Social Perception and Interpersonal Behavior: On the Self-Fulfilling Nature of Social Stereotypes

Mark Snyder
University of Minnesota

Elizabeth Decker Tanke
University of Santa Clara

Ellen Berscheid
University of Minnesota

This research concerns the self-fulfilling influences of social stereotypes on dyadic social interaction Conceptual analysis of the cognitive and behavioral consequences of stereotyping suggests that a perceiver's actions based upon stereotype-generated attributions about a specific target individual may cause the behavior of that individual to confirm the perceiver's initially erroneous attributions. A paradigmatic investigation of the behavioral confirmation of stereotypes involving physical attractiveness (e.g., "beautiful people are good people") is presented. Male "perceivers" interacted with female "targets" whom they believed (as a result of an experimental manipulation) to be physically attractive or physically unattractive. Tape recordings of each participant's conversational behavior were analyzed by naive observer judges for evidence of behavioral confirmation. These analyses revealed that targets who were perceived (unknown to them) to be physically attractive came to behave in a friendly, likeable, and sociable manner in comparison with targets whose perceivers regarded them as unattractive. It is suggested that theories in cognitive social psychology attend to the ways in which perceivers create the information that they process in addition to the ways that they process that information.

> Thoughts are but dreams
> Till their effects be tried
>
> —William Shakespeare [1]

Cognitive social psychology is concerned with the processes by which individuals gain knowledge about behavior and events that they encounter in social interaction, and how they use this knowledge to guide their actions. From this perspective, people are "constructive thinkers" searching for the causes of behavior, drawing inferences about people and their circumstances, and acting upon this knowledge.

Most empirical work in this domain—largely stimulated and guided by the attribution theories (e.g., Heider, 1958; Jones & Davis, 1965; Kelley, 1973)—has focused on the processing of information, the "machinery" of social cognition. Some outcomes of this research have been the specification of how individuals identify the causes of an actor's behavior, how individuals make inferences about the traits and dispositions of the actor, and how individuals make predictions about the actor's future behavior (for reviews, see Harvey, Ickes, & Kidd, 1976; Jones et al., 1972; Ross, 1977).

It is noteworthy that comparatively little theoretical and empirical attention has been directed to the other fundamental question within the cognitive social psychologist's mandate: What are the cognitive and behavioral consequences of our impressions of other

[1] From *The Rape of Lucrece*, lines 346–353.

people? From our vantage point, current-day attribution theorists leave the individual "lost in thought," with no machinery that links thought to action. It is to this concern that we address ourselves, both theoretically and empirically, in the context of social stereotypes.

Social stereotypes are a special case of interpersonal perception. Stereotypes are usually simple, overgeneralized, and widely accepted (e.g., Karlins, Coffman, & Walters, 1969). But stereotypes are often inaccurate. It is simply not true that all Germans are industrious or that all women are dependent and conforming. Nonetheless, many social stereotypes concern highly visible and distinctive personal characteristics; for example, sex and race. These pieces of information are usually the first to be noticed in social interaction and can gain high priority for channeling subsequent information processing and even social interaction. Social stereotypes are thus an ideal testing ground for considering the cognitive and behavioral consequences of person perception.

Numerous factors may help sustain our stereotypes and prevent disconfirmation of "erroneous" stereotype-based initial impressions of specific others. First, social stereotypes may influence information processing in ways that serve to bolster and strengthen these stereotypes.

Cognitive Bolstering of Social Stereotypes

As information processors, humans readily fall victim to the cognitive process described centuries ago by Francis Bacon (1620/1902):

The human understanding, when any proposition has been once laid down . . . forces everything else to add fresh support and confirmation . . . it is the peculiar and perpetual error of the human understanding to be more moved and excited by affirmatives than negatives. (pp. 23–24)

Empirical research has demonstrated several such biases in information processing. We may overestimate the frequency of occurrence of confirming or paradigmatic examples of our stereotypes simply because such instances are more easily noticed, more easily brought to mind, and more easily retrieved

from memory (cf. Hamilton & Gifford, 1976; Rothbart, Fulero, Jensen, Howard, & Birrell, Note 1). Evidence that confirms our stereotyped intuitions about human nature may be, in a word, more cognitively "available" (Tversky & Kahneman, 1973) than nonconfirming evidence.

Moreover, we may fill in the gaps in our evidence base with information consistent with our preconceived notions of what evidence should support our beliefs. For example, Chapman and Chapman (1967, 1969) have demonstrated that both college students and professional clinicians perceive positive associations between particular Rorschach responses and homosexuality in males, even though these associations are demonstrably absent in real life. These "signs" are simply those that comprise common cultural stereotypes of gay males.

Furthermore, once a stereotype has been adopted, a wide variety of evidence can be interpreted readily as supportive of that stereotype, including events that could support equally well an opposite interpretation. As Merton (1948) has suggested, in-group virtues ("We are thrifty") may become outgroup vices ("They are cheap") in our attempts to maintain negative stereotypes about disliked out groups. (For empirical demonstrations of this bias, see Regan, Straus, & Fazio, 1974; Rosenhan, 1973; Zadny & Gerard, 1974).

Finally, selective recall and reinterpretation of information from an individual's past history may be exploited to support a current stereotype-based inference (cf. Loftus & Palmer, 1974). Thus, having decided that Jim is stingy (as are all members of his group), it may be all too easy to remember a variety of behaviors and incidents that are insufficient one at a time to support an attribution of stinginess, but that taken together do warrant and support such an inference.

Behavioral Confirmation of Social Stereotypes

The cognitive bolstering processes discussed above may provide the perceiver with an "evidence base" that gives compelling cognitive reality to any traits that he or she may

have erroneously attributed to a target individual initially. This reality is, of course, entirely cognitive: It is in the eye and mind of the beholder. But stereotype-based attributions may serve as grounds for predictions about the target's future behavior and may guide and influence the perceiver's interactions with the target. This process itself may generate behaviors on the part of the target that erroneously confirm the predictions and validate the attributions of the perceiver. How others treat us is, in large measure, a reflection of our treatment of them (cf. Bandura, 1977; Mischel, 1968; Raush, 1965). Thus, when we use our social perceptions as guides for regulating our interactions with others, we may constrain their behavioral options (cf. Kelley & Stahelski, 1970).

Consider this hypothetical, but illustrative, scenario: Michael tells Jim that Chris is a cool and aloof person. Jim meets Chris and notices expressions of coolness and aloofness. Jim proceeds to overestimate the extent to which Chris' self-presentation reflects a cool and aloof disposition and underestimates the extent to which this posture was engendered by his own cool and aloof behavior toward Chris, that had in turn been generated by his own prior beliefs about Chris. Little does Jim know that Tom, who had heard that Chris was warm and friendly, found that his impressions of Chris were confirmed during their interaction. In each case, the end result of the process of "interaction guided by perceptions" has been the target person's *behavioral confirmation* of the perceiver's initial impressions of him.

This scenario makes salient key aspects of the process of behavioral confirmation in social interaction. The perceiver (either Jim or Tom) is not aware that his original perception of the target individual (Chris) is inaccurate. Nor is the perceiver aware of the causal role that his own behavior (here, the enactment of a cool or warm expressive style) plays in generating the behavioral evidence that erroneously confirms his expectations. Unbeknownst to the perceiver, the reality that he confidently perceives to exist in the social world has, in fact, been actively constructed by his own transactions with and operations upon the social world.

In our empirical research, we proposed to demonstrate that stereotypes may create their own social reality by channeling social interaction in ways that cause the stereotyped individual to behaviorally confirm the perceiver's stereotype. Moreover, we sought to demonstrate behavioral confirmation in a social interaction context designed to mirror as faithfully as possible the spontaneous generation of impressions in everyday social interaction and the subsequent channeling influences of these perceptions on dyadic interaction.

One widely held stereotype in this culture involves physical attractiveness. Considerable evidence suggests that attractive persons are assumed to possess more socially desirable personality traits and are expected to lead better lives than their unattractive counterparts (Berscheid & Walster, 1974). Attractive persons are perceived to have virtually every character trait that is socially desirable to the perceiver: "Physically attractive people, for example, were perceived to be more sexually warm and responsive, sensitive, kind, interesting, strong, poised, modest, sociable, and outgoing than persons of lesser physical attractiveness" (Berscheid & Walster, 1974, p. 169). This powerful stereotype holds for male and female perceivers and for male and female stimulus persons.

What of the validity of the physical attractiveness stereotype? Are the physically attractive actually more likable, friendly, and confident than the unattractive? Physically attractive young adults are more often and more eagerly sought out for social dates (Dermer, 1973; Krebs & Adinolphi, 1975; Walster, Aronson, Abrahams, & Rottman, 1966). Even as early as nursery school age, physical attractiveness appears to channel social interaction: The physically attractive are chosen and the unattractive are rejected in sociometric choices (Dion & Berscheid, 1974; Kleck, Richardson, & Ronald, 1974).

Differential amount of interaction with the attractive and unattractive clearly helps the stereotype persevere, for it limits the chances for learning whether the two types of individuals differ in the traits associated with the stereotype. But the point we wish to focus upon here is that the stereotype may also

channel interaction so that it behaviorally confirms itself. Individuals may have different styles of interaction for those whom they perceive to be physically attractive and for those whom they consider unattractive. These differences in interaction style may in turn elicit and nurture behaviors from the target person that are in accord with the stereotype. That is, the physically attractive may actually come to behave in a friendly, likable, sociable manner—not because they necessarily possess these dispositions, but because the behavior of others elicits and maintains behaviors taken to be manifestations of such traits.

Accordingly, we sought to demonstrate the behavioral confirmation of the physical attractiveness stereotype in dyadic social interaction. In order to do so, pairs of previously unacquainted individuals (designated, for our purposes, as a perceiver and a target) interacted in a getting-acquainted situation that had been constructed to allow us to control the information that one member of the dyad (the male perceiver) received about the physical attractiveness of the other individual (the female target). To measure the extent to which the actual behavior of the target matched the perceiver's stereotype, naive observer judges, who were unaware of the actual or perceived physical attractiveness of either participant, listened to and evaluated tape recordings of the interaction.

Method

Participants

Fifty-one male and 51 female undergraduates at the University of Minnesota participated, for extra course credit, in a study of "the processes by which people become acquainted with each other." Participants were scheduled in pairs of previously unacquainted males and females.

The Interaction Between Perceiver and Target

To insure that participants would not see each other before their interactions, they arrived at separate experimental rooms on separate corridors. The experimenter informed each participant that she was studying acquaintance processes in social relationships. Specifically, she was investigating the differences between those initial interactions that involve nonverbal communication and those, such as telephone conversations, that do not. Thus, she explained, the participant would engage in a telephone conversation with another student in introductory psychology.

Before the conversation began, each participant provided written permission for it to be tape recorded. In addition, both dyad members completed brief questionnaires concerning such information as academic major in college and high school of graduation. These questionnaires, it was explained, would provide the partners with some information about each other with which to start the conversation.

Activating the perceiver's stereotype The getting-acquainted interaction permitted control of the information that each male perceiver received about the physical attractiveness of his female target. When male perceivers learned about the biographical information questionnaires, they also learned that each person would receive a snapshot of the other member of the dyad, because "other people in the experiment have told us they feel more comfortable when they have a mental picture of the person they're talking to." The experimenter then used a Polaroid camera to photograph the male. No mention of any snapshots was made to female participants.

When each male perceiver received his partner's biographical information form, it arrived in a folder containing a Polaroid snapshot, ostensibly of his partner. Although the biographical information had indeed been provided by his partner, the photograph was not. It was one of eight photographs that had been prepared in advance.

Twenty females students from several local colleges assisted (in return for $5) in the preparation of stimulus materials by allowing us to take Polaroid snapshots of them. Each photographic subject wore casual dress, each was smiling, and each agreed (in writing) to allow us to use her photograph. Twenty college-age men then rated the attractiveness of each picture on a 10-point scale.[2] We then chose the four pictures that had received the highest attractiveness ratings ($M = 8.10$) and the four photos that had received the lowest ratings ($M = 2.56$). There was virtually no overlap in ratings of the two sets of pictures.

Male perceivers were assigned randomly to one of two conditions of perceived physical attractiveness of their targets. Males in the attractive target condition received folders containing their partners' biographical information form and one of the four attractive photographs. Males in the unattractive target condition received folders containing their partners' biographical information form and one of the four unattractive photographs. Female targets knew nothing of the photographs possessed by their male interaction partners, nor did they receive snapshops of their partners.

The perceiver's stereotype-based attributions. Before initiating his getting-acquainted conversation,

---

[2] The interrater correlations of these ratings of attractiveness ranged from .45 to .92, with an average interrater correlation of .74.

each male perceiver rated his initial impressions of his partner on an Impression Formation Questionnaire. The questionnaire was constructed by supplementing the 27 trait adjectives used by Dion, Berscheid, and Walster (1972) in their original investigation of the physical attractiveness stereotype with the following items: intelligence, physical attractiveness, social adeptness, friendliness, enthusiasm, trustworthiness, and successfulness. We were thus able to assess the extent to which perceivers' initial impressions of their partners reflected general stereotypes linking physical attractiveness and personality characteristics.

The getting-acquainted conversation. Each dyad then engaged in a 10-minute unstructured conversation by means of microphones and headphones connected through a Sony TC-570 stereophonic tape recorder that recorded each participant's voice on a separate channel of the tape.

After the conversation, male perceivers completed the Impression Formation Questionnaires to record final impressions of their partners Female targets expressed self-perceptions in terms of the items of the Impression Formation Questionnaire. Each female target also indicated, on 10-point scales, how much she had enjoyed the conversation, how comfortable she had felt while talking to her partner, how accurate a picture of herself she felt that her partner had formed as a result of the conversation, how typical her partner's behavior had been of the way she usually was treated by men, her perception of her own physical attractiveness, and her estimate of her partner's perception of her physical attractiveness. All participants were then thoroughly and carefully debriefed and thanked for their contribution to the study.

Assessing Behavioral Confirmation

To assess the extent to which the actions of the target women provided behavioral confirmation for the stereotypes of the men perceivers, 8 male and 4 female introductory psychology students rated the tape recordings of the getting-acquainted conversations. These observer judges were unaware of the experimental hypotheses and knew nothing of the actual or perceived physical attractiveness of the individuals on the tapes. They listened, in random order, to two 4-minute segments (one each from the beginning and end) of each conversation. They heard *only* the track of the tapes containing the target women's voices and rated each woman on the 34 bipolar scales of the Impression Formation Questionnaire as well as on 14 additional 10-point scales; for example, "How animated and enthusiastic is this person?", "How intimate or personal is this person's conversation?", and "How much is she enjoying herself?". Another group of observer judges (3 males and 6 females) performed a similar assessment of the male perceivers' behavior based upon only the track of the tapes that contained the males' voices.[3]

Results

To chart the process of behavioral confirmation of social stereotypes in dyadic social interaction, we examined the effects of our manipulation of the target women's apparent physical attractiveness on (a) the male perceivers' initial impressions of them and (b) the women's behavioral self-presentation during the interaction, as measured by the observer judges' ratings of the tape recordings.

The Perceivers' Stereotype

Did our male perceivers form initial impressions of their specific target women on the basis of general stereotypes that associate physical attractiveness and desirable personalities? To answer this question, we examined the male perceivers' initial ratings on the Impression Formation Questionnaire. Recall that these impressions were recorded *after* the perceivers had seen their partners' photographs, but *before* the getting-acquainted conversation.[4] Indeed, it appears that our male per-

---

[3] We assessed the reliability of our raters by means of intraclass correlations (Ebel, 1951), a technique that employes analysis-of-variance procedures to determine the proportion of the total variance in ratings due to variance in the persons being rated. The intraclass correlation is the measure of reliability most commonly used with interval data and ordinal scales that assume interval properties. Because the measure of interest was the mean rating of judges on each variable, the between-rater variance was not included in the error term in calculating the intraclass correlation. (For a discussion, see Tinsley & Weiss, 1975, p. 363). Reliability coefficients for the coders' ratings of the females for all dependent measures ranged from .35 to .91 with a median of 755. For each dependent variable, a single score was constructed for each participant by calculating the mean of the raters' scores on that measure. Analyses of variance, including the time of the tape segment (early vs. late in the conversation) as a factor, revealed no more main effects of time or interactions between time and perceived attractiveness than would have been expected by chance. Thus, scores for the two tape segments were summed to yield a, single score for each dependent variable. The same procedure was followed for ratings of male perceivers' behavior. In this case, the reliability coefficients ranged from .18 to .83 with a median of .61.

[4] These and all subsequent analyses are based upon a total of 38 observations, 19 in each of the

ceivers did fashion their initial impressions of their female partners on the basis of stereotyped beliefs about physical attractiveness, multivariate $F(34, 3) = 10.19$, $p < .04$. As dictated by the physical attractiveness stereotype, men who anticipated physically attractive partners expected to interact with comparatively sociable, poised, humorous, and socially adept women; by contrast, men faced with the prospect of getting acquainted with relatively unattractive partners fashioned images of rather unsociable, awkward, serious, and socially inept women, all $Fs(1, 36) > 5.85$, $p < .025$.

Behavioral Confirmation

Not only did our perceivers fashion their images of their discussion partners on the basis of their stereotyped intuitions about beauty and goodness of character, but these impressions initiated a chain of events that resulted in the behavioral confirmation of these initially erroneous inferences. Our analyses of the observer judges' ratings of the women's behavior were guided by our knowledge of the structure of the men's initial impressions of their target women's personality. Specifically, we expected to find evidence of behavioral confirmation only for those traits that had defined the perceivers' stereotypes. For example, male perceivers did not attribute

attractive target and unattractive target conditions. Of the original 51 dyads, a total of 48 male–female pairs completed the experiment. In each of the remaining three dyads, the male participant had made reference during the conversation to the photograph. When this happened, the experimenter interrupted the conversation and immediately debriefed the participants. Of the remaining 48 dyads who completed the experimental procedures, 10 were eliminated from the analyses for the following reasons: In 4 cases the male participant expressed strong suspicion about the photograph; in 1 case, the conversation was not tape recorded because of a mechanical problem; and in 5 cases, there was a sufficiently large age difference (ranging from 6 years to 18 years) between the participants that the males in these dyads reported that they had reacted very differently to their partners than they would have reacted to an age peer. This pattern of attrition was independent of assignment to the attractive target and unattractive target experimental conditions $(\chi^2 = 1.27, ns)$.

differential amounts of sensitivity or intelligence to partners of differing apparent physical attractiveness. Accordingly, we would not expect that our observer judges would "hear" different amounts of intelligence or sensitivity in the tapes. By contrast, male perceivers did expect attractive and unattractive targets to differ in sociability. Here we would expect that observer judges would detect differences in sociability between conditions when listening to the women's contributions to the conversations, and thus we would have evidence of behavioral confirmation.

To assess the extent to which the women's behavior, as rated by the observer judges, provided behavioral confirmation for the male perceivers' stereotypes, we identified, by means of a discriminant analysis (Tatsuoka, 1971), those 21 trait items of the Impression Formation Questionnaire for which the mean initial ratings of the men in the attractive target and unattractive target conditions differed by more than 1.4 standard deviations.[5] This set of "stereotype traits" (e.g., sociable, poised, sexually warm, outgoing) defines the differing perceptions of the personality characteristics of target women in the two experimental conditions.

We then entered these 21 stereotype traits and the 14 additional dependent measures into a multivariate analysis of variance. This analysis revealed that our observer judges did indeed view women who had been assigned to the attractive target condition quite differently than women in the unattractive target condition, $Fm(35, 2) = 40.003$, $p < .025$. What had initially been reality in the minds of the men had now become reality in the behavior of the women with whom they had interacted—a behavioral reality discernible even by naive observer judges, who had access *only* to tape recordings of the women's contributions to the conversations.

When a multivariate analysis of variance is performed on multiple correlated dependent

[5] After the 21st trait dimension, the differences between the experimental conditions drop off sharply. For example, the next adjective pair down the line has a difference of 1.19 standard deviations, and the one after that has a difference of 1.02 standard deviations.

measures, the null hypothesis states that the vector of means is equal across conditions. When the null hypothesis is rejected, the nature of the difference between groups must then be inferred from inspection of group differences on the individual dependent measures. In this case, the differences between the behavior of the women in the attractive target and the unattractive target conditions were in the same direction as the male perceivers' initial stereotyped impressions for fully 17 of the 21 measures of behavioral confirmation. The binomial probability that at least 17 of these adjectives would be in the predicted direction by chance alone is a scant .003. By contrast, when we examined the 13 trait pairs that our discriminant analysis had indicated did *not* define the male perceivers' stereotype, a sharply different pattern emerged. Here, we would not expect any systematic relationship between the male perceivers' stereotyped initial impressions and the female targets' actual behavior in the getting-acquainted conversations. In fact, for only 8 of these 13 measures is the difference between the behavior of the women in the attractive target condition in the same direction as the men's stereotyped initial impressions. This configuration is, of course, hardly different from the pattern expected by chance alone if there were no differences between the groups (exact binomial $p = .29$). Clearly, then, behavioral confirmation manifested itself only for those attributes that had defined the male perceivers' stereotype; that is, only in those domains where the men believed that there did exist links between physical attractiveness and personal attributes did the women come to behave differently as a consequence of the level of physical attractiveness that we had experimentally assigned to them.

Moreover, our understanding of the nature of the difference between the attractive target and the unattractive target conditions identified by our multivariate analysis of variance and our confidence in this demonstration of behavioral confirmation are bolstered by the consistent pattern of behavioral differences on the 14 additional related dependent measures. Our raters assigned to the female targets in the attractive target condition higher

ratings on *every* question related to favorableness of self-presentation. Thus, for example, those who were thought by their perceivers to be physically attractive appeared to the observer judges to manifest greater confidence, greater animation, greater enjoyment of the conversation, and greater liking for their partners than those women who interacted with men who perceived them as physically unattractive.[6]

In Search of Mediators of Behavioral Confirmation

We next attempted to chart the process of behavioral confirmation. Specifically, we searched for evidence of the behavioral implications of the perceivers' stereotypes. Did the male perceivers present themselves differently to target women whom they assumed to be physically attractive or unattractive? Because we had 50 dependent measures[7] of

---

[6] We may eliminate several alternative interpretations of the behavioral confirmation effect. Women who had been assigned randomly to the attractive target condition were not in fact more physically attractive than those who were assigned randomly to the unattractive target condition. Ratings of the actual attractiveness of the female targets by the experimenter revealed no differences whatsoever between conditions, $t(36) = .00$. Nor, for that matter, did male perceivers differ in their own physical attractiveness as a function of experimental condition, $t(36) = .44$ In addition, actual attractiveness of male perceivers and actual attractiveness of female targets within dyads were independent of each other, $r(36) = .06$.

Of greater importance, there was no detectable difference in personality characteristics of females who had been assigned randomly to the attractive target and unattractive target conditions of the experiment They did not differ in self-esteem as assessed by the Janis-Field-Eagly (Janis & Field, 1973) measure, $F(1, 36) < 1$ Moreover, there were no differences between experimental conditions in the female targets' self-perceptions as reported after the conversations on the Impression Formation Questionnaire ($Fm < 1$). We have thus no reason to suspect that any systematic, pre-existing differences between conditions in morphology or personality can pose plausible alternative explanations of our demonstration of behavioral confirmation.

[7] Two dependent measures were added between the time that the ratings were made of the female participants and the time that the ratings were made of the male participants. These measures were

the observer judges' ratings of the males—12 more than the number of observations (male perceivers)—a multivariate analysis of variance is inappropriate. However, in 21 cases, univariate analyses of variance did indicate differences between conditions (all $ps < .05$). Men who interacted with women whom they believed to be physically attractive appeared (to the observer judges) more sociable, sexually warm, interesting, independent, sexually permissive, bold, outgoing, humorous, obvious, and socially adept than their counterparts in the unattractive target condition. Moreover, these men were seen as more attractive, more confident, and more animated in their conversation than their counterparts. Further, they were considered by the observer judges to be more comfortable, to enjoy themselves more, to like their partners more, to take the initiative more often, to use their voices more effectively, to see their women partners as more attractive and, finally, to be seen as more attractive by their partners than men in the unattractive target condition.

It appears, then, that differences in the level of sociability manifested and expressed by the male perceivers may have been a key factor in bringing out reciprocating patterns of expression in the target women. One reason that target women who had been labeled as attractive may have reciprocated these sociable overtures is that they regarded their partners' images of them as more accurate, $F(1, 28) = 6.75$, $p < .02$, and their interaction style to be more typical of the way men generally treated them, $F(1, 28) = 4.79$, $p < .04$, than did women in the unattractive target condition.[8] These individuals, perhaps, rejected their partners' treatment of them as unrepresentative and defensively adopted more cool and aloof postures to cope with their situations.

Discussion

Of what consequence are our social stereotypes? Our research suggests that stereotypes can and do channel dyadic interaction so as to create their own social reality. In our demonstration, pairs of individuals got acquainted with each other in a situation that allowed us to control the information that one member of the dyad (the perceiver) received about the physical attractiveness of the other person (the target). Our perceivers, in anticipation of interaction, fashioned erroneous images of their specific partners that reflected their general stereotypes about physical attractiveness. Moreover, our perceivers had very different patterns and styles of interaction for those whom they perceived to be physically attractive and unattractive. These differences in self-presentation and interaction style, in turn, elicited and nurtured behaviors of the target that were consistent with the perceivers' initial stereotypes. Targets who were perceived (unbeknownst to them) to be physically attractive actually came to behave in a friendly, likable, and sociable manner. The perceivers' attributions about their targets based upon their stereotyped intuitions about the world had initiated a process that produced behavioral confirmation of those attributions. The initially erroneous attributions of the perceivers had become real: The stereotype had truly functioned as a self-fulfilling prophecy (Merton, 1948).[9]

We regard our investigation as a particularly compelling demonstration of behavioral confirmation in social interaction. For if there is any social–psychological process that ought to exist in "stronger" form in everyday interaction than in the psychological laboratory,

---

[8] The degrees of freedom for these analyses are fewer than those for other analyses because they were added to the experimental procedure after four dyads had participated in each condition.

[9] Our research on behavioral confirmation in social interaction is a clear "cousin" of other demonstrations that perceivers' expectations may influence other individuals' behavior. Thus, Rosenthal (1974) and his colleagues have conducted an extensive program of laboratory and field investigations of the effects of experimenters' and teachers' expectations on the behavior of subjects in psychological laboratories and students in classrooms. Experimenters and teachers led to expect particular patterns of performance from their subjects and pupils act in ways that selectively influence or shape those performances to confirm initial expectations (e.g., Rosenthal, 1974).

---

responses to the questions, "How interested is he in his partner?" and "How attractive does he think his partner is?".

it is behavioral confirmation. In the context of years of social interaction in which perceivers have reacted to their actual physical attractiveness, our 10-minute getting-acquainted conversations over a telephone must seem minimal indeed. Nonetheless, the impact was sufficient to permit outside observers who had access only to one person's side of a conversation to detect manifestations of behavioral confirmation.

Might not other important and widespread social stereotypes—particularly those concerning sex, race, social class, and ethnicity—also channel social interaction so as to create their own social reality? For example, will the common stereotype that women are more conforming and less independent than men (cf. Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972) influence interaction so that (within a procedural paradigm similar to ours) targets believed to be female will acually conform more, be more dependent, and be more successfully manipulated than interaction partners believed to be male? At least one empirical investigation has pointed to the possible self-fulfilling nature of apparent sex differences in self-presentation (Zanna & Pack, 1975).

Any self-fulfilling influences of social stereotypes may have compelling and pervasive societal consequences. Social observers have for decades commented on the ways in which stigmatized social groups and outsiders may fall "victim" to self-fulfilling cultural stereotypes (e.g., Becker, 1963; Goffman, 1963; Merton, 1948; Myrdal, 1944; Tannenbaum, 1938). Consider Scott's (1969) observations about the blind:

> When, for example, sighted people continually insist that a blind man is helpless because he is blind, their subsequent treatment of him may preclude his even exercising the kinds of skills that would enable him to be independent. It is in this sense that stereotypic beliefs are self-actualized. (p. 9)

And all too often it is the "victims" who are blamed for their own plight (cf. Ryan, 1971) rather than the social expectations that have constrained their behavioral options.

Of what import is the behavioral confirmation process for our theoretical understanding of the nature of social perception? Although our empirical research has focused on social stereotypes that are widely accepted and broadly generalized, our notions of behavioral confirmation may apply equally well to idiosyncratic social perceptions spontaneously formed about specific individuals in the course of every day social interaction. In this sense, social psychologists have been wise to devote intense effort to understanding the processes by which impressions of others are formed. Social perceptions are important precisely because of their impact on social interaction. Yet, at the same time, research and theory in social perception (mostly displayed under the banner of attribution theory) that have focused on the manner in which individuals process information provided them to form impressions of others may underestimate the extent to which information received in actual social interaction is a product of the perceiver's own actions toward the target individual. More careful attention must clearly be paid to the ways in which perceivers *create* or *construct* the information that they process in addition to the ways in which they *process* that information. Events in the social world may be as much the *effects* of our perceptions of those events as they are the *causes* of those perceptions.

From this perspective, it becomes easier to appreciate the perceiver's stubborn tendency to fashion images of others largely in trait terms (e.g., Jones & Nisbett, 1972), despite the poverty of evidence for the pervasive cross-situational consistencies in social behavior that the existence of "true" traits would demand (e.g., Mischel, 1968). This tendency, dubbed by Ross (1977) as the "fundamental attribution error," may be a self-erasing error. For even though any target individual's behavior may lack, overall, the trait-defining properties of cross-situational consistency, the actions of the perceiver himself may produce consistency in the samples of behavior available to that perceiver. Our impressions of others may cause those others to behave in consistent trait-like fashion for us. In that sense, our trait-based impressions of others are veridical, even though the same individual may behave or be led to behave in a fashion perfectly consistent with opposite

attributions by other perceivers with quite different impressions of that individual. Such may be the power of the behavioral confirmation process.

Reference Note

1 Rothbart, M., Fulero, S., Jensen, C., Howard, J., & Birrell, P. *From individual to group impressions: Availability heuristics in stereotype formation.* Unpublished manuscript, University of Oregon, 1976.

References

Bacon, F. [*Novum organum*] (J. Devey, Ed). New York P. F Collier & Son, 1902. (Originally published, 1620.)

Bandura, A. *Social learning theory.* Englewood Cliffs, N.J.: Prentice Hall, 1977.

Becker, H. W. *Outsiders: Studies in the sociology of deviance.* N.Y.: Free Press, 1963.

Berscheid, E., & Walster, E. Physical attractiveness. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 7). New York: Academic Press, 1974.

Broverman, I. K., Vogel, S. R., Broverman, D. M., Clarkson, F. E., & Rosenkrantz, P. S. Sex-role stereotypes: A current appraisal. *Journal of Social Issues,* 1972, *28,* 59–78.

Chapman, L., & Chapman, J. The genesis of popular but erroneous psychodiagnostic observations. *Journal of Abnormal Psychology,* 1967, *72,* 193–204.

Chapman, L., & Chapman, J. Illusory correlations as an obstacle to the use of valid psychodiagnostic signs. *Journal of Abnormal Psychology,* 1969, *74,* 271–280.

Dermer, *M. When beauty fails.* Unpublished doctoral dissertation, University of Minnesota, 1973.

Dion, K. K., & Berscheid, E. Physical attractiveness and peer perception among children. *Sociometry,* 1974, *37*(1), 1–12.

Dion, K. K., Berscheid, E., & Walster, E. What is beautiful is good. *Journal of Personality and Social Psychology,* 1972, *24,* 285–290

Ebel, R. L. Estimation of the reliability of ratings. *Psychometrika,* 1951, *16,* 407–424.

Goffman, E. *Stigma: Notes on the management of spoiled identity.* Englewood Cliffs, N.J.: Prentice Hall, 1963.

Hamilton, D. L., & Gifford, R. K. Illusory correlation in interpersonal perception: A cognitive basis of stereotypic judgments. *Journal of Experimental Social Psychology,* 1976, *12,* 392–407.

Harvey, J. H., Ickes, W. J., & Kidd, R. F. *New directions in attribution research.* Hillsdale, N.J.: Erlbaum, 1976.

Heider, F. *The psychology of interpersonal relations.* New York: Wiley, 1958.

Janis, I., & Field, P. Sex differences and personality factors related to persuasibility. In C. Hovland & I. Janis (Eds.), *Personality and persuasibility.* New Haven, Conn.: Yale University Press, 1973.

Jones, E. E., & Davis, K. E. From acts to dispositions· The attribution process in person perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2). New York: Academic Press, 1965.

Jones et al. *Attribution: Perceiving the causes of behavior.* Morristown, N.J.: General Learning Press, 1972.

Jones, E. E., & Nisbett, R. E. The actor and the observer Divergent perceptions of the causes of behavior. In E. Jones, D. Kanouse, H. Kelley, S. Valins, & B. Weiner (Eds.), *Attribution: Perceiving the causes of behavior.* New York. General Learning Press, 1972.

Karlins, M., Coffman, T. L, & Walters, G. On the fading of social stereotypes Studies in three generations of college students. *Journal of Personality and Social Psychology,* 1969, *13,* 1–16.

Kelley, H. H. The process of causal attribution. *American Psychologist,* 1973, *28,* 107–128.

Kelley, H. H., & Stahelski, A. J. The social interaction basis of cooperators' and competitors' beliefs about others. *Journal of Personality and Social Psychology,* 1970, *16,* 66–91.

Kleck, R. E, Richardson, S. A., & Ronald, L. Physical appearance cues and interpersonal attraction in children. *Child Development,* 1974, *45,* 305–310.

Krebs, D., & Admolphi, A. A. Physical attractiveness, social relations, and personality style. *Journal of Personality and Social Psychology,* 1975, *31,* 245–253.

Loftus, E., & Palmer, J. Reconstruction of automobile destruction. *Journal of Verbal Learning and Verbal Behavior,* 1974, *13,* 585–589.

Merton, R K. The self-fulfilling prophecy. *Antioch Review,* 1948, *8,* 193–210.

Mischel, W. *Personality and assessment.* New York: Wiley, 1968.

Myrdal, G. *An American dilemma.* New York: Harper & Row, 1944.

Raush, H. L. Interaction sequences. *Journal of Personality and Social Psychology,* 1965, *2,* 487–499.

Regan, D. T., Straus, E, & Fazio, R. Liking and the attribution process. *Journal of Experimental Social Psychology,* 1974, *10,* 385–397.

Rosenhan, D. L. On being sane in insane places. *Science,* 1973, *179,* 250–258.

Rosenthal, R. *On the social psychology of the self-fulfilling prophecy: Further evidence for pygmalion effects and their mediating mechanisms.* New York: M.S.S. Information Corp. Modular Publications, 1974.

Ross, L. The intuitive psychologist and his shortcomings: Distortions in the attribution process. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 10). New York: Academic Press, 1977.

Ryan, W. *Blaming the victim.* New York: Vintage Books, 1971.

Scott, R. A. *The making of blind men.* New York: Russell Sage, 1969.

Tannenbaum, F. *Crime and the community.* Boston: Ginn, 1938.

Tatsuoka, M. M. *Multivariate analysis.* New York: Wiley, 1971.

Tinsley, H. E. A., & Weiss, D. J. Interrater reliability and agreement of subjective judgments. *Journal of Counseling Psychology,* 1975, *22,* 358–376.

Tversky, A., & Kahneman, D. Availability: A heuristic for judging frequency and probability. *Cognitive Psychology,* 1973, *5,* 207–232.

Walster, E., Aronson, V., Abrahams, D., & Rottman, L. Importance of physical attractiveness in dating behavior. *Journal of Personality and Social Psychology,* 1966, *4,* 508–516.

Zadny, J, & Gerard, H. B. Attributed intentions and informational selectivity. *Journal of Experimental Social Psychology,* 1974, *10,* 34–52.

Zanna, M. P., & Pack, S. J. On the self-fulfilling nature of apparent sex differences in behavior. *Journal of Experimental Social Psychology,* 1975, *11,* 583–591.

Announcement for Student Subscribers Outside the United States

Students in psychology programs outside the United States are eligible to subscribe to the *Journal of Personality and Social Psychology* at the rate of $20 for 1978. This is the same rate paid by members of the American Psychological Association. In order to obtain a Student in Psychology application and order form to subscribe to JPSP and all other APA journals, write to Box M, American Psychological Association, 1200 Seventeenth Street, N.W., Washington, D.C. 20036, U.S.A.