famous. As predicted, Jacoby et al. found a higher false-alarm rate for old nonfamous names than for new nonfamous names. In this way, Jacoby et al. succeeded in making nonfamous names "become famous overnight," an effect that indicates a potent unconscious influence of memory.

Stereotypical Gender Bias in False-Fame Judgments

Some of our recent research has taken advantage of the ease of identifying the gender of names (even those of unknown people). Although names carry other social category information as well (e.g., race; ethnicity, age), we manipulated gender because of (a) the relative ease of varying gender through names, (b) the likelihood that subjects (even in a within-subjects design) would not be alerted to our use of this commonplace category as an independent variable, and (c) the pervasive and accurate association between gender and fame (i.e., greater male than female fame).

Procedure. Adapting the Jacoby et al. (1989) procedure, we (Banaji & Greenwald, 1991; Banaji & Greenwald, 1992) varied the gender of nonfamous names by attaching a female or male first name to a common last name (e.g., Peter Walker, Susan Walker). Famous names were derived by generating names in three categories of fame (actors, musicians, and writers) and by selecting names in these categories thought to be known to most but not all undergraduates (Gladys Knight, Dave Brubeck, Doris Lessing, Thornton Wilder, Jane Wyman,

Rod Steiger). In the experiment we describe here, each of 49 subjects (23 male, 26 female) initially judged a list of 72 names for ease of pronunciation, the ostensible purpose being to estimate the difficulty that each name would pose to a person unfamiliar with the English language. The 72-name Day 1 list included 36 famous and 36 nonfamous names, with 18 female names and 18 male names in each of these sets of 36. After a 48-hour delay, subjects were shown a new list of 144 names, consisting of the 72 old (Day 1) names, randomly intermixed with 72 new names generated in the same fashion. Subjects judged each of the 144 Day 2 names simply as famous or not.

Data Analysis. Data from each subject's judgments for each of the four within-subject conditions (old male, new male, old female, and new female) were reduced to a hit rate (proportion of famous names correctly judged famous) and a false-alarm rate (proportion of nonfamous names mistakenly judged famous). One can see in Table 3.2 that (a) hit rates were higher for male names than for female names, (b) false alarm rates were higher for old names than for new names, and (c) the false-alarm rate for old male names was higher than that for old female names.

Unfortunately, the hit and false-alarm data do not readily allow judgments of the extent to which findings reflect effects of the independent variables on sensitivity to the famous–nonfamous distinction versus their effects on readiness to judge that names are famous (independent of their actual fame). However, signal detection analysis can decompose hit and false-alarm data into measures of sensitivity to a stimulus variation (name fame in this case) and threshold or criterion for assigning the judgment. These measures are referred to, respectively, as d' (d prime) and β (beta) (Green & Swets, 1966). Our analyses used these measures, replacing β with its logarithm because of the superior distributional properties (greater approximation to normality) of this log transformation.

Mean values of d' and log β for the four conditions are given in Tab. 3.3. The results for d' indicate that subjects were more sensitive to the fame variation for

TABLE 3.2
Hit and False Alarm Rates for Old and New, Male and Female Names (n = 49)

	Old Names		*New Names*	
	Hit Rate	*F-A Rate*	*Hit Rate*	*F-A Rate*
Male names				
Mean	.78	.08	.73	.03
SD	.15	.10	.21	.06
Female names				
Mean	.64	.04	.61	.03
SD	.17	.06	.21	.06

TABLE 3.3
Mean Values of d' and log β for Old and New, Male and Female Names (n = 49)

	Old Names		*New Names*	
	d'	*log β*	*d'*	*log β*
Male names				
Mean	2.39	.71	2.63	1.17
SD	.61	1.09	.86	.94
Female names				
Mean	2.15	1.38	2.19	1.45
SD	.54	.81	.77	.82

male names than female names [$F(1,48) = 37.50$]. The results for log β show subjects more readily judged famousness for male than for female names [$F(1,48) = 28.02$] and for old than new names [$F(1,48) = 8.67$]. Further, there was a significant interaction such that the greater tendency to assign fame to male rather than to female names was greater for old than for new names [$F(1,48) = 6.07$]. These tendencies were displayed equally by male and female subjects.

The main findings are graphed in Fig. 3.1. These findings provide evidence for implicit stereotypes that associate maleness more than femaleness with fame. In our experiment, the stereotype apparently operates with greatest force for nonfamous names that are given a boost in familiarity by presentation on Day 1. When encountered on Day 2, such names' familiarity is more likely to be interpreted as fame when the name is male than when female. The findings shown in Fig. 3.1 have now been replicated in much the same form in three experiments (Banaji & Greenwald, 1992). These additional experiments show a reliable name gender difference in β even in the absence of a name gender difference in d' (i.e., when famous male and female names were equally famous).

Stereotypical Gender Bias in Judgments of Dependence and Aggression

Higgins, Rholes, and Jones (1977) demonstrated that the presentation of trait-category information in one context can influence judgments of an ambiguously described target person in an unrelated context. We (Banaji, Hardin, & Rothman, 1993) used a variant of their procedure to examine another form of implicit stereotyping (cf. Srull & Wyer, 1979). Based on two established gender stereotypes (see Broverman et al., 1972), we asked whether activating a trait category would lead to more extreme judgments, specifically of targets whose social category (male or female) was stereotypically consistent with the trait category (aggressiveness and dependence, respectively).

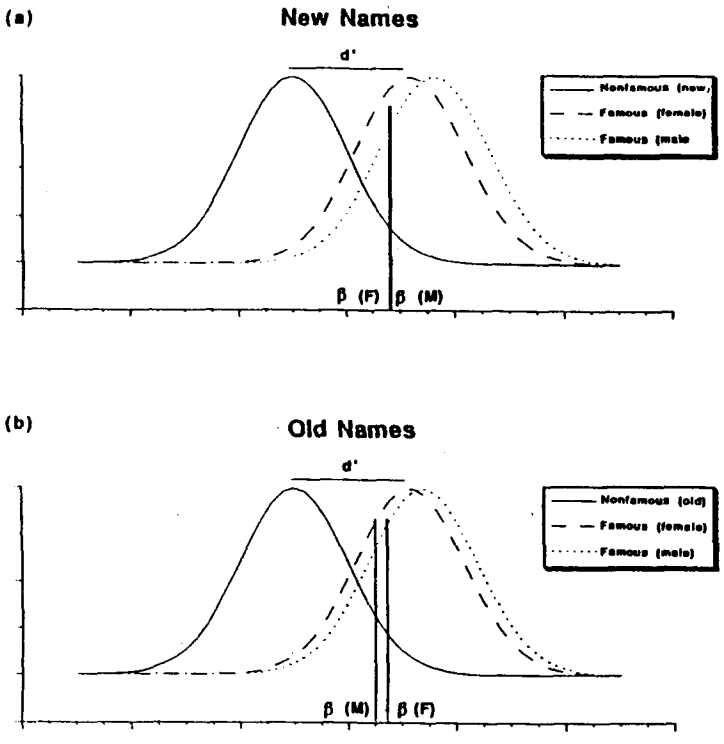

FIG. 3.1. Signal detection analysis of fame judgments. Noise distributions, to the left in each panel, indicate the distribution of strength of evidence for famousness provided by nonfamous names (solid line). The signal distributions, to the right, give the corresponding distributions for famous names, separately for male names (dotted line) and female names (dashed line). The separation between means of the noise and signal distributions measures subjects' sensitivity to the fame variation. This sensitivity (signal detection theory's *d'* measure) was significantly greater for male than female names. The vertical lines represent placements of criterion for subjects' judgments of fame for male and female names. Areas in the signal distributions to the right of criterion placement represent the hit rates shown in Table 2, and areas in the noise distributions to the right of the criterion represent Table 2's false alarm rates. The signal detection measure, beta, is the ratio of the height of the signal distribution to that of the noise distribution, at the point corresponding to criterion placement. Beta was lower for male names than female names (i.e., weaker evidence was required to judge a male name as famous), and this male-favoring bias occurred for names previously encountered on Day 1 (old names, Panel B) but not for names first encountered during the fame judgment task on Day 2 (new names, Panel A).

Procedure. Banaji et al. (1993) assigned subjects to either a dependence or aggression experiment. Subjects in each experiment were assigned to a condition in a 2 (trait exposure vs. control) × 2 (target gender: male vs. female) between-subjects design. In each experiment, subjects believed they were participating in two separate experiments. In the "first" experiment, subjects unscrambled 45 four-word sentences that were either all neutral in meaning or included 30 sentences each of which described a behavior indicative of the target trait (dependence or aggression). Examples of unscrambled sentences for the target trait dependence are: *G. conforms to others, B. takes verbal abuse, T. has low self-esteem.* Examples of unscrambled sentences for the target trait aggression are: *C. threatens other people, R. cuts off drivers, T. abuses an animal.* Then, a new experimenter conducted the "second" experiment, in which subjects read a paragraph that described either a male (Donald) or female (Donna) target performing a series of weakly trait-relevant actions. For example, in the dependence experiment, embedded in a story containing several neutral statements were items such as: "I ordered only coffee, and so did she (he)," or ". . . but wanted to check with her (his) boyfriend (girlfriend) first." Likewise, in the aggression experiment, embedded in a story containing several neutral statements were items such as: "Noticed his (her) mug was dirty and asked the waitress for a new one," or ". . . wanted to take his (her) car, so we left mine at the cafe." After a short filler task, subjects rated Donald or Donna on the target trait and other traits, related and unrelated to the target trait.

Results. Both experiments demonstrated implicit gender stereotyping. In the dependence experiment, subjects who were exposed to primes that described dependent behaviors judged the female target as more dependent than subjects who rated the same target after exposure to neutral primes. However, subjects exposed to the same dependence primes judged the male target as less dependent than subjects who rated the target after exposure to neutral primes. In the aggression experiment, subjects who were exposed to primes that described aggressive behaviors judged the male target as more aggressive than subjects who rated the same target after exposure to neutral primes. When judging a female target, previous exposure to the same aggression primes produced no change in judgment.

In summary, both experiments demonstrate the importance of a match between priming information and target's social category in producing the trait priming effect. Like the previous demonstration of gender bias in fame judgments, this result involves an implicit form of gender stereotyping. These are implicit effects because they occur without the subject being consciously aware of the influence of recent experience (name familiarity and trait activation, respectively). At the same time, these effects reveal gender stereotypes because they occur selectively when the information content of recent experience stereotypically fits with the gender category of the judgment target.

Commentary on the Goldberg Variations

Goldberg (1968) reported that female subjects underrated the quality of essays that were attributed to female-named rather than male-named authors. That result inspired a large replication literature, a recent review of which declared, in arriving at a conclusion opposed to Goldberg's, "[M]any authors . . . misrepresent the strength of the results Goldberg reported. . . . A quantitative meta-analysis of research using Goldberg's experimental paradigm shows that the average difference between ratings of men and women is negligible" (Swim, Borgida, Maruyama, & Myers, 1989, p. 409). Because Goldberg's finding is a prime example of implicit gender discrimination, Swim et al.'s questioning of its conclusion raises an issue about the generality of the implicit gender stereotyping results described in this chapter. We consider in turn the two main points of Swim et al.'s conclusion.

First, with regard to the strength of the original findings we note that, although reporting no statistical tests, Goldberg (1968) did provide enough data to permit effect size computations. Assuming that Goldberg used a two-tailed, alpha = .05 significance criterion, the mean effect size (across 6 topics) was between d = .43 and d = 1.03. These effect-size numbers are in a range conventionally described by Cohen (1988) as *moderate* to *large*. With topics (instead of subjects) used as the unit of observation, Goldberg's effect size was calculatable exactly as d = .88, which is conventionally a *large* effect.

Second, with regard to the strength of effects found in their meta-analytic review, Swim et al. reported an overall mean effect size of d = .07 (95% confidence interval between .04 and .10). This mean effect size is, indeed, below a conventional *small* level (Cohen, 1988). Nevertheless, as Rosenthal (1990) effectively argued, even effect sizes smaller than d = .07 can be very important and should therefore not be routinely dismissed as *negligible*. For example, translating a d = .07 sex-discrimination effect size finding into a large-scale hiring situation in which 50% of applicants are to be hired, 107 men would be hired for every 100 equally qualified women. That should not be "negligible" to be approximately 3.5% of deserving women who end up without jobs (nor to the 3.5% of undeserving men who end up with jobs!).

Perhaps more important than the overall mean effect size observed by Swim et al. was the highly significant heterogeneity in effect sizes that they reported (1989, p. 415, Table 1). As a consequence of this heterogeneity, it is inappropriate to accept the overall mean effect size as an adequate description of the literature reviewed by Swim et al. Rather, it is more proper to evaluate Goldberg's original conclusion by considering selectively, within the Goldberg Variations literature, those studies that had characteristics most similar to the original report. For example, studies that (like Goldberg's original) manipulated the target-person-sex independent variable minimally (by name only) showed larger effect sizes (mean d > = .12) than do other studies (Swim et al., 1989, Tables

17–19, pp. 420–422). This observation agrees with our assumption that Goldberg's original finding captured an implicit discrimination phenomenon and therefore might be undone by independent variable manipulations that brought the author's sex more into the subject's conscious focus of attention.

Implicit Race Stereotyping

Our studies focus on gender stereotypes, but there is no reason to believe that implicit stereotyping is confined to gender. In particular, some findings have already established that implicit stereotyping occurs for race categories. These findings were obtained chiefly within the social cognition tradition that has typically focused on conscious cognition. However, as will be apparent, the results reviewed here reflect the same implicit (unconscious) processes that are apparent in our studies of gender-related stereotyping.

Gaertner and McLaughlin (1983) presented subjects with pairs of letter strings, requesting a "*yes*" judgment if both were words and "*no*" otherwise. Hypothesizing that faster "*yes*" responses should reflect stronger existing associations between the two words in a pair, they found that White subjects responded reliably faster to White-positive word pairs than to Black-positive pairs (e.g., *White–smart vs. Black–smart*). This difference did not emerge on judgments of negative traits (e.g., *White–lazy vs. Black–lazy*). These findings were apparent both for subjects who scored high and those who scored low on an explicit measure of race prejudice. In a related study, Dovidio et al. (1986) used the procedure of presenting a prime (*Black* or *White*) followed by a target (a positive or negative trait) and asking subjects to judge if the target trait could *ever be true* or was *always false* of the prime category. Again, subjects responded reliably faster to positive traits that followed the prime *White* than *Black*, and in this study they also responded faster to negative traits that followed the prime *Black* than *White*.

The results just described were interpreted by Gaertner and Dovidio (1986) as evidence for *aversive racism*, which they define as a conflict "between feelings and beliefs associated with a sincerely egalitarian value system and unacknowledged negative feelings and beliefs about blacks" (p. 62). From our perspective, these findings can effectively be described as *implicit racism*.

Devine (1989) reported that white subjects who were subliminally exposed to a series of words, 80% of which were stereotypically associated with Black Americans (e.g., poor, jazz, slavery, Harlem, busing) judged a male target person to be more hostile than subjects for whom only 20% of the words had the stereotype association. Again, there was no difference in this result between subjects who scored high and low on an explicit measure of prejudice. Two aspects of the procedure and results render conclusions based on this finding tentative. First, the male target's race was unspecified, and we must therefore assume that subjects imagined a white American target, raising the question of

whether the effect is due to activation of the stereotype of Black Americans or possibly to a hostility component of the priming procedure. Further, the dissociation result was obtained across separate experiments and between an implicitly measured stereotype and explicitly measured prejudice. However, the importance of Devine's study derives from its pioneer status in identifying this particular form of an implicit stereotyping effect.

Gilbert and Hixon (1991) showed that a race stereotype, presumably activated by including an Asian female in a videotaped sequence seen by subjects, influenced subsequent word-fragment completions, a type of measure often used in implicit memory research. Subjects who were in a condition that included a cognitive load (e.g., rehearsing an eight-digit number) during exposure to the Asian stimulus completed fewer fragments with stereotypic terms than subjects not given the additional cognitive task, suggesting that cognitive load interfered with stereotype activation. On the other hand, those who had no load during the stereotype activation stage (and for whom, therefore, it could be assumed that the stereotype was activated), gave more stereotype-consistent completions than those who had added mental load. Results were reversed when cognitive load was introduced after stereotype activation (i.e., when judging the target). Now, subjects in the cognitive load condition were more likely to display the activated stereotype than those in the no-load condition. These findings indicate that implicit stereotype expressions are less likely when subjects can devote greater conscious effort to their task.

SPECULATIONS ABOUT IMPLICIT STEREOTYPING FOR SOCIAL CHANGE

Not surprisingly, interest in person-level and consciously operative psychological processes has led social psychologists to offer prescriptions for social change by transformations in (a) individual thought and behavior, and (b) the conscious expression of stereotypes and prejudice, by using conscious methods of change (but see Gaertner & Dovidio, 1986, p. 85). A clear example of both these features is Allport's (1954, p. 487) discussion of methods that focus on conscious change at the individual level.

We do not deny the importance of individual-based or conscious methods of change. To continue the argument made in this chapter, however, we recommend going beyond the almost exclusive reliance on such techniques. The enormity and complexity of intergroup behavior make methods that focus exclusively on individual change in conscious awareness ineffectual. Here, we speculate briefly about the relevance of implicit stereotyping for the endeavor of reducing prejudice and discrimination.

Change in Social Structure Will Change Cognitive Structure. It is plausible that influential stereotypes are derived from everyday experiences of reality, for

example, that women as a social group are less famous than men or that men commit more crimes of aggression than women. Such knowledge is obtained without the distortion of facts or the accompaniment of strong feelings about the social groups in question. The focus of this chapter is on the unconscious application of such commonplace knowledge of groups in the judgment of individual members. Each act of implicit stereotyping can be seen as an implicit individual reproduction of beliefs about the collective. In other words, social structure (e.g., stratification of fame by gender) causes cognitive structure (e.g., a higher criterion of fame in judgments of an individual female). If implicit stereotyping is the unconscious application of knowledge about an existing relationship between an attribute (fame) and a social category (females, males), then the stratification of attributes by social categories fosters the potential for implicit stereotyping and prejudice. The unconscious mechanisms that transduce knowledge of the social world for use in individual judgment demonstrate the influence of sociocultural realities on cognition. Future programs for social change in beliefs and attitudes can be facilitated by research that establishes links between the social conditions of the collective and the cognitive output of individuals.

Of the several ways in which social structure itself can be changed, a minority of social psychologists have argued for the need for legislation and social policy as a way to ensure relatively swift social change (e.g., Allport, 1954; Aronson, 1988; Clark, 1955; Katz & Taylor, 1988). Although it may be obvious that legislated social change creates individual belief change, this view is a relatively new one and has not always been endorsed with enthusiasm. For example, the United States Supreme Court defended its "equal but separate" decision in *Plessey v. Ferguson* (1896) by stating that the law was powerless to counter "racial instincts" (p. 537) and that "If one race be inferior to the other socially, the Constitution of the United States cannot put them upon the same plane" (p. 551). Likewise, in recent Supreme Court decisions on abortion rights, the court has transferred the decision making to states, and thereby to the individual voters in each state, presumably reflecting the position that stateways can't change folkways. To the contrary, we emphasize that legislated change can effectively transform social structure that can change cognitive structure. In particular, legislated social change has the benefit of potentially widespread influence without the involvement of conscious decisions by single individuals to adopt nondiscriminatory behaviors.

Making the Unconscious Conscious Reduces the Incidence of Stereotyping and Prejudice. Recognition of implicit stereotyping and prejudice leads to a critical question: How can stereotyping and prejudice be reduced when their operation is concealed from the perpetrator and (perhaps) even the target of discrimination? One method is to alert subjects to the stigmatizing attribute that produces the stereotyped judgment. Data relevant to this issue suggest that individuals may show evidence of stereotyping on an implicit measure but not on an explicit measure (Baxter, 1973; Crosby et al., 1980; Devine, 1989; Dovidio et

al., 1986). Drawing social category information into conscious awareness allows mental (cognitive and motivational) resources to overrule the consciously unwanted but unconsciously operative response. The notion of highlighting awareness of the social category at the time of judgment may be controversial because other well-reasoned suggestions dictate minimizing awareness of social category distinctions (Brewer & Miller, 1988). Future research must address the task and goal conditions under which, and the methods by which, increasing the salience of category information decreases the expression of prejudice.

THE ROLE OF INTENTION AND RESPONSIBILITY IN SOCIAL ACTION

Social psychologists have avoided addressing issues concerning responsibility and intention in situations that produce stereotyping and prejudice (although see Bargh, in press; Fiske, 1989a). Such issues have historically been considered to be in the purview of social philosophy and legal discourse. In particular, the issue of "intention to harm" has been central to important decisions by the United States Supreme Court. Of central interest is the issue of the unfairness of assigning blame for an act committed without conscious intention to harm versus the damage that results to the victim. For example, in an important libel case, the court ruled that such acts of harm doing must be shown to have occurred with actual malice, with knowledge that it was false, and with reckless disregard of the truth (*The New York Times v. Sullivan*, see Lewis, 1991). Likewise, the Supreme Court gave a restrictive interpretation of the Voting Rights Act of 1965, ruling that district lines and other voting procedures did not violate the law unless it could be shown that they were adopted for the purpose of discriminating. That decision produced an immediate response from Congress, which passed an amendment clarifying that the Voting Rights Act applies to actions that have a discriminatory result even if intentional discrimination is not proven (see Greenhouse, 1991).

Social psychologists have been concerned with the implications of their research for legal action, albeit only rarely have their experimental data been offered as part of testimony in important legal decisions (e.g., Clark, 1955; Fiske, 1989b). However, empirical discoveries about the implicit nature of social judgments are indeed relevant to discussions about the legal consequences of such acts for the perpetrator as well as the survivor of stereotyping and prejudice. Specifically, if implicit stereotyping arises (a) from knowledge shared by a culture as a whole and is not uniquely possessed by the perpetrator alone, (b) from an accurate understanding of reality and not necessarily from misperception or distortion, and (c) without the conscious awareness of the perpetrator, such data would argue for removing responsibility from individual perpetrators of social crimes of stereotyping and prejudice. Such conditions surrounding discoveries of implicit stereotyping encourage consideration of the notion of *perpetratorless crimes* (as a parallel to the existing notion of *victimless crimes*). The notion of removing responsibility and blame from individual perpetrators differs vastly from conventional assumptions of most justice systems. Discussion of the implications of this construct for justice systems must be considered at length, without sacrificing attention to the consequences of perpetratorless crimes for the target of prejudice.

From the perspective of the victim of implicit stereotyping, the potential pervasiveness of such actions demand discussion of the status of victim remuneration. In particular, implicit stereotyping is, by its very nature, likely to be unnoticed by the target, and hence traditional methods of guaranteeing due process and so forth become irrelevant. However, if future research documents the extent of damage produced by implicit stereotyping and prejudice, alternative methods of recognizing the extent of discrimination and providing remuneration will need to be developed. For example, an important issue for consideration is the target's attribution of internal versus external location of the causes of negative outcomes. Specifically, if the (external) cause of a discriminatory act is hidden from the victims' view, an internal attribution of its cause may be produced. Judgments of internal causes of behavior that actually reside in the environment (i.e., in the perpetrator's implicit discrimination) can produce psychological damage in members of groups routinely targeted for implicit stereotyping and prejudice. The combination of an absence of a conscious perpetrator of stereotyping and prejudice and the presence of such acts themselves and their consequences suggests that new dialogue is needed about methods for recognizing implicit stereotyping and treating its symptoms.

CONCLUSIONS

Historically, implicit stereotyping and prejudice have been disregarded in considerations of social behavior. With increasing attention to unconscious processes in thought and judgment, their operation can now be effectively investigated. Research on implicit stereotyping and prejudice can: (a) question the currently dominant conception that such evaluations operate primarily within consciousness, (b) provide increased understanding of the subtle yet powerful mechanisms by which stereotyped judgments are produced, and (c) instigate discussion of potential new solutions to a major social problem.

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4 The Role of Mood in the Expression of Intergroup Stereotypes

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We usually think of the stereotypes we hold as quite stable over time. In contrast, the stereotypes we express at different points in time may vary. Situational constraints, such as contextual cues regarding appropriateness, play a role in this regard (Dovidio & Gaertner, 1986). However, in addition to monitoring what we say, the stereotypes that come to mind for possible expression at various times may differ. That is, only a subset of our available pool of stereotypes may be accessible at any particular time. One factor that may influence which stereotypes come to mind, and thus the likelihood of their expression, is the mood in which we find ourselves. In particular, when we're in a bad mood, we may find that negative stereotypes are especially likely to come to mind and be expressed.

The focus of this chapter is on how mood influences the expression of intergroup stereotypes. We present a model that places the role of mood in the context of an information-processing system. We also describe a series of studies that examine the effect of mood on the expression of ethnic stereotypes. Our interest in this topic was piqued by a set of on-the-street interviews reported in the local newspaper of a small Ontario community (Boucher, 1987). The question to which residents responded was, "Do you agree with the federal government's new policy restricting the entry of refugees into Canada?" Some typical responses were as follows:

- Yes, I've been unemployed for 6 months now. Canada should be a lot stricter in everything. Crime is a real factor in this, too.
- Yes, they keep trying to put that juvenile delinquent shelter in our neighborhood. Refugees? We don't need them.