

## Figural Emphasis and Person Perception

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Based on Jones and Nisbett's (1972) proposition that actor-observer differences in causal attributions derive from differences in attentional focus, it was hypothesized that observers' focus of attention would influence their causal attributions for an actor's behavior. More specifically, it was predicted that the behavior of an actor who was the focus of attention by virtue of some salient physical attribute would be attributed by observers more to dispositional causes and less to situational causes than would the behavior of a less physically salient actor. The manipulations of physical salience were based upon Gestalt laws of figural emphasis in object perception. They included brightness (Study I), motion (Study II), pattern complexity (Study III), and contextual novelty (Studies IV and V). The results revealed that the salience of the actors' environments (i.e., the other people present) rather than the salience of the actor him/herself had the most consistent influence on causal attributions. When environmental salience was high, behavior was attributed relatively more situationally than when it was low. Prior research findings are considered in light of the proposition that causal attributions for an actor's behavior vary only with the salience of his/her environment, and additional implications of this phenomenon are suggested. Some ambiguities in the application of Gestalt principles to the perception of people are discussed.

The possibility that there are commonalities between the processes of person perception and object perception has often intrigued psychologists. Heider (1958), for example, based his theory of causal attribution upon an analogy with Brunswik's (1952) theory of object perception. Just as Brunswik argued that the perceiving organism has to integrate highly variable cues given in proximal stimulation in order to make inferences about the relatively unchanging distal object which gave rise to them, Heider argued that the attributing organism must integrate the cues given in

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behavior in order to infer the more stable factors that cause it. A more recent application of object perception principles to person perception has been provided by Jones and Nisbett (1972). Jones and Nisbett (1972) explained an attributional divergence of actors and observers by attributing their behavior to situational requirements, while observers attribute the same behavior to the personal disposition of the actor (Jones, Nisbett, Caputo, Legant, & Marecek, 1973). Jones and Nisbett (1972) argued that the behavior itself is more salient to the observer than the actor because the observer is in a better position to see it. The actor, on the other hand, is more likely than the observer to focus on environmental stimuli surrounding the behavior. According to Jones and Nisbett, these attentional differences result in corresponding differences in causal attributions. Observers make dispositional attributions for behavior because, for them, the actor is salient or the focus of the situation. Actors, on the other hand, make situational attributions for their behavior because, for them, it is the environmental stimuli which are salient or "figural."

Evidence in support of Jones and Nisbett's proposition was reported by Storms (1973) who found that when actor and observer perspectives were reversed by having each watch a videotape of the other's behavior from the other's point of view, the actor-observer attributional differences were also reversed. Actors made more dispositional attributions for their behavior in an interaction with another person from an observer's point of view, while observers who saw the interaction from the actor's point of view made more situational attributions (Storms and Duval (1975) and Taylor and Fiske (1975) have also reported consistent with the reputed connection between perspective and attribution, although the latter investigators did not report differences in salience on dispositional or situational attributions for leadership to a salient actor.

Given Jones and Nisbett's original proposition that differences in causal attributions derive from differences in figural emphasis, this proposition generalized beyond the variable of vantage point and other factors which increase the figural properties or salience of the actor to increase observers' attributions of his behavior to dispositional causes and decrease their attributions to situational causes. This proposition, in analogy with object perception provides a number of factors which might influence an actor's salience. As Jones and Nisbett (1972) and other psychologists have argued that bright stimuli, highly articulated stimuli, and isolated stimuli all tend to increase salience (Kahneman, 1973). The purpose of the present series of experiments was to apply these principles of figural emphasis in the realm of person perception. More specifically,

behavior in order to infer the more stable factors that caused the behavior. A more recent application of object perception principles to the realm of person perception has been provided by Jones and Nisbett (1972) in explaining an attributional divergence of actors and observers: Actors tend to attribute their behavior to situational requirements, whereas observers attribute the same behavior to the personal disposition of the actor (e.g., Nisbett, Caputo, Legant, & Marecek, 1973). Jones and Nisbett argue that the behavior itself is more salient to the observer than to the actor, largely because the observer is in a better position to see it. The actor, on the other hand, is more likely than the observer to focus attention on the environmental stimuli surrounding the behavior. According to Jones and Nisbett, these attentional differences result in corresponding attributional differences. Observers make dispositional attributions for the actor's behavior because, for them, the actor is salient or "figural" against the ground of the situation. Actors, on the other hand, attribute their own behavior to situational causes because, for them, it is the environmental stimuli which are salient or "figural."

Evidence in support of Jones and Nisbett's proposition has been reported by Storms (1973) who found that when actors' and observers' perspectives were reversed by having each watch a videotape of the actor's behavior from the other's point of view, the actor-observer difference in causal attributions was also reversed. Actors who saw their own interaction with another person from an observer's vantage point manifested more dispositional and less situational attribution than observers who saw the interaction from the actor's vantage point. Arkin and Duval (1975) and Taylor and Fiske (1975) have also reported data consistent with the reputed connection between perceptual salience and attribution, although the latter investigators did not obtain an effect for salience on dispositional or situational attributions. Rather, they found more attributions of leadership to a salient actor.

Given Jones and Nisbett's original proposition that actor-observer differences derive from differences in *figural emphasis*, McArthur (1973) generalized beyond the variable of vantage point and hypothesized that any factors which increase the figural properties or salience of an actor should increase observers' attributions of his behavior to dispositional causes and decrease their attributions to situational causes. Further pursuit of the analogy with object perception provides a number of rules regarding factors which might influence an actor's salience. For example, Gestalt psychologists have argued that bright stimuli, moving stimuli, highly articulated stimuli, and isolated stimuli all tend to be seen as figural (Kahneman, 1973). The purpose of the present series of five experiments was to apply these principles of figural emphasis in object perception to the realm of person perception. More specifically, it was assumed that

observers of a two-person interaction would focus their attention more on a brightly lit actor than on a dimly lit one, more on a moving actor than on a stationary one, more on a complexly patterned actor than on a nondifferentiated one, and more on a contextually novel actor than on a common one. This last determinant of figural emphasis has recently been manipulated by Taylor, Fiske, and Anderson (Note 1) who found that a solo black actor in an all white group was perceived differently from the same actor when he appeared in a fully integrated group. Study IV of the present research extended the Taylor et al. investigation by examining the effects of solo status when the novel attribute—shirt color—has no meaningful implications about the person manifesting it. Study V investigated a more meaningful solo status—sex.

Based on Jones and Nisbett's (1972) theory and the findings of Storms (1973) and Arkin and Duval (1975), it was hypothesized that the behavior of an actor who was the focus of attention by virtue of some salient physical attribute would be attributed more to dispositional causes and less to situational causes than would the behavior of a less salient actor. Based on Taylor and Fiske's (1975) findings it was also hypothesized that the salient actor would be perceived as exercising more of a leadership role than the less salient actor. In addition, it was expected that more would be recalled about the salient actor, since this tendency had been reported by Taylor et al. (Note 1) and in research on object perception (Rubin, 1915/1958).

## METHOD

### *Subjects*

Volunteer subjects for all five experiments were recruited from undergraduate psychology classes and, with the exception of those who participated in Study I, were paid \$2.00 for their time. Subjects in Study II (Motion) were drawn from Harvard University's summer session; the remaining subjects were Brandeis University students. Forty subjects participated in Study I (Brightness), 24 in Study II (Motion), 32 in Study III (Pattern Complexity), 48 in Study IV (Novel Color), 32 in Study IVa (Novel Color in Black and White), and 48 in Study V (Novel Sex). Subjects who participated in Study III also participated in Study IVa. All other subjects participated in only one of the studies reported here. Half of the subjects in each study were male and half were female. Four additional subjects were not included in the final analysis—two because they recognized one of the actors in the videotape, and two because they had heard about another study in the series.

### *Materials*

A series of videotapes depicting a getting acquainted conversation between two actors were prepared. The conversation of approximately 5 minutes duration was memorized from a script to insure that each actor volunteered the same amount of information and initiated the same number of topics of discussion. The topics discussed included information about school, living arrangements, travel, work plans, family, and friends. While all of the scripts covered these general topics, the specific names, places, etc., were varied. The scripts employed in Study I (Brightness) and II (Motion) were identical as were those employed in Study IV (Novel color

and V (Novel Sex). The videotapes made for Studies I, II, and III were in black and white while those for Studies IV and V were in color.

In Study I, the salient actor was seated in a bright light, while the nonsalient actor was seated in a dim light. Both were males. The same two males served in Study II. In Study II, the salient actor was seated in a rocking chair and rocked through the conversation, while the nonsalient actor was seated in a regular chair. This particular arrangement was employed because it is relatively devoid of implications about the person manifesting it. Other forms of movement, such as gesturing, were avoided to avoid attributions which reflect the meaning of the movement rather than attention to the actor. In Study III (Pattern Complexity) the salient actor was patterned with a bold black and white horizontal stripe, while the nonsalient actor wore a grey shirt. Because it was anticipated that brightness would influence perception of equal reflectance. Both actors in this study were females.

In Studies IV and V four persons were depicted in the videotapes. In Study IV, the salient actor was engaged in the getting acquainted conversation, while the nonsalient actor was engaged in a different conversation. The salient actor in Study IV (a male) wore a different color shirt than the nonsalient actor. As in Study III, all shirts were of equal reflectance. This arrangement was chosen in order to determine whether contextual novelty influenced perception. While other forms of novelty, such as racial minority status, have more social relevance, these may produce causal inferences about the connotations of the novel attribute rather than its tendency to attract attention. The novel color shirt, on the other hand, is relatively devoid of implications about the person wearing it. Contextual novelty was manipulated in a more subtle way in Study V where the salient actor was a different sex than the three other actors.

Two forms of each of the five videotapes were prepared in order to control for the actor who was salient. In Studies I, II, and III the actor who was salient was dressed in a striped shirt in one form of the videotape and a solid shirt in the second form. Counterbalancing was used in Study IV by varying the composition of the persons who did not participate in the conversation. In Study IV, a red-shirted actor was salient in one form because the other three actors wore blue-shirts, while a blue-shirted actor was salient in the second form because the other three actors wore red-shirts. Similarly, in Study V, a female actor was salient in one form because the other three actors depicted were male, while a male was salient in the second form because the other three actors depicted were female. While the physical salience of each videotape form, their actual behavior was held constant—in both forms.

### *Dependent Variables*

Following the procedure which had been employed by Storms (1975), subjects rated how friendly, talkative, easygoing, and outgoing they perceived the actor to be on 9-point scales and for each of these behaviors, subjects rated how much they liked the actor. In Studies I and V, the causal influence of dispositional factors was rated on a second set of 9-point scales which were employed by Storms (1973) and Taylor and Fiske (1975). In Studies II, III, and IV, the causal influence of situational factors was rated on a second set of 9-point scales which were employed by Storms (1973) and Taylor and Fiske (1975). In Studies I and II in the hopes that the causal influence of situational factors would be significant, a measure was constructed in Studies I and II in the hopes that the causal influence of situational factors would be significant. A single 9-point scale was employed with dispositional factors as the other. In all five studies, "dispositional" causal factors such as personality, traits, character, and personality were defined as factors such as being "friendly," "talkative," "easygoing," and "outgoing." "Situational" factors were defined as factors such as being acquainted situation, the topics of conversation, and the v

and V (Novel Sex). The videotapes made for Studies I, II, and III were in black and white, while those for Studies IV and V were in color.

In Study I, the salient actor was seated in a bright light, while the nonsalient actor was seated in a dim light. Both were males. The same two males served as actors in Study II, where the salient actor was seated in a rocking chair and rocked throughout the conversation, while the nonsalient actor was seated in a regular chair. This particular manipulation of motion was employed because it is relatively devoid of implications about the attributes of the person who is manifesting it. Other forms of movement, such as gesturing a lot, may produce causal attributions which reflect the meaning of the movement rather than its tendency to draw attention to the actor. In Study III (Pattern Complexity) the salient actor wore a shirt patterned with a bold black and white horizontal stripe, while the nonsalient actor wore a solid grey shirt. Because it was anticipated that brightness would influence salience, the shirts were of equal reflectance. Both actors in this study were females.

In Studies IV and V four persons were depicted in the videotape vignette, although only two were engaged in the getting acquainted conversation, while the others simply sat and listened. The salient actor in Study IV (a male) wore a different color shirt than the three other males did. As in Study III, all shirts were of equal reflectance. This particular manipulation was chosen in order to determine whether contextual novelty per se could influence person perception. While other forms of novelty, such as racial minority status or physical stigma, may have more social relevance, these may produce causal attributions which reflect the connotations of the novel attribute rather than its tendency to draw attention to the actor. A novel color shirt, on the other hand, is relatively devoid of implications about the person who is wearing it. Contextual novelty was manipulated in a more socially relevant way in Study V where the salient actor was a different sex than the three other people were.

Two forms of each of the five videotapes were prepared in order to counterbalance the actor who was salient. In Studies I, II, and III the actor who was brightly illuminated, moving, or dressed in a striped shirt in one form of the videotape was dimly illuminated, stationary, or dressed in the solid shirt in the second form. Counterbalancing was achieved in Studies IV and V by varying the composition of the persons who did not participate in the conversation. Thus, in Study IV, a red-shirted actor was salient in one form because all others depicted wore blue shirts, while a blue-shirted actor was salient in the second form because all others depicted wore red-shirts. Similarly, in Study V, a female actor was salient in one form because all others depicted were male, while a male was salient in the second form because all others depicted were female. While the physical salience of each actor was varied across the two videotape forms, their actual behavior was held constant—i.e., they followed the same script in both forms.

### *Dependent Variables*

Following the procedure which had been employed by Storms (1973) and Taylor and Fiske (1975), subjects rated how friendly, talkative, easygoing, and sincere each actor was on 9-point scales and for each of these behaviors, subjects rated the extent to which the behavior was caused by dispositional qualities of the actor versus situational factors. In Studies III, IV, and V, the causal influence of dispositional factors was rated on one 9-point scale and the causal influence of situational factors was rated on a second 9-point scale. These are the same scales which were employed by Storms (1973) and Taylor and Fiske (1975). Since Taylor and Fiske had obtained no significant effects for these measures in their study, a slightly different measure was constructed in Studies I and II in the hopes that it would be more sensitive. A single 9-point scale was employed with dispositional factors as one endpoint and situational factors as the other. In all five studies, "dispositional" causes were defined for subjects as personal factors such as personality, traits, character, personal style, attitudes, and mood. "Situational" factors were defined as factors such as being in an experiment, the getting acquainted situation, the topics of conversation, and the way the other participant behaved.

In addition to attributing each actor's behavior to dispositional vs. situational causes, attributions of leadership behavior were assessed by having subjects rate on 9-point scales how much each actor set the tone of the conversation, determined the kind of information exchanged, and caused the other person to behave as s/he did. These measures replicate those employed by Taylor and Fiske (1975). Recall of each of the stimulus person's contributions to the conversation was assessed by having subjects fill in blanks on a standard information form asking for name, school attended, career plans, places visited, names of friends and relatives, etc.<sup>1</sup>

### Procedure

Upon arriving at the experimental room all subjects were greeted by the experimenter (a male in Studies I and II and a female in Studies III, IV, and V), seated in front of a videotape monitor, and given the following instructions:

This is a study in an area of social psychology called interpersonal dynamics. More specifically, what we're interested in is something called the getting acquainted process, and what happens when two people meet for the first time. I'm going to show you a videotape so that you can observe two people who are getting acquainted. The people you will see actually were getting acquainted for the first time, although they were asked in advance to think about what they were going to say and, of course, they knew that they were being taped.

Subjects who participated in Studies III, IV, and V were also told the following:

As a matter of fact, since we just got all this new equipment, some people from the BU Communications department came over to check out the camera and the TV reception and they brought over wardrobes and make-up and lighting—so don't be surprised if the situation looks a little staged.

These additional instructions were designed to allay suspicions which might have arisen when subjects in Study IV saw a videotape depicting four people, three of whom were wearing the same color shirt. The instructions were intended to provide a plausible explanation for the shirts without mentioning them explicitly, and they seem to have been successful. When subjects were asked for their reactions to the videotapes after the data had been collected, only one person commented on the shirts and before the experimenter could respond, another subject retorted that "they wore those shirts to test out the equipment."

Subjects in Studies III, IV, and V also participated in an additional study, and they, therefore, saw two different videotapes. The additional videotape seen by subjects in Study III was one from Study IVa—a "novel color" tape shown in black and white. The additional videotape seen by subjects in Studies IV and V were from investigations which are not reported here because they are irrelevant to present purposes.

After subjects viewed a videotape, they were asked to record their impressions of each

<sup>1</sup> In Studies I and II, subjects also rated how nervous, energetic, dull, and competent each actor was, and made causal attributions for each of these behaviors. In Study III, there were also two open ended questions designed to tap subjects' perceptions of each actor's leadership qualities as well as their perceptions regarding the extent to which the actor's behavior had reflected her basic disposition. The first question asked subjects how they would describe each actor to a friend. The second said, "You have seen her interacting with someone she's just met. How do you think she 'typically' interacts with her friends?" Although the measures extracted from these questions showed some trends parallel to the effects obtained for the structured questions, they did not approach statistical significance and will not be discussed further.

stimulus person on a written questionnaire. Subjects in Studies III, IV, and V completed the causal attribution measures before the recall measures. Subjects in Studies I and II participated before any of the recall measures. This was to insure that they were aware, during the second study, that they should try to recall the stimulus person's behavior. The order of rating the stimulus persons within each videotape was the same as the order in which subjects in Studies III, IV, IVa and V viewed the videotape in that particular study. After subjects had finished the ratings, they were then debriefed and II—debriefed as to the purpose and goals of the experiment. The order of Studies III, IV, and V, was delayed until all subjects had been debriefed. An explanation was mailed to the subjects.

### RESULTS AND DISCUSSION

Dependent measures were analyzed through procedures utilizing sex of subject (2), form of videotape (2), order of the actors (2), and (in Studies III, IV, and V) order of that study (2), as between-subjects factors. For both the salient and nonsalient actors, salience was a significant measure.

#### Causal Attributions: Results

*D-S Attribution Index.* The unidimensional attribution index (the sum of the scores on Studies I and II to measure the extent to which a person's behavior was seen as dispositionally caused were summed, and analyzed separately for each situation performed on these overall Dispositional-Situational Attribution Index. A comparable index was constructed in Study III by subtracting the sum of the individual situational attribution scores from the sum of the individual dispositional attribution scores. Composite measures were employed as had been used in Studies I and II because the hypothesis concerned the relative contributions of dispositional versus situational attributions and made no reference to behavioral dimensions.

The prediction that the behavior of the bright actor was more dispositional/less situational than that of the dull actor was confirmed,  $F(1,32) = 4.28, p < .05$ , as was the prediction that the behavior of the moving person would be viewed as more situational than that of the stationary one,  $F(1,16) = 2.84, p = .11$  (see Fig. 1). A main effect of the actor's position was also predicted that the behavior of the actor in the solid shirt would be viewed as more dispositional/less situational than that of the actor in the striped shirt. This prediction was supported at a main effect,  $F(1,16) = 6.03, p < .05$ , revealed a highly significant interaction,  $F(1,16) = 6.03, p < .05$ , revealed that in form 2 of the videotape: When the bright actor was in the solid shirt, her behavior was perceived as more d

stimulus person on a written questionnaire. Subjects in Studies I and II completed the recall measures before the causal attribution measures. Subjects in Studies III, IV, IVa, and V completed the causal attribution measures for both of the studies in which they were participating before any of the recall measures. This was to insure that they would not be aware, during the second study, that they should try to recall the content of the conversation. The order of rating the stimulus persons within each videotape was counterbalanced, as was the order in which subjects in Studies III, IV, IVa and V viewed the videotape for that particular study. After subjects had finished the ratings, they were thanked and—in Studies I and II—debriefed as to the purpose and goals of the experiment. Complete debriefing in Studies III, IV, and V, was delayed until all subjects had been run at which time a written explanation was mailed to the subjects.

## RESULTS AND DISCUSSION

Dependent measures were analyzed through analysis of variance procedures utilizing sex of subject (2), form of videotape (2), order of rating the actors (2), and (in Studies III, IV, and V) order of viewing the videotape for that study (2), as between-subjects factors. Since each subject rated both the salient and nonsalient actors, salience was employed as a repeated measure.

### *Causal Attributions: Results*

*D-S Attribution Index.* The unidimensional questions employed in Studies I and II to measure the extent to which an actor's behaviors (e.g., friendliness, talkativeness, etc.) were seen as dispositionally as opposed to situationally caused were summed, and analyses of variance were performed on these overall Dispositional-Situational Attribution Indices. A comparable index was constructed in Studies III, IV, and V by subtracting the sum of the individual situational ratings of the actor's behaviors from the sum of the individual dispositional ratings. These composite measures were employed as had been done by Storms (1973) because the hypothesis concerned the relative strength of dispositional versus situational attributions and made no distinction among the behavioral dimensions.

The prediction that the behavior of the brighter person would be viewed as more dispositional/less situational than that of the dimmer person was confirmed,  $F(1,32) = 4.28, p < .05$ , as was the prediction that the behavior of the moving person would be viewed as more dispositional/less situational than that of the stationary one,  $F(1,16) = 5.43, p < .05$ . The prediction that the behavior of the actor in the more complexly patterned shirt would be viewed as more dispositional/less situational than that of the actor in the solid shirt was supported at a marginal level of significance,  $F(1,16) = 2.84, p = .11$  (see Fig. 1). A videotape form  $\times$  salience interaction,  $F(1,16) = 6.03, p < .05$ , revealed that the predicted effect was highly significant in form 2 of the videotape: When actor B wore the striped shirt, her behavior was perceived as more dispositional/less situational

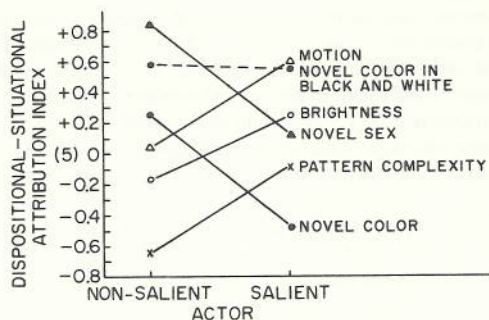


FIG. 1. Observers' attributions of an actor's behavior to dispositional minus situational causes as a function of the actor's salience. Note. The midpoint of the D-S Attribution Index is 5 in Studies I and II and 0 in Studies III, IV, and V.

than that of the solid shirted person,  $t(30) = 2.92, p < .01$ , whereas when actor A wore the striped shirt, the salience effect was not significant,  $t < 1$ .

A reversal of predictions was obtained in Studies IV and V. The behavior of the actor in the novel color shirt tended to be seen as *less* dispositionally/more situationally caused than that of the actor in the common color shirt,  $F(1,32) = 3.41, p < .08$ , and the behavior of the novel-sexed actor was seen as *less* dispositionally/more situationally caused than that of the person whose sex was in the majority,  $F(1,32) = 3.91, p < .06$ . The former effect was clearly due to shirt-color rather than to some unintentional change in the actor's behavior when he was dressed in an odd color shirt, since it did not approach significance in Study IVa, when the videotapes were shown in black and white,  $F < 1$  (see Fig. 1). The latter effect (Study V) was somewhat qualified by a marginally significant videotape form  $\times$  salience interaction,  $F(1,32) = 3.05, p < .10$ ; only in the novel-female form was the behavior of the minority actor perceived as less dispositional/more situational than that of the majority actor,  $t(46) = 2.63, p < .02$ . In the novel-male form, there was no significant difference in the causal attributions for the behavior of the minority and majority persons,  $t < 1$ .

*Dispositional and situational attributions.* Separate analyses performed on the sum of the dispositional attributions and on the sum of the situational attributions in Studies III, IV, and V revealed that the effects reported for the overall Dispositional-Situational Index derived primarily from variations in situational attributions. There was a tendency for the behavior of the stripe-shirted actor to be attributed less to the situation than the behavior of the solid-shirted actor,  $F(1,16) = 2.55, p = .13$ , while shirt-pattern had no effect on dispositional attributions, although the means were in the expected direction,  $F(1,16) = 1.12, p > .25$ . Similarly, the behavior of the actor in a novel color shirt was attributed more to situational causes than that of the actor in the common color shirt,

$F(1,32) = 3.94, p < .06$ , while shirt color had *no* dispositional attributions, although the means showed a tendency toward dispositional attributions as the situational attribution  $p > .15$ . Finally, the behavior of the minority sex was attributed more to the situation than the behavior of the majority sex,  $p < .05$ , while minority status had no significant effects on dispositional attributions, although again the means tended toward dispositional attributions,  $F(1,32) = 2.26, p < .15$ .

Videotape form  $\times$  salience interactions complicated the analyses of the Dispositional-Situational Index. In contrast to the separate analyses of the Situational Attribution Index, it was noted that these interactions do not reflect an overall tendency for the behavior of the two actors to be attributed to different causes. Rather, they reveal that environmental factors had a more significant effect on situational attribution than in the other. Thus, the tendency to attribute behavior less to the situation was significant in Study III,  $p < .01$ , but not in form 1,  $t < 1$ . Similarly, the tendency to attribute behavior more to the situation was significant in the odd sex actor's behavior more to the situation female was in the minority,  $t(46) = 2.75, p < .01$  in the minority,  $t < 1$ . In addition, the tendency to attribute behavior more to the situation was significant in a novel-shirted actor more to the situation was in the minority,  $t(46) = 2.92, p < .01$  in the minority,  $t < 1$ .<sup>2</sup>

#### Causal Attributions: Discussion

As predicted, Studies I, II, and III revealed that the behavior of actors who were salient or "figural" by virtue of continuous motion, or a complexly patterned shirt, was attributed more to their less salient counterparts. In contrast to these findings, Studies IV and V revealed that the behavior of actors who were

<sup>2</sup> Significant third- and fourth-order interactions involving actor or order of viewing the videotape have not been reported. Out of a possible 24 third-order and 14 fourth-order interactions of the D-S attribution measures in the five studies, only 3 were significant. One significant salience  $\times$  rating order interaction in Study III was highly significant when the salient actor was rated first,  $F(1,16) = 6.76, p < .05$ . Marginally significant interactions were obtained on the dispositional-situational index and the situational attribution index in Studies III and V. In Study III the salience effects for the situational attribution index were significant only for males, and in Study V, they were significant only for females. Unanticipated sex differences were neither ubiquitous nor surprising and are not discussed further.

$F(1,32) = 3.94, p < .06$ , while shirt color had no significant effect on dispositional attributions, although the means showed the same reversal from predictions as the situational attribution means,  $F(1,32) = 1.82, p > .15$ . Finally, the behavior of the minority sex actor was attributed more to the situation than the behavior of the majority actor,  $F(1,32) = 4.26, p < .05$ , while minority status had no significant effect on dispositional attributions, although again the means tended toward a reversal from predictions,  $F(1,32) = 2.26, p < .15$ .

Videotape form  $\times$  salience interactions comparable to those reported for the analyses of the Dispositional-Situational Index were obtained for the separate analyses of the Situational attribution measure. It should be noted that these interactions do not reflect an "actor" effect—i.e., a general tendency for the behavior of the two actors to be attributed to different causes. Rather, they reveal that environmental salience had a more significant effect on situational attributions in one videotape form than in the other. Thus, the tendency to attribute the stripe shirted actor's behavior less to the situation was significant in form 2,  $t(30) = 2.78, p < .01$ , but not in form 1,  $t < 1$ . Similarly, the tendency to attribute the odd sex actor's behavior more to the situation was significant when a female was in the minority,  $t(46) = 2.75, p < .01$ , but not when a male was in the minority,  $t < 1$ . In addition, the tendency to attribute the behavior of a novel-shirted actor more to the situation was significant when the red-shirted actor was novel,  $t(46) = 2.92, p < .01$ , but not when the blue-shirted actor was novel,  $t < 1$ .<sup>2</sup>

#### *Causal Attributions: Discussion*

As predicted, Studies I, II, and III revealed that relatively more dispositional/less situational attribution was made for the behavior of actors who were salient or "figural" by virtue of bright illumination, continuous motion, or a complexly patterned shirt than for the behavior of their less salient counterparts. In contrast to these results, Studies IV and V revealed that the behavior of actors who were salient by virtue of

<sup>2</sup> Significant third- and fourth-order interactions involving salience and order of rating the actors or order of viewing the videotape have not been reported because they are not readily interpretable. Out of a possible 24 third-order and 14 fourth-order interactions in the analyses of the D-S attribution measures in the five studies, only 3 were significant at the  $p < .05$  level or better. One significant salience  $\times$  rating order interaction was obtained. The salience effect in Study III was highly significant when the salient actor was rated second, but not when she was rated first,  $F(1,16) = 6.76, p < .05$ . Marginally significant sex  $\times$  salience interactions were obtained on the dispositional-situational index and the dispositional attribution measure in Studies III and V. In Study III the salience effects for these two measures were significant only for males, and in Study V, they were significant only for females. Since these unanticipated sex differences were neither ubiquitous nor readily interpretable, they will not be discussed further.



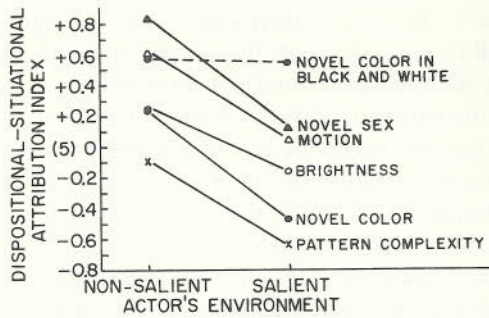


FIG. 2. Observers' attributions of an actor's behavior to dispositional minus situational causes as a function of the salience of the actor's environment. *Note.* The midpoint of the D-S Attribution Index is 5 in Studies I and II and 0 in Studies III, IV, and V.

contextual novelty was attributed relatively less dispositionally/more situationally than was the behavior of their less salient counterparts. These apparently contradictory findings can be reconciled if one considers the salience of environmental stimuli in each of the five experiments. While the degree of dispositional over situational attribution did not consistently bear a direct relation to the salience of the actor, it always bore an inverse relationship to the salience of the actor's environment. The dispositional-situational attribution index was lower when the actor's environment (i.e., the other actor) was brightly lit than when it was dim, lower when it contained continuous motion than when it was relatively stationary, lower when it contained a complexly patterned element than when it was relatively undifferentiated, and lower when the elements formed a unit or "figure" by virtue of their similarity to one another than when they could not be grouped (see Fig. 2). These effects of environmental salience are all consistent with Arkin and Duval's (1975) recent finding that observers made more situational attributions for an actor's behavior when the actor's environment was dynamic (a slideshow) than when it was stable (a display of photographs).

It is rather ironic that research based upon a theory which holds that observers tend to ignore an actor's environment fell prey to this very "observer bias" and predicted that causal attributions would vary with the salience of the actor rather than with the salience of the actor's environment. Another irony is that research which drew upon Gestalt principles of figural emphasis failed to anticipate the "reversible figure" phenomenon manifested in Studies IV and V where increasing the figural emphasis of an actor also increased the figural properties of his environment. Because the salience of each actor and his environment were directly correlated in these studies, they have provided a very stringent test of the effects of environmental salience on causal attributions. Any tendency for an actor's salience to increase the degree of dispositional

over situational attribution for his behavior v observed tendency for his salient environ attribution. The fact that this latter tendency v opposing influence of the actor's salience mitig effects of environmental salience received too lil and III, where the salience of the actor and the e correlated.

It should be noted that the inverse correlation actor and his environment in Studies I, II, an interpret the results as supporting the origir dispositional/less situational attribution would b a salient than a nonsalient actor. Furthermore, : have failed to support this hypothesis, it must b have provided a very stringent test of it due t between the salience of each actor and his envi above. In view of this, one could argue that the e salience would be obtained if they both had However, this argument is weakened by the re (1975) study in which the salience of the actors v salience of their environments was not—e consisted of the other actor plus a circle of s similarity of their environments, no signific attribution were obtained for the behavior of observers faced, and the nonsalient actor, whose

The proposition that the degree of disp attribution varies inversely with the salience rather than varying directly with the salience explain Taylor and Fiske's (1975) lack of effec attributions for the behavior of the two actors si the salience of their environments was not var more recent study by Taylor et al. (Note 1) did m actor's environment. Causal attributions for the whose environment consisted of a "unit" of fi with attributions for the behavior of the same a was a mixed group of two blacks and three w present formulation, a slight tendency for situational attribution for the behavior of the sol Like this study, Storms' (1973) manipulation perspectives altered the salience of the actor's salience of the actor. Thus his finding that cau perspective is also consistent with the preser would appear that the effects may have been m the salience of the actor's environment than by the actor.

over situational attribution for his behavior was operating against the observed tendency for his salient environment to decrease such attribution. The fact that this latter tendency was significant despite the opposing influence of the actor's salience mitigates the criticism that the effects of environmental salience received too liberal a test in Studies I, II, and III, where the salience of the actor and the environment was inversely correlated.

It should be noted that the inverse correlation between the salience of an actor and his environment in Studies I, II, and III, does allow one to interpret the results as supporting the original hypothesis that more dispositional/less situational attribution would be made for the behavior of a salient than a nonsalient actor. Furthermore, although Studies IV and V have failed to support this hypothesis, it must be acknowledged that they have provided a very stringent test of it due to the positive correlation between the salience of each actor and his environment which was noted above. In view of this, one could argue that the effects predicted for actors' salience would be obtained if they both had the *same* environments. However, this argument is weakened by the results of Taylor and Fiske's (1975) study in which the salience of the actors was clearly varied while the salience of their environments was not—each actor's environment consisted of the other actor plus a circle of six observers. Despite the similarity of their environments, no significant differences in causal attribution were obtained for the behavior of the salient actor, whom observers faced, and the nonsalient actor, whose back was to the observer.

The proposition that the degree of dispositional over situational attribution varies inversely with the salience of an actor's environment rather than varying directly with the salience of the actor can readily explain Taylor and Fiske's (1975) lack of effect. No differences in causal attributions for the behavior of the two actors should be expected because the salience of their environments was not varied. On the other hand, a more recent study by Taylor et al. (Note 1) did manipulate the salience of an actor's environment. Causal attributions for the behavior of a black actor, whose environment consisted of a "unit" of five whites, were compared with attributions for the behavior of the same actor when his environment was a mixed group of two blacks and three whites. Consistent with the present formulation, a slight tendency for observers to make more situational attribution for the behavior of the solo black actor was obtained. Like this study, Storms' (1973) manipulation of actors' and observers' perspectives altered the salience of the actor's environment as well as the salience of the actor. Thus his finding that causal attributions varied with perspective is also consistent with the present formulation, although it would appear that the effects may have been mediated more by changes in the salience of the actor's environment than by changes in the salience of the actor.

In each of the present studies as well as in prior research (Arkin & Duval, 1975; Nisbett et al., 1973; Storms, 1973; Taylor et al., Note 1) the major locus of the experimental effects has been on situational attributions rather than on dispositional attributions. This is consistent with the proposition that attributions vary with the salience of the actor's environment, since it does seem logical that the presence of salient environmental stimuli would be sufficient to increase situational attributions for the actor's behavior, while the absence of salient stimuli would not be sufficient to increase dispositional attributions. The question remains, however, why dispositional attribution is not increased when the actor's salience is augmented. Perhaps the observer's attention is so focused on the actor to begin with that salience manipulations cannot further increase the actor's figural emphasis. Increasing environmental salience, on the other hand, may decrease the observer's attention to the actor and thereby increase situational attribution. Whatever the explanation for the weak effects on dispositional attribution, it is apparent that situational and dispositional attributions are not psychological reciprocals of one another. Indeed, their average intercorrelation in Studies III, IV, and V was only  $r = -.19$ . In view of this, future researchers would be well advised to employ separate measures for the two attributions rather than a unidimensional scale such as that employed in Studies I and II.

#### *Leadership Ratings: Results and Discussion*

Since the three questions measuring the extent to which the stimulus person was seen as exercising a leadership role in the getting acquainted conversation were highly correlated (the average intercorrelation for the five studies was  $+ .69$ ), they were summed and analyses of variance were performed on the totals, as had been done by Taylor and Fiske (1975). The prediction that the salient actor would be perceived as more of a leader than the nonsalient actor was confirmed only in Study I, where the brightly lit person was rated significantly higher than the dimly lit one,  $F(1,32) = 4.86, p < .05$ . This effect was qualified by a videotape form  $\times$  salience interaction,  $F(1,32) = 15.19, p < .001$ , which revealed that the predicted effect was obtained only in form 1: When actor C was seated in a bright light, he was perceived as exercising more leadership than actor D,  $t(38) = 4.32, p < .001$ , whereas when actor D was in a bright light, there was a nonsignificant reversal of the predicted salience effect,  $t(38) = 1.19, p > .20$ .

While the main effects for salience did not approach significance in Studies II, III, IV, and V, all  $p$ 's  $< .25$ , an unpredicted sex of subject  $\times$  salience interaction in Study IV,  $F(1,32) = 6.03, p < .03$ , revealed that females tended to attribute more leadership to the actor in the novel color shirt,  $t(46) = 2.31, p < .05$ , whereas males did not,  $t(46) = 1.17, p > .20$ . Videotape form  $\times$  salience cross-over interaction effects obtained for the attributions of leadership in Studies IV and V

reflected more attributions of leadership to one of the other, regardless of salience.

The restriction of the salience main effect to Study I is interesting to note in this regard that leaders in the spotlight. Thus the greater attribution to the brightly lit actor may derive from the cultural connotation of "limelight" rather than from being the focus of attention per se, since leaders even in a leaderless group discussion (e.g.,

#### *Recall: Results and Discussion*

The prediction that more would be recalled about the nonsalient actor was confirmed only in Study I, where recall was significantly more about the brightly illuminated actor,  $F(1,32) = 7.49, p < .01$ . This effect was qualified by a significant videotape form  $\times$  salience interaction,  $p < .08$ , which revealed that the predicted effect was obtained only in form 2: When actor D was seated in a bright light, recall about him was significantly higher than about dimly lit actor C,  $t(38) = 3.24, p < .01$ . When actor C was brightly lit the salience effect was not significant. The form  $\times$  salience cross-over interaction effects observed in Study IV reflected more recall about one of the two actors, regardless of salience.<sup>3</sup>

Not only was there confirmation of the predicted recall effect in Study I, but also it was found that recall did not correlate with the other dependent measures. It is, therefore, clear that the effects observed in the present studies were not simply a function of attentional focus on recall of each actor's behavior.

#### CONCLUSIONS

Application of laws of figural emphasis in object perception has revealed that observers' recall of actor's behavior varied consistently with the

<sup>3</sup> These effects undoubtedly reflect the content of the actor's behavior. A similar effect was also obtained in Study I where the same script was used. The salience main effect was significant as well. Similarly, the interaction was also obtained in Study IVa where shirt color did not vary. The effects in Studies I, III, and IV reflected significantly greater recall by females than males ( $p < .08, < .001, \text{ and } < .01$ , respectively).

reflected more attributions of leadership to one of the two actors than to the other, regardless of salience.

The restriction of the salience main effect to Study I suggests that only particular forms of salience will yield attributions of leadership. It is interesting to note in this regard that leaders in the real world are often literally in the spotlight. Thus the greater attribution of leadership to the brightly lit actor may derive from the cultural connotations of being in the "limelight" rather than from being the focus of attention per se. By the same token, Taylor and Fiske's (1975) effect on the leadership measure may derive from the cultural connotations of being at the "head-of-the-table" rather than from focus of attention per se, since leaders are generally seated facing us rather than with their backs to us. Indeed, it has been found that people who are seated at the head of the table tend to be perceived as leaders even in a leaderless group discussion (e.g., Bass & Klubeck, 1952).

#### *Recall: Results and Discussion*

The prediction that more would be recalled about the salient than the nonsalient actor was confirmed only in Study I where subjects recalled significantly more about the brightly illuminated than the dimly illuminated actor,  $F(1,32) = 7.49, p < .01$ . This effect was qualified by a marginally significant videotape form  $\times$  salience interaction,  $F(1,32) = 3.40, p < .08$ , which revealed that the predicted effect was significant only in form 2: When actor D was seated in a bright light, more was recalled about him than about dimly lit actor C,  $t(38) = 3.24, p < .01$ , but when actor C was brightly lit the salience effect was not significant,  $t < 1$ . Videotape form  $\times$  salience cross-over interaction effects obtained in Studies II and IV reflected more recall about one of the two actors than the other, regardless of salience.<sup>3</sup>

Not only was confirmation of the predicted recall effect limited to Study I, but also it was found that recall did not correlate significantly with any of the other dependent measures. It is, therefore, clear that the attributional effects observed in the present studies were not mediated by effects of attentional focus on recall of each actor's behavior.

#### CONCLUSIONS

Application of laws of figural emphasis in object perception to the realm of person perception has revealed that observers' causal attributions for an actor's behavior varied consistently with the salience of the actor's

<sup>3</sup> These effects undoubtedly reflect the content of the actors' lines: The interaction in Study II was also obtained in Study I where the same script was employed, although in Study I the salience main effect was significant as well. Similarly, the interaction pattern in Study IV was also obtained in Study IVa where shirt color did not vary. Sex of subject main effects in Studies I, III, and IV reflected significantly greater recall of the conversation content by females than males ( $p < .08, < .001, \text{ and } < .01$ , respectively).

environment, which consisted of other actors. The more figural or salient the environmental stimuli, the more situational attribution there was for the actor's behavior. This finding is consistent with Jones and Nisbett's (1971) proposition that greater salience of an actor's *environment* to the actor than to an observer contributes to the tendency for actors to make more situational attributions for their behavior than observers do.

While the present research has shown that one can apply Gestalt principles to the perception of people, it has also revealed that it may often be difficult to specify in advance which of several alternative principles of figural emphasis will determine a perceiver's attentional focus. For example, in Studies IV and V, the Gestalt law of articulation would predict that the heterogeneous environments (mixed sex or mixed shirt-colors) would be more figural than the homogeneous environments.

When we compare the figure and the ground parts with each other, we always find the latter ones to be simpler, in the sense of greater uniformity, less articulation, than the former. (Koffka, 1935, p. 186.)

On the other hand, the law of similarity, derived from research investigating which stimuli most readily group themselves into figures, would predict that the homogeneous environments would be more figural.

Other things being equal, if several stimuli are presented together, there is a tendency to see the form in such a way that the similar items are grouped together. (Wertheimer, 1923/1958, p. 119.)

One clue as to why the law of similarity held sway in Studies IV and V is provided in Koffka's discussion of the range of application of the law of articulation.

Articulated sectors preponderate as figure . . . However not any kind of articulation will produce this effect . . . One has, therefore, not only to consider what articulation will do to the figure, but also its effects upon the ground. (Koffka, 1935, p. 194.)

In Studies IV and V the homogeneous group of people may have been more readily perceived as figural than the heterogeneous group because the homogeneous group was readily differentiated from the ground (i.e., the actor), whereas the more articulated, heterogeneous group was not.

As Koffka's discussion of the law of articulation indicates, ambiguities occur in the application of Gestalt principles to object perception as well as to person perception. However, the greater complexity of situations involving people may increase the likelihood that more than one principle will apply. Not only is the stimulus situation likely to be more complex in the case of person perception, but it is also more likely to be dynamic. This may increase the ambiguity in predicting figural emphasis which derives from reversible figure-ground relationships such as occurred in Studies IV

and V, where a strict application of Gestalt predicted reversibility:

If the conditions are such to produce segregation of smaller unit will, *ceteris paribus*, become the figure; t 1935, p. 191.)

Perhaps when the "larger unit" is people stronger potential for becoming figural, simply animate.

Although the salience manipulations employed were generated from Gestalt principles of figure-ground, it is noted that one may question whether these are the most parsimonious explanation for the experimental results. There are many concomitants of figural emphasis that may or may not characterize the "figures" created. (See Rubin, 1915/1958, for a discussion of these alternative conceptualizations for several of the higher situational attributions given a brightly patterned element in the actor's environment.) Principles of selective attention which hold for simple stimuli, and complex stimuli draw the attention of observers (Berlyne, 1970). On the other hand, it does seem that Gestalt principles—the law of similarity—to explain the attributions when the actor's environment consists of a grouping of people. Thus, although the explanation for the emphasis may have excess meaning as compared to selective attention, they do have the advantage of being explained within the same framework.

Whether the experimental effects are due to figure-ground emphasis or selective attention, they must be viewed in light of the relatively meaningless manipulations which were employed. The presence of brightly dressed, or similarly dressed persons do not in any logical basis for increasing situational attribution. Thus, the effects of these salient environments are simply to draw the observers' attention to the actor. Their attention so focused, observers may then be more likely for situational attribution which would otherwise be attributed to the actor. Alternatively, focusing attention on the actor's environment may foster situational attribution in the manner of a figure-ground. It has been observed in research on object perception: "Equivalent objects tended to make it the carried object moved objectively or not." (Koffka, 1935, p. 191.)

Although the behavior manifested by actors

and V, where a strict application of Gestalt principles would not have predicted reversibility:

If the conditions are such to produce segregation of a larger and a smaller unit, the smaller unit will, *ceteris paribus*, become the figure; the larger the ground. (Koffka, 1935, p. 191.)

Perhaps when the "larger unit" is people rather than objects it has stronger potential for becoming figural, simply because the people are animate.

Although the salience manipulations employed in the present research were generated from Gestalt principles of figural emphasis, it should be noted that one may question whether these principles provide the most parsimonious explanation for the experimental effects. For one thing, there are many concomitants of figural emphasis in object perception which may or may not characterize the "figures" created in the present research. (See Rubin, 1915/1958, for a discussion of these.) What's more, there is an alternative conceptualization for several of the experimental findings: The higher situational attribution given a brightly lit, moving, or complexly patterned element in the actor's environment could be explained using principles of selective attention which hold that intense stimuli, moving stimuli, and complex stimuli draw the attention (Titchener, 1908/1966; Berlyne, 1970). On the other hand, it does seem necessary to invoke a Gestalt principle—the law of similarity—to explain the higher situational attributions when the actor's environment contained an homogeneous grouping of people. Thus, although the explanatory principles of figural emphasis may have excess meaning as compared with principles of selective attention, they do have the advantage of allowing all of the data to be explained within the same framework.

Whether the experimental effects are viewed as reflecting figural emphasis or selective attention, they must be viewed as quite remarkable given the relatively meaningless manipulations of environmental salience which were employed. The presence of brightly lit, steadily rocking, boldly dressed, or similarly dressed persons do not in and of themselves provide any logical basis for increasing situational attributions for the actor's behavior. Thus, the effects of these salient environmental stimuli must be simply to draw the observers' attention to the actor's environment. With their attention so focused, observers may then discover some logical basis for situational attribution which would otherwise go unnoticed. Alternatively, focusing attention on the actor's environment may in and of itself foster situational attribution in the manner of a visual illusion which has been observed in research on object perception: "fixation of one of the two equivalent objects tended to make it the carrier of motion, whether it moved objectively or not." (Koffka, 1935, p. 283.)

Although the behavior manifested by actors in the present series of

studies was relatively trivial, the results have some interesting implications for social perception in more significant situations. One thing which they suggest is that people who want their bad deeds to be attributed to situational factors would do well to commit them in the context of salient environmental stimuli. For example, it may be that aggression which is directed toward a physically salient person will be attributed more situationally than will aggression toward a less salient person. Moreover, this may hold true for physically salient attributes intrinsic to the target of aggression, such as obesity or beauty or nervous tics, for example, as well as for salient attributes extrinsic to the target, like those manipulated in the present research. Unfortunately, the present findings can provide no words of wisdom for people who want their good deeds to be attributed to their benevolent disposition. Being physically conspicuous or responding to relatively inconspicuous environmental cues does not seem sufficient to have a significant influence on attributions of behavior to dispositional causes.

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