Attributing the causes of group performance: Effects of performance quality, task importance, and future testing[1]

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It has been consistently found that attributions concerning an event are affected by the consequences of that event. Following an event that produces positive consequences, individuals increase the link between themselves and the action, while individuals decrease that link following an event that produces negative consequences. Thus, people respond more favorably after receiving a positive rather than a negative interpersonal evaluation, and they are more likely to accept the personal implications of the former than the latter (e.g., Eagly, 1967; Jones, 1973; Steiner, 1968). Similarly, people accept responsibility for personal or group actions that produce task success and minimize personal responsibility for comparable actions that produce task failure (e.g., Caine, 1975; Heider, 1944, 1958; Medow & Zander, 1965; Schlenker, 1975; Schlenker, Soraci, & McCarthy, 1976; Streufert & Streufert, 1969; Wolosin, Sherman, & Till, 1973). Studies of casual attribution patterns indicate that personal success on a task is attributed more to internal factors such as ability and effort than to external ones such as task difficulty and luck; personal failure on tasks is attributed more to external factors than to internal ones (e.g., Dustin, 1966; Fitch, 1970; Frieze & Weiner, 1971; Johnson, Feigenbaum, & Weiby, 1964; Luginbuhl, Crowe, & Kahan, 1975; Wortman, Costanzo, & Witt, 1973).

These results can be interpreted from either of two theoretical perspectives, one emphasizing self-serving motivational biases and the second emphasizing veridical information processing. The first approach proposes that perceptions and attributions

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are in part determined by an individual's need to maintain or enhance self-esteem (Heider, 1944, 1958; Kelley, 1967; Schlenker, 1975; Shaver, 1970; Wortman, 1970). As long as the situation allows some ambiguity, perceptions will be biased to provide relatively favorable self-implications. The influence of these egocentric biases decreases if the situation is unambiguous, or if observers know the actor's history and could refute the actor's description of the event, or if future events could invalidate a particular description.

Bem (1972) proposed that it is not necessary to infer any self-serving motivational bias to explain the previous phenomena. If a person expects to succeed at a particular task, then success should be attributed to personal, internal factors, and failure should be attributed to nonpersonal, external factors. However, if a person expects to fail on a task, then failure should be attributed to internal factors and success should be attributed to external ones. Extending this analysis, Miller and Ross (1975) suggested that the vast majority of individuals, particularly college students, have a long history of past success across a wide variety of situations. Since success is consistent across situations, people infer that success is caused by personal, internal factors, and infer that failure is caused by external ones. Hence in the absence of contradictory information, self-perceptions will be deduced that appear to be egocentrically biased, even though these perceptions are arrived at logically. Consistent with this formulation, Feather (1969; Feather & Simon, 1971) found that an unexpected outcome (i.e., success after expecting failure, or vice-versa) was more often attributed to environmental factors than was an expected outcome. However, these results are also consistent with an egocentric perception model. Feather had subjects rate their expectations of future performance prior to the task. Contradicting one's prior statements, e.g., attributing success to personal ability after having stated that one expected to fail, would not be esteem-enhancing since it would make subjects appear to be inconsistent and irrational. Thus, these data do not clearly favor one approach over the other.

According to an egocentric perception approach, two major determinants of the amount of attributional distortion that should occur are (a) the importance of the task for the person, and (b) the degree to which future events could invalidate

current perceptions. Since success is more gratifying and failure more threatening when a task is important rather than unimportant, egocentric biases that would enhance or protect self-esteem should increase with task importance. Ross, Bierbrauer, and Polly (1974) indirectly examined task importance by comparing the perceptions of professional teachers with those of college students after they had either succeeded or failed at teaching an 11-year-old boy how to spell a list of words. Ross et al. assumed that the importance of task success would be greater for the professional teachers than for the college students. They found that, contrary to predictions based on egocentric perceptions, subjects rated teacher factors as more important than pupil factors after failure rather than success, and rated pupil factors more important after success rather than failure. This effect was more pronounced for the professional teachers than for the college students. However, several difficulties with the study cloud interpretation of the data. First, there was a high degree of evaluation apprehension present in the situation (subjects were videotaped and told that the tapes would be used for "instructional" purposes). The objective record of their behaviors may have made subjects reluctant to claim credit for success and blame the pupil for failure. Second, it is not clear that taking responsibility from pupils for their success or blaming them for their failure would enhance the self-esteem of the professional teachers; it would seem that social norms for teachers would recommend the opposite (obtained) behavior and produce greater increases in self-esteem through compliance. Third, no check was made on the importance of the task for the professional teachers versus the college students. Finally, as compared with the college students, the professional teachers would have expected to perform similar teaching tasks in the future, and their attributions may therefore have been less egocentric. Research indicates that when people expect to continue working on tasks similar to one that has just been completed, they tend to be less self-enhancing and more conservative in their attributions than when no future task is anticipated (Radloff, 1966; Wortman et al., 1973). The existence of a future test of ability raises the spector of possible failure that could repudiate initial claims of high personal ability and motivation. Thus, when future conditions are anticipated that

could potentially refute a self-serving attribution, egocentric perceptions should be minimized.

The present experiment examined the effects of performance, task importance, and future testing on attributions made after completing a cooperative group task. If self-serving attributional biases occur, a triple-interaction should be obtained between these variables. If their group succeeds rather than fails, subjects should take more personal responsibility for the group's performance and should attribute the cause of the performance to internal rather than external factors. This effect should be most pronounced when the task is important and where no future testing is anticipated, and should be minimized when either the task is unimportant or when future testing is expected.

Prior research using the task employed in the present study (Schlenker, 1975) indicates that members of groups not given performance feedback do expect moderate success. Thus, if perceptions follow a logical, information processing pattern, a main effect of group performance should occur. Subjects should take more responsibility for success than for failure and should attribute success more than failure to internal factors. It is unclear why either future testing or task importance should affect either responsibility attributions or internal versus external causal attributions if individuals do logically process information.

It has been suggested that analyses of attributions of causality that focus only on an internal-external dimension confound it with a stable-unstable dimension (Frieze & Weiner, 1971; Luginbuhl et al., 1975; Weiner et al., 1971). Crossing these dimensions produces four primary factors to which attributions can be made: ability (internal-stable), effort (internal-unstable), task difficulty (external-stable), and luck (external-unstable). Frieze and Weiner (1971) found that as compared to successful subjects, subjects who failed attributed their performance more to task difficulty and less to effort, ability, and luck. Luginbuhl et al. (1975), however, directly compared each of the factors and found that successful subjects attributed their performance more to effort than to ability, while failure subjects attributed their performance more to poor task ability and task difficulty than to other factors. Luginbuhl et al. suggested that their results might only be obtained on relatively unimportant tasks.

Ability is trivial on unimportant tasks, so failure can be safely attributed either to it or to task difficulty. Attributing failure to lack of effort might only insult the experimenter, while attributing failure to bad luck might appear to be a crass attempt to exonerate oneself. Following success on an unimportant task, one can impress the experimenter more when one appears to be motivated to perform rather than when one appears to possess a trivial personal ability. For these reasons, it was hypothesized that task importance should affect (a) internal attributions; as task importance increases, attributions to ability should increase and attributions to effort should decrease, and (b) external attributions; as task importance increases, attributions to luck should increase and attributions to task difficulty should remain the same.

Method

Subjects

Subjects were 64 male and 62 female introductory psychology students who participated in order to earn research credit toward a course requirement. The data obtained from two male subjects were eliminated prior to the analyses because one failed to understand the response procedures and one was suspicious of the validity of the feedback.

Procedure

Subjects were scheduled to participate in same-sex, four-person groups, and were asked not to sign up with friends for the same time period. As subjects arrived at the laboratory, they were seated in adjoining, partitioned cubicles to eliminate any preexperiment socializing and visual contact during the experiment itself.

When all the subjects were seated, the experimenter explained that the study was investigating social sensitivity. The construct was described as the ability to accurately assess the feelings and attitudes of another person from only a minimal amount of information about that person, and was supposedly related to social competence, intelligence, and leadership ability. The experimenter then explained that the purpose of the present experiment was to determine if group responses to a social sensitivity test are superior or inferior to the responses of individuals who take the test alone.

Future-test manipulation. Subjects in the future-test condition expected to take the test more than once. They were told that in

order to examine the differences between group and individual social sensitivity, they would initially take the test as a group and then would take another version of the test individually. Subjects in the no-future-test condition expected to take the test only once, as a group; supposedly, other subjects would take the test individually at a future date.

The instructions next described the test and the procedures to be followed for the group testing. The test consisted of twelve problems, each of which had three possible solutions. The fictitious but face-valid test was patterned after a similar one devised by Jones and Ratner (1967). Subjects were instructed to record their answers to each problem by pressing the appropriately labeled switch on a metal "communication box" located in front of them in each booth. It was explained that the majority answer of the group on each problem would serve as the "group solution." The experimenter emphasized that there would be no group discussion during the presentation of the problems and that the group's solution would be the only solution that would matter; individual answers would not be recorded by the experimenter. Subjects were informed that they would not receive feedback during the presentation of the problems; however, they would be informed of the group's total score at the conclusion of the experiment. In this way, subjects could not know whether their answers coincided with or disagreed with the group solutions and would not know how well either they or the group did as trials progressed. This situation captures the essence of many real group situations where objective contributions are uncertain and attributions about responsibility must be inferred later on the basis of overall group performance.

Importance manipulation. The importance of doing well on the task was varied by manipulating both the perceived validity of the test and the possibility of obtaining an extra reward. Subjects in the low-importance condition were told, "The test is a somewhat reliable and valid measure of social sensitivity, but is not so to a very high degree." Hence, a good score would not necessarily indicate a great deal of social sensitivity, while a poor score would not necessarily indicate a low amount of social sensitivity. Subjects in the high-importance condition were told that the test "has been validated several times by psychologists and is a very accurate and reliable measure of social sensitivity and overall social competence." Hence, a good score would indicate high social sensitivity, while a poor score would indicate low social sensitivity. Additionally, subjects were told that they could receive extra experimental credit (beyond what they would normally receive for their participation) according to

how well their group performed on the task. All introductory psychology students were required to participate in a minimum of four hours worth of experimentation. The extra credit could be used toward satisfying this requirement or, if a student already had fulfilled the requirement, could be applied as extra credit toward the final grade in the course. The greater the number of test items that the group answered correctly, the more extra credit they would receive. No mention of extra credit was made in the low-importance condition.

After insuring that the procedure was clear, the experimenter read the test items as the subjects followed along on their copies. After reading each item, the experimenter asked subjects to record their answers, paused to simulate recording the group's answer from the master control panel, and then went on to the next item.

Feedback manipulation. After completion of the test, the experimenter paused to "total up the group's score," and then gave the group bogus feedback to indicate how well they had done. Subjects in the success condition were told that their group had answered 10 out of the 12 problems correctly, ranking them in the top 5 percent of all groups who had taken the test. Subjects in the failure condition were told that their group had answered only 3 out of the 12 items correctly, ranking them in the lowest 5 percent of all groups who had taken the test.

Subjects were then told that since the study was investigating differences between group and individual testing conditions, it was important to assess how group members perceived the situation. A "group perceptions questionnaire" was handed out; the questionnaire contained manipulation checks, measures of perceived responsibility for group performance (e.g., "How responsible do you feel you personally were for the group's performance?"), and measures of the perceived influence of various causal factors (e.g., luck, distractions, effort, test difficulty, etc.) on the group's score (e.g., "How much of an effect did luck or chance have on your group's score?"). Each item on the questionnaire was followed by an 18-point scale with labeled gradations. Subjects in the future-test condition were reminded that they would take a different version of the test after they had completed the questionnaire. It was stressed to all subjects that their answers on the questionnaire would be kept strictly confidential and would not be shown to the other group members. To further increase anonymity, subjects were told not to place their names on the questionnaire. Following completion of the questionnaire, subjects were debriefed.

Thus, the experiment was a 2 (Future-Test versus No-Future-Test)

by 2 (Low-Importance versus High-Importance) by 2 (Success versus Failure) by 2 (Sex of Subjects) factorial design.[2]

Results

Manipulation Checks

Perceptions of group performance. In order to determine if the performance feedback was effective in generating differences in perceptions of success and failure, subjects were asked to rate how well their group performed on the task, how satisfied they were with the performance of their group, and how well they personally performed on the task. A $2 \times 2 \times 2 \times 2$ multivariate analysis of variance performed on these variables revealed a main effect of performance feedback, $F\ (3, 106) = 493.92$, $p < .001$. Examination of the univariate F-ratios and the means for each of these items, presented in Table 1, indicated that subjects who received success feedback were more satisfied with their group's performance and felt that both they and their group did better on the test than subjects who received failure feedback.

Previous research (Dustin, 1966; Medow & Zander, 1965; Schlenker, 1975; Schlenker, Soraci, & McCarthy, 1976; Zander & Medow, 1963) has found that members of failing groups indirectly distort their responsibility for a group outcome by rating their personal performance as superior to the group's performance. Members of successful groups, though, rate their personal performance about equal to or slightly less than the group's performance. The difference between each subject's rating of personal performance and group performance was calculated for the present data and an analysis of variance was performed on this measure of relative performance. A main effect of performance feedback was revealed, $F\ (1, 108) = 382.25$, $p < .0001$. Consistent with past findings, members of groups that failed (mean was $+6.4$) rated their personal performance as superior to their group's performance, $t\ (61) =$

2. Even though subjects did not interact during the experiment, the fact that they participated in groups of four and were assigned to conditions as a group raised the question of whether the groups within each experimental condition systematically differed. Analyses of variance were performed using the four groups in each cell of the design as factor levels in one-way, 4-group analyses. No significant patterns of effects were obtained; hence, there is no evidence that the groups within each condition differed in any systematic way, and individual scores were deemed appropriate for use in the overall analyses.

16.05, $p < .05$, while members of successful groups (mean was –3.7) rated the quality of their personal performance below that of the group's performance, $t\ (61) = 12.01$, $p < .05$.

Perceptions of task importance. The task importance manipulation was quite successful, as a multivariate analysis of variance revealed a main effect of task importance on three manipulation check items, $F\ (3, 106) = 10.78$, $p < .001$. The items, with associated univariate F-ratios for the task importance main effect, included: (a) personal importance of doing well on the task, $F\ (1, 108) = 15.84$, $p < .001$, (b) importance for the other group members to do well, $F\ (1, 108) = 30.88$, $p < .001$, and (c) the validity of the social sensitivity test (test validity was included as part of the importance manipulation), $F\ (1, 108) = 4.965$, $p < .05$. Subjects in the high- as compared to low-importance conditions felt that it was more important for them (means were 11.1, 8.1, respectively) and the other group members (means were 11.4, 7.9, respectively) to do well, and that the test was more valid (means were 9.1, 7.6, respectively). The verbal labels associated with these scores indicated that subjects in the high-importance conditions felt that it was moderately to very important for them and the group to do well, and that the test was moderately valid; subjects in the low-importance conditions felt that it was only somewhat important for them and the group to do well, and that the test was only somewhat valid.

A significant main effect of performance feedback was also obtained at the multivariate level on these items, $F\ (3, 108) = 6.764$, $p < .001$, and examination of the univariate F-ratios indicated that significant effects were produced on the group importance and validity items. As shown in Table 1, subjects felt that the test was more valid and that it was more important for the other group members to do well when the group had succeeded rather than failed. Finally, a sex main effect was obtained on the personal importance item, $F\ (1, 108) = 4.65$, $p < .05$, with females rating the task as less important than males; means were 8.7, 10.4, respectively.

Subjects also were asked how important it was to be socially sensitive. No significant effects of any of the independent variables or their interaction were revealed, as all subjects felt that it was "very important" to possess social sensitivity; mean was 12.8. Thus, the task importance manipulation clearly affected

subjects' desires to do well on the task, but did not affect the importance of the concept of social sensitivity.

Future testing. To check if subjects correctly perceived the future-testing manipulation, they were asked whether or not they would be taking the test again. Five of the 124 subjects incorrectly answered the question; 2 were in the future-testing conditions and 3 were in the no-future-testing conditions. Thus, the manipulation was quite successful overall; the data from the incorrect subjects were retained for all analyses in their originally assigned conditions.

Attributions of Responsibility

Three items on the questionnaire assessed subjects' attributions of responsibility for their group's performance: (a) personal responsibility, (b) responsibility of the average group member (excluding self), and (c) responsibility of the group as a whole. A multivariate analysis of variance revealed only a main effect of performance feedback on the items, $F\ (3, 108) = 12.57$, $p < .001$; as shown in Table 1, univariate analyses revealed main effects of performance feedback on all three items. Subjects in the success conditions assigned more responsibility to self, average group member, and group as a whole than did subjects in the failure conditions.

The only other effect obtained on these items was a univariate future-testing by importance interaction on attributions of personal responsibility, $F\ (1, 108) = 6.34$, $p < .03$. When a future test was anticipated, subjects took more personal responsibility, $p < .05$, when task importance was high rather than low; means were 10.1 and 8.4, respectively. When no-future-test was anticipated, task importance did not significantly affect attributions of personal responsibility; means for the low- and high-importance conditions were 10.0 and 9.0, respectively.

Attributions of relative responsibility were examined by subtracting ratings of the average group member's responsibility from ratings of personal responsibility and performing a $2 \times 2 \times 2 \times 2$ analysis of variance on this measure. The only effect obtained was a future-testing by group performance interaction, $F\ (1, 108) = 4.57$, $p < .03$. In the future-testing conditions, subjects took less relative responsibility, $p < .05$, when task importance was low rather than high; means were –1.3 and –0.6,

Table 1. Means and significance test for the effects of task performance on attributions.

Dependent variable	Condition means		F value	p value
	Success	Failure		
Perceptions of group performance				
Personal performance	12.39	9.55	35.79	$< .001$
Group performance	16.05	3.15	1493.69	$< .001$
Satisfaction with performance	14.74	3.83	289.46	$< .001$
Perceptions of task importance				
Importance for subject	10.11	8.90	2.85	$> .09$
Importance for others	10.43	8.69	7.45	$< .01$
Validity of test	8.29	6.97	15.22	$< .001$
Attributions of responsibility				
Personal responsibility	10.59	8.19	19.17	$< .01$
Average member's responsibility	12.45	9.25	36.13	$< .001$
Group responsibility	11.53	8.95	21.47	$< .001$
Causal factors: Internal				
Personal effort	14.33	14.23	0.16	$> .6$
Personal ability	12.81	10.94	9.24	$< .01$
Internal constraints	3.38	5.61	9.63	$< .01$
Causal factors: External				
Distractions	2.82	4.16	3.78	$= .05$
Luck	6.62	6.79	0.04	$> .8$
Difficulty of the test	7.22	9.22	7.96	$< .01$

respectively. In the no-future-testing conditions, subjects took less relative responsibility, $p < .05$, when task importance was high rather than low; means were –1.5 and –0.1, respectively.

Perceptions of Causal Factors

Subjects were asked to rate the degree to which various causal factors affected their group's performance. These factors included four items that have been employed in prior research: personal ability (internal-stable), personal effort (internal-unstable), difficulty of the test (external-stable), and luck (external-unstable). In addition, two other items were included: internal constraints such as nervousness and fatigue (internal-unstable), and situational distractions produced by the equipment, noise, and so on (external-unstable).

A multivariate analysis of variance performed on the six items revealed a main effect of performance feedback, $F\ (6, 103) = 5.031$, $p < .001$. Means and univariate F-ratios for each of the items are presented in Table 1. As compared to

subjects in successful groups, failure subjects felt that they were less socially sensitive, more constrained by internal factors, more distracted by the situation, and had taken a more difficult test. Thus, successful as compared to unsuccessful subjects maximized the perceived influence of personal ability and minimized the influence of all constraining factors, whether internal or external, stable or unstable.

Although the multivariate analysis of variance failed to reveal any other significant effects, univariate analyses did reveal several interactions. Naturally, these effects should be interpreted cautiously in the absence of a multivariate effect. A performance feedback by task importance interaction was obtained on perceptions of personal effort, $F\ (1,\ 108) = 3.70$, $p = .05$. After success, subjects felt that they had tried harder, $p < .05$, when the task had been important rather than unimportant; means were 14.9 and 13.8, respectively. After failure, however, task importance did not significantly affect ratings of effort; means for the low- and high-importance conditions were 14.5 and 13.8, respectively. Thus, although it had been hypothesized that following success, task importance would be directly related to attributions of personal ability, the direct relationship was only found for attributions to effort.

Ratings of the effects of internal constraining factors revealed both a performance feedback by future-testing interaction, $F\ (1,\ 108) = 3.81$, $p = .05$, and a task-importance by future-testing interaction, $F\ (1,\ 108) = 3.93$, $p < .05$. When their group had succeeded, subjects who anticipated a future test placed more importance on internal constraining factors, $p < .05$, than did subjects who did not anticipate a future test; means were 4.2 and 3.6, respectively. Following a group failure, no differences between future-testing conditions were obtained; future-testing and no-future-testing conditions were 8.4 and 9.0, respectively. The second interaction indicated that when future testing was anticipated, subjects in the high-importance conditions attributed greater influence to internal constraints, $p < .05$, than did subjects in the low-importance conditions; means were 5.5 and 3.5, respectively. When no future testing was anticipated, task importance had no significant effects on attributions to internal constraints; means for the high- and low-importance conditions were 4.9 and 5.1, respectively. Thus, subjects who expected to

take a future test protected a past success by emphasizing the growing influence of nervousness and fatigue; a possible future failure thus could be explained by reference to these factors. And, when future testing was anticipated, subjects who felt the test was important emphasized the influence of internal constraints, again allowing a ready cause for an important potential future failure.

Discussion

The results demonstrated a consistent effect of group success versus failure on attributions. As compared to subjects in failing groups, subjects in successful groups attributed more responsibility to self, average group member, and group as a whole, and attributed the cause of the performance more to personal ability and less to internal constraints, distractions in the situation, and task difficulty. These results replicate past findings of causal inference patterns that have been obtained in individual testing situations and extend them to group decision situations.

The manipulation checks clearly indicated that subjects did perceive the task to be more important in the high-importance conditions than in the low-importance conditions, and 96 percent of the 124 subjects correctly perceived whether or not they would be taking a future test. But despite the strength of the manipulations, these variables affected subjects' attributions only sporadically with no significant multivariate effects. The findings are thus quite consistent with the information processing model. As long as subjects expected some success on the task (cf. Schlenker, 1975), they inferred personal responsibility for success and attributed the cause of the performance to internal, facilitative factors; failure produced inferences of less personal responsibility and the operation of external, debilitative factors. Logically, neither task importance nor anticipation of future testing should necessarily affect perceptions, and by and large they did not.

The self-serving bias model predicts a triple interaction of the major variables, a result which did not occur. However, the results which were obtained can be explained from the self-serving bias model. As compared to members of successful groups, members of failing groups rated their personal performances much higher than the group's performance, took less per-

sonal responsibility, derogated the test's validity, emphasized internal constraints, environmental distractions, and task difficulty, but did not suggest that they expended any less effort. Additionally, the univariate interactions involving future testing suggested self-protective attributions designed to ward off the embarrassment of a potential future failure. When future testing was anticipated, either past success or high task importance produced increased attributions of the influence of internal constraints (nervousness and fatigue). By emphasizing internal constraints, subjects can maintain that they will keep trying hard and are quite able on the task, but unfortunately, are beginning to tire. If a future success occurs, all well and good, but a future failure can be easily dismissed as due to such uncontrollable internal fluctuations. The fact that subjects in the future-testing as compared to no-future-testing conditions also took greater personal and relative responsibility for their group's prior performance gives added credence to the validity of their protective ploy. Although personally responsible in the past and hence not the kind of people who seek scapegoats under all conditions, unstable factors now influence their performance.

One possible explanation for the failure to obtain the intuitively compelling result of differences produced by task importance would focus on the self-presentational concerns of the subjects. Recalling past experience, it would seem that people do try to claim credit for success and avoid blame for failure, and they do this more as task importance increases. It is quite plausible that such behavioral effects are not generated by self-serving *perceptual* distortions, but instead are produced by self-serving *self-presentational* differences. That is, people logically process the information relevant for the action, but distort it when describing the action to important others. In this way, although people may not perceive themselves as having done more on an important than an unimportant task, they can impress observers with tales of their personal accomplishments (or escape the embarrassment of a tale of personal failure). The rewards and punishments (e.g., status, respect, esteem, etc.) that can be obtained from the audience are greater when the incident is important rather than unimportant. After having "lied," people may come to believe their descriptions of the event and eventually not even be able to recall their initial accurate

description (such an occurrence is suggested by dissonance theory, Festinger, 1957). Thus, what starts out as an attempt to impress an audience can end up as attitude change, and this should be more likely to occur under conditions of high rather than low task importance. In the present experiment, subjects' responses to the questionnaire were completely anonymous (no names were placed on them), and the experimenter attempted to maintain the impression that no interpersonal evaluation would be involved in their answers. Under these conditions, the subjects had little or no reason to try to impress the experimenter with their personal abilities, irrespective of the importance of the task. Hence, the obtained data followed a logical, information-processing pattern. This line of reasoning suggests that a number of variables could be manipulated to obtain differences as a function of task importance. For example, if subjects were told that an audience (or experimenter) was evaluating them personally and they had to respond publicly rather than anonymously, task importance effects might be obtained. In addition, a pleasant, powerful audience might produce greater such effects than a disliked, powerless audience, since subjects would want to impress the former more than the latter.

In summary, the results extend the study of egocentrism from individual to group settings and can be explained by either an information processing model or a self-serving bias model. Despite the effectiveness of the manipulations, the triple interaction of past group performance, task importance, and future testing which is predicted by a self-serving bias model did not occur. Future research is necessary to determine when, if ever, task importance affects attribution patterns in a manner predicted by the self-serving bias approach.

Summary

An egocentric perception model of attribution suggests that three major factors affect self-serving perceptual biases which occur after task performance: performance quality, the importance of the task, and the possibility of continuing to work on similar future tasks. To assess the effects of these variables on attributions, 126 subjects worked in 4-person, same-sex groups on a social sensitivity task. The $2 \times 2 \times 2 \times 2$ factorial design

included: (a) group success or failure, (b) high versus low task importance, (c) expectations of future testing versus no future testing, and (d) sex of subjects. Although the manipulation checks indicated that the task importance and future testing manipulations were quite successful, only group performance consistently affected attributions. As compared to subjects in groups that failed, successful subjects attributed greater responsibility for the performance to self, average group member, and group as a whole, and attributed the cause of the performance more to personal ability and less to internal constraints, situational distractions, and task difficulty. The results extend previous findings obtained in individual testing situations to group testing situations, and can be explained from either an information processing model or a self-serving motivational bias model of egocentrism. However, the failure to find pervasive effects of task importance and future testing is somewhat more consistent with the former than the latter model.

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