

Self-Serving Biases in the Attribution of Causality: Fact or Fiction?

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A review of the evidence for and against the proposition that self-serving biases affect attributions of causality indicated that there is little empirical support for the proposition in its most general form. The literature provides some support for the contention that individuals engage in self-enhancing attributions under conditions of success, but only minimal evidence was found to suggest that individuals engage in self-protective attributions under conditions of failure. Moreover, it was proposed that the self-enhancing effect may not be due to motivational distortion, but rather to the tendency of people (a) to expect their behavior to produce success, (b) to discern a closer covariation between behavior and outcomes in the case of increasing success than in the case of constant failure, and (c) to misconstrue the meaning of contingency.

We are prone to alter our perception of causality so as to protect or enhance our self esteem. We attribute success to our own dispositions and failure to external forces. (Hastorf, Schneider, & Polefka, 1970, p. 73)

The principle described in the foregoing observation has received considerable attention in social psychology. Various labels *ego-defensive*, *ego-protective*, or *ego-biased* attribution, discussions of the phenomenon can be found in source books (Heider, 1958; Kelley, 1967), text books (Hastorf et al., 1970; Weiner, 1973), and innumerable journal articles (e.g., Beckman, 1973; Schopler & Layton, 1972a, 1972b; Wolosin, Sherman, & Till, 1973).

The concept of a self-serving attribution process owes its existence, in part at least, to Heider's (1958) "naive analysis of action" model. According to Heider, the selection of an acceptable causal attribution depends on two factors: "(1) The reason has to fit the wishes of the person and (2) the datum has to be plausibly derived from the reason" (p. 172). Thus, assuming it is plausible to do so,

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we try to explain our behavior in terms that "flatter us" and "put us in a good light." This formulation is, of course, quite consistent with social psychological theories predicated upon self-esteem maintenance (e.g., balance theory, dissonance theory). The principle of ego-biased attribution is also compatible with Kelley's (1971) notion of "effective control." Kelley, postulating that it is important for individuals to be able to exercise control over their environment, described the relationship between the need for effective control and the attribution process as follows: "The attribution to self of success and the attribution to external factors of failure provides for the continuation of control attempts" (p. 23).

While most discussions of self-serving biases in perception of causality have assumed their existence, some authors have questioned the principle's theoretical and empirical underpinnings (Bem, 1972; Kelley, 1971). Nowhere in the extant literature, however, has the principle's empirical base been critically examined; and it is to this task that we address ourselves in succeeding portions of the present article. The major thrust of this examination is to compare the explanatory power of the self-serving attributional analysis with that of a nonmotivational, information-processing analysis. It should be noted at this time that the biased-attribution principle is double-edged and to receive full support it must be shown that people indulge

both in self-protective attributions under conditions of failure and in self-enhancing attributions under conditions of success.¹

The empirical data that are most often adduced in support of the existence of self-serving attributional biases come from two general traditions. The first is represented by a series of interpersonal influence studies which examined the relationship between causal ascription and the success of influence attempts. Studies of the relationship between causal ascriptions and outcomes in skill-oriented performance tasks provide the second source of relevant data.

INTERPERSONAL INFLUENCE RESEARCH

In the experiments described in this section, subjects are asked to instruct another person on how to perform at a particular task. The subjects are informed that following their intervention, the target person either succeeded or failed at the activity. The subjects' perceptions of the causal determinants of the target person's performance are then assessed.

Of the research employing an interpersonal influence paradigm, three studies involved a quasi teacher-student relationship. The prototypic experiment in this area (Johnson, Feigenbaum, & Weiby, 1964) required educational psychology students to teach arithmetic concepts to fourth-grade boys. Each teacher explained to two pupils how to multiply by 10 and then saw that Pupil A had done well but that Pupil B had done poorly.

¹ The scope of the present review has been limited to studies which assess causal attributions following success and failure. The concept of self-protective biases is also integral to a body of literature which focuses on causal attributions for another's accidental harm doing (Chaikin & Darley, 1973; Shaver, 1970a, 1970b; Walster, 1966, 1967). Defensive attribution, as the phenomenon has been labeled, implies that an individual often distorts his ascriptions of responsibility for an accident in order to protect himself against the threatening possibility that (a) a similar accident could happen to him or (b) at some future time he could himself be responsible for someone's suffering. Unlike the defensive attribution literature, the studies described in the current review center on the individual's causal attributions for the consequences of his own behavior. It is interesting to note that the empirical and theoretical bases of the defensive attribution phenomenon have also recently been questioned (Fishbein & Ajzen, 1973; Kelley, 1973; Ross & DiTecco, in press; Vidmar & Crinklaw, 1974).

(Actually there were no pupils and the feedback was programmed.) Subjects then taught their pupils to multiply by 20. On receiving their subsequent work sheets, subjects learned that A had continued to do well and B had either (a) continued to do badly or (b) improved to do as well as A. When asked to account for the performances of the two pupils in an open-ended format, the teachers tended to accept responsibility for improved performance but to blame continued low performance on B himself.

While this study is ubiquitously cited as a demonstration of self-serving biases in attribution, a careful examination of the data and design fails to bear this out. To begin with, it is not obvious why a motivational concept of any description needs to be invoked to explain these data. Since all subjects simultaneously taught a student who performed in a consistently successful manner, they knew that their behavior did not predictably produce low performance. With this information before them, it would seem only rational to draw the inference that a poor performance by B was not due solely to their influence. Further support for a nonmotivational interpretation comes from a consideration of Kelley's (1971) "covariation principle." According to Kelley's model of attribution, "an effect is attributed to the one of its possible causes with which, over time, it covaries" (p. 3). Within the present context, therefore, it is conceivable that insofar as the teacher tried harder or varied her instructional method after B's initial poor performance, the informational pattern available to her would show a strong positive covariation between her own behavior and that of the improving student, but a negative or noncovariance between her own behavior and that of the consistently poor student (Kelley, 1967). By the covariation principle, the former would warrant a self-attribution and the latter would not.

Another feature of the data which suggests that the subjects' attributions could represent logical inferences, and not ego-colored ones, is the finding that subjects did not credit themselves with the consistently high performance of Child A. Child A's performance tended to be attributed to his eagerness, moti-

vation, ability, and so on. In other words, subjects took credit for a successful student's performance only when it was possible to perceive some correspondence between their efforts and the student's performance.²

In a study reported by Beckman (1970), female educational students were again required to teach arithmetic concepts and symbols to children. As in the Johnson et al. (1964) study, teachers instructed two students at a time, one of whom performed consistently well over a series of four trials. Beckman's design, however, diverged from the Johnson et al. study in two important respects. First, causal attributions were collected for both ascending and descending performance patterns. Thus, B's performance was varied according to one of three patterns: (a) low initial and low final performance, (b) low initial and high final performance, or (c) high initial and low final performance. The second manner in which Beckman's study differed from the earlier one was that she included observer subjects. These subjects were asked to make causal attributions on the basis of written transcripts of the teacher-student interaction.

The results of this study were generally consistent with those reported by Johnson et al. (1964). Teachers tended to accept responsibility for a student's performance when the student improved. When the student performed poorly, responsibility was attributed to various causes external to the teacher, such as the child's motivation or situational factors. Interestingly, this was true whether the pattern for failure was low-low or high-low.

Further evidence relevant to the phenomenon of biased attribution comes from a comparison of the causal attributions made by participant and observer subjects. The assumption underlying the inclusion of observers in this experiment was that their attributions would not be ego colored and would serve as a baseline against which to compare the ego-biased attributions of the teachers. The only condition in which teachers and observers differed significantly was the low-

high condition. Teachers attributed more causal responsibility to self in this condition than did observers.

To summarize, Beckman's study, like the Johnson et al. (1964) study, reported little evidence to indicate a biased-attribution phenomenon. The fact that teachers credited themselves more than observers did in the low-high condition suggests that something like self-enhancing attribution may be operative, but there is certainly no evidence in this study to suggest that teachers engaged in ego-protective attributions. Even the presence of a self-enhancing attributional bias (assumed from the existence of participant-observer differences) can be questioned, however. The major problem of interpretation concerns the fact that observers did not actually view the interaction but were provided only with a stylized transcript. (Moreover, the transcript was somewhat misleading since it incorrectly implied that teachers and students were in face-to-face contact with each other). Without the same evidence that was available to the teachers, observers may have been unable to appreciate the contingencies between the teacher's efforts and the student's performance. To return to Kelley's (1971) covariance model, the attributional patterns of the observers may not have concurred with those of the teachers because the observer did not have the covariance data that the teacher herself had. It should be noted that this is a very difficult problem to resolve. While participant-observer comparisons seem to represent an effective means of testing for the presence of self-serving attributions, one can never be certain that participants and observers are receiving, or attending to, the same information in forming causal ascriptions (Jones & Nisbett, 1971).

A second study by Beckman (1973) improved upon her earlier one by having observer subjects view directly the teacher-student interaction. While there were only minor variations in design from Beckman's first to her second study, the pattern of results was strikingly different. Contrary to the first study, participants and observers did not differ in their causal attributions for the low-high condition. More importantly, participant subjects assumed *more* personal responsibility

² It should be noted that Johnson et al. (1964) did not actually report the subjects' perceptions of A. Consequently, the present description is based solely on those authors' discussions of the data.

in the high-low condition than in the low-high condition. Observer judgments showed no such differentiation. In sum, the second Beckman study not only failed to replicate the apparent ego-enhancing effect in the previous study, but actually found evidence against defensive attribution; that is, teachers accepted more responsibility for failure than for success (high-low versus low-high).³

The final study which examined the process of self-serving attributional biases within an interpersonal influence context (Schopler & Layton, 1972a) employed a social judgment task. Each subject was paired with a partner who had previously performed either well or poorly on the task. During the next set of trials, subjects were asked to offer advice to their partner while he performed the judgment test. The degree of interaction between the adviser and the partner was held constant by limiting the adviser's communication to the sending of recommendations which the partner was free to accept or reject. After completing the second set of trials the subject learned how well his partner had performed. The partner's performance was presented as having remained the same (low-low or high-high) or as having changed (low-high or high-low).

The data from this study are consistent with some aspects of the results obtained in research already described. As in Johnson et al. (1964), subjects accepted less responsibility for the other's performance when it remained low (low-low) than when it improved (low-high). Unlike in the Johnson et al. study, however, subjects seemed to assign themselves a high degree of responsibility in the continuous success condition (high-high). Moreover, as in the Beckman (1973) experiment, subjects accepted considerable responsibility for a decrease in performance (high-low). (Examination of the interaction means suggests that the high-low condition yielded substantially more self-attribution of responsibility than the low-low condition and not appreciably less than the low-high or high-high conditions). This self-attribution of responsibility for a decrease in performance

³ An unpublished study by Ross, Bierbrauer, and Polly (Note 1), which employed actual school teachers in a similar situation, also failed to find evidence for self-serving causal attributions.

makes it difficult to argue that either self-enhancing or self-protective attributions were operative. Nevertheless, it is necessary to consider why the high-high condition yielded more self-attribution of responsibility than the low-low condition. Schopler and Layton (1972b) suggested the possibility that this difference may be due, in part, to the subject's expectations:

From A's point of view his own interventions may simply appear to be more predictive of success than failure. Indeed, . . . A's interventions are typically intended to produce success and may actually be more predictive of success than failure. (p. 10)

Support for this speculation comes from the work of Parducci (1963, 1965, 1968) on the "range-frequency compromise principle." Examining a wide range of outcome judgments, Parducci has consistently found that people expect the majority of outcomes to be positive. The work of Marks (1951) and Irwin (1953) also indicates that individuals tend to underestimate the probability of a negative event.

On the whole, the interpersonal influence studies seem to provide little evidence to support the assertion that perceptions of causality are distorted in the service of self-protection or self-enhancement. The only finding to receive considerable empirical support is that people are more likely to perceive that they have influenced a target person's improvement than that they have produced his repeated failure. As noted earlier, however, this finding need not be interpreted in motivational terms. The self-enhancing effect is readily interpretable by an information-processing model which assumes that attributions are determined by intentions, expectations, and the perceived covariation between behavior and outcome.

RESEARCH ON ACHIEVEMENT TASKS

Do people take responsibility for their successes at a skill task, while attributing their failures to external factors such as bad luck, other persons, or the difficulty of the task itself? Much recent research has addressed itself directly to this question, though the range of tasks employed has been relatively narrow. The use of an anagrams task has been particularly popular (Davis & Davis, 1972; Feather, 1969; Feather & Simon, 1971a, 1971b), although pattern recognition

(Chaikin, 1971), number estimation (Fitch, 1970), simulation games (Streifert & Streufert, 1969; Wolosin et al., 1973), and bogus social perceptiveness tests (Davis & Davis, 1972; Wortman, Costanzo, & Witt, 1973) have also been used. The choice of task is limited by the fact that it is necessary to randomly assign subjects to success and failure experiences. In the anagrams task this is usually accomplished by varying the difficulty of the anagrams given to the subjects. In the other tasks, subjects are provided with false feedback as to their degree of success at the activity.

A review of the literature on skill tasks does not suggest a straightforward answer to the question posed above. The predicted success-failure effects on self-attributions of causality were obtained unambiguously in only a small number of experiments (Streifert & Streufert, 1969; Wolosin et al., 1973; Wortman et al., 1973). The remaining studies showed that causal attributions were dependent on an interaction between success and failure and certain situational and personality factors.

First, let us consider the research that provides the strongest evidence for self-serving biases in the attribution of causality. Streifert and Streufert (1969) required pairs of subjects to play an international simulation game against another team. Programmed feedback indicated that subjects either gradually improved or became worse at the game. In these circumstances, subjects attributed greater responsibility to their own team for success than for failure. Similarly, Wortman et al. (1973) found that subjects who allegedly succeeded at a social perceptiveness task were less likely to attribute their performance to luck than were failing subjects. However, since the Streufert and Streufert and Wortman et al. experiments did not include a condition that received intermediate outcomes, it is impossible to determine the directionality of this effect. That is, the results may indicate either enhanced responsibility for success or avoidance of responsibility for failure, or both.

The two experiments conducted by Wolosin et al. (1973) did include intermediate out-

come conditions.⁴ Subjects played either a cooperative (Experiment 1) or competitive (Experiment 2) game with another person. The outcome of this game, from the subject's point of view, was either successful, unsuccessful, or neutral. Subjects were then asked to distribute responsibility for the outcome among self, other, and situation. In the cooperative experiment, subjects who received failing outcomes attributed slightly, though nonsignificantly, more responsibility to self than did subjects who received neutral outcomes (32.6% versus 29.8%); the most responsibility was assigned to self in the success condition (38.7%). In the competitive experiment the pattern of means suggests both avoidance of responsibility for failure and increased acceptance of responsibility for success (success: 42.7%; neutral: 35.3%; failure: 27.6%), though only the success-failure difference was statistically significant.⁵

In summary, there are four studies (Streifert & Streufert, 1969; Wolosin et al., 1973; Wortman et al., 1973) which provide relatively unambiguous support for the hypothesis that attributions of causality are directly affected by task performance. In only two of these studies (Wolosin et al., 1973; Experiments 1 and 2), however, is it possible to assess the directionality of the effect. One of these studies (Experiment 2) suggests that people are inclined to make self-enhancing attributions under conditions of success, but neither provides strong evidence to suggest that people avoid personal responsibility

⁴ The present authors would like to thank Wolosin et al. for providing the data required to compute the statistical significance of these comparisons.

⁵ It is not clear that an intermediate outcome condition completely relieves the interpretational ambiguity which surrounds this phenomenon. For instance, how is the intermediate outcome experienced in the individual's phenomenology? The valence of neutral outcomes may be located somewhere between success and failure, but it is also possible that individuals may not discriminate between a neutral and failing outcome, given a desire for and an expectation of success. If the latter were the case, then a comparison of causal ascriptions for failure and neutral outcomes would be insensitive to a potential self-protective bias. A neutral outcome condition is only valuable to the extent that the outcomes are evaluated as truly neutral in the subject's phenomenology. Thus, while we stress the conceptual value of intermediate outcome conditions, their empirical validity should be assessed in future research.

under conditions of failure. Moreover, as noted earlier, the self-enhancing effect may reflect the tendency of people to anticipate and work toward success rather than failure.

It is also possible that people actually perceive a greater relationship between behavior and positive outcomes than between behavior and negative outcomes. Support for this alternative explanation may be derived from two studies which examined adults' understanding of the concept of correlation. Smedslund (1963) required nursing students to estimate the relation between a symptom (s) and a diagnosis (d). The subjects based their decisions on data which indicated varying frequencies of the following categories: s present, d present; s absent, d absent; s present, d absent; s absent, d present. Smedslund found that the subjects' judgments of a relationship depended almost solely on the frequency of the s present, d present category. The frequency and distribution of the remaining categories were virtually ignored.

In a similar vein, Jenkins and Ward (1965) asked subjects to judge the degree of contingency between their responses and outcomes at a task which required subjects to guess which of two possible responses was correct. The major finding paralleled that obtained by Smedslund (1963): The amount of judged control was determined by the frequency of correct guesses, rather than the actual programmed contingency between outcomes and responses.

These data indicate that adults do not understand the meaning of statistical contingency. As Jenkins and Ward observed, "The baseline against which subjects assess their performance appears to be one of zero occurrence of the event in interest in the absence of control" (1965, p. 17). Estimates of amount of control are thus based on the frequency of positive instances, with the frequency of negative instances being uninformative. The attributional results obtained on skill tasks are consistent with this primitive notion of contingency. Positive instances of the co-occurrence of the response and the desired outcome (i.e., success) induce perceptions of self-control. Negative instances (i.e., failure), on the other hand, are less informa-

tive and, hence, yield neither stable personal nor environmental attributions.

INTERACTIVE VARIABLES

This section reviews research which has investigated factors that interact with attributions of causality following success or failure at achievement tasks.

Performance Expectancies

Feather and his colleagues (Feather, 1969; Feather & Simon, 1971a, 1971b) have examined the effect of expectations for success and failure on subjects' attributions of causality for low and high levels of performance. Expectations of success either were based on subjects' own estimates of their anagram-solving ability (Feather, 1969) or manipulated by providing subjects with easy or difficult practice problems (Feather & Simon, 1971a, 1971b). This research suggests that an unexpected outcome—whether it be success or failure—is more likely to be attributed to external factors than an expected outcome. Gilmore and Minton (1974) have replicated these results using an experimental paradigm similar to that of Feather (1969). Additional relevant evidence comes from Fitch's (1970) experiment in which chronic, low self-esteem subjects (who may anticipate failure at most tasks) were found to accept more responsibility for failure than high self-esteem subjects at a task in which they were required to estimate the number of dots on a briefly exposed slide. In the Fitch study, however, low self-esteem subjects did not differ from high self-esteem subjects in their causal attributions for success.

The research conducted by Feather (1969) suggests that expectations of performance level are more important determinants of attributions of causality than the actual level of performance attained. Feather interpreted this effect in terms of balance theory (Heider, 1958). A balance theory formulation assumes that positive outcomes (success) will be attributed to self when there is positive self-evaluation with respect to the performance task (high expectations of success), but will be attributed to external factors when there is negative evaluation (low expectation of success). Similarly, with failure, negative self-

evaluations produce internal attributions, and positive self-evaluations yield external attributions.

A recent experiment by McMahan (1973) suggests a refinement of the balance theory analysis. McMahan found that expected success or failure tended to be attributed to ability, a relatively stable dispositional property of the person. On the other hand, unexpected performance increased attributions to more variable causes such as luck and effort. The important finding here is that effort, an internal cause, may be used to account for unexpected success or failure. The reliability of this result is in doubt, however, as it was not obtained in a Feather and Simon (1971b) study which also assessed attributions to effort. Nevertheless, it seems likely that the stability dimension is independent of the internal-external dimension and may prove to be more critical in determining causal inferences than the latter (Feather & Simon, 1971a, 1971b; Weiner, Frieze, Kukla, Reed, Rest, and Rosenbaum, 1971).

Simple-Complex Conceptual Structures

An information-processing theory proposed by Schroder, Driver, and Streufert (1967) suggests that people differ in terms of the degree of complexity they perceive in their environment. For example, the attitudes of simple subjects tend to be based on unidimensional interpersonal perceptions, while complex subjects tend to perceive others in a more multidimensional fashion (Streufert & Streufert, 1969). Streufert and Streufert have suggested that this complexity dimension may have important implications for attributions of causality. Specifically, complex persons should be less likely than simple individuals to assign responsibility to a single causal factor for either a successful or failing performance. Thus, complex individuals should show less of a tendency to attribute failure solely to external factors and to attribute success solely to internal factors than should simple individuals. In the Streufert and Streufert study, both complex and simple subjects tended to accept more responsibility for success than failure. However, as expected, this effect was more pronounced for simple than for complex subjects.

Internal Versus External Locus of Control

One individual difference dimension which might be expected to influence the nature of causal attributions is internal-external control of reinforcement. Individuals occupying the internal end of this dimension perceive reinforcement as contingent upon their behavior, whereas externals perceive reinforcement as more dependent on external factors such as luck (Lefcourt, 1966; Rotter, 1966). Of major interest here is the suggestion that some individuals who obtain external scores on the internal-external dimension may have developed this orientation as a defense since it enables them to maintain self-esteem by attributing failures to events beyond their control (Rotter, 1966).

If an external orientation does serve a defensive function, it might be expected that externals would be more likely than internals to attribute failure to external factors. Conversely, the causal ascriptions of internals and externals for a successful performance should be similar, since success is presumably non-threatening. This hypothesis was tested in two studies conducted by Davis and Davis (1972). In the first study, highly internal and highly external subjects were induced to perform either well or poorly on an anagrams test and were then asked to indicate the extent to which their scores were based on skill or luck. The second study manipulated subjects' performance at a "social sensitivity test" and required subjects to evaluate the degree to which their scores were determined by ability, effort, luck, or situational factors. Employing Heider's (1958) classification system, ability and effort were classified as internal causes, and luck and situational factors as external causes.

The results provide some support for interpreting an external orientation as defensive. In both studies externals were more likely than internals to attribute failure to bad luck rather than to lack of ability. No differences occurred between the two groups under success conditions. However, these results were not replicated by Gilmor and Minton (1974) and Lefcourt (Note 2), who also used an anagrams test. Gilmor and Minton obtained an internal-external locus of control by performance interaction, indicating that internals

accepted more responsibility for success than did externals; a nonsignificant trend in the opposite direction was found under failure. (It should be noted that unlike the Davis and Davis (1972) study, a successful-failure outcome was determined by the subject's actual performance at the task). Finally, Lefcourt (Note 2) found that externals accepted less responsibility for both success and failure than did internals in a design in which all subjects were induced to both succeed and fail on repeated administrations of an anagrams test.

The contradictory nature of these results indicates that the relationship between internal-external locus of control and attributions of causality for success and failure remains to be determined. Procedural differences between the studies must be examined and further research conducted if the inconsistencies are to be explained. At the present time, research on the internal-external dimension does not provide strong evidence for self-serving biases in causal attributions.

Achievement Motivation

Weiner and Kukla (1970) have investigated the relation of achievement motivation to perceptions of causality. In one study, these authors compared subjects above and below the median in achievement motivation in their causal ascriptions for hypothetical successes and failures. The data indicated that the tendency to make internal attributions for success was greater for the high- than for the low-achievement-oriented males. However, these two groups did not differ significantly in their causal attributions for failure, and none of the differences between female subjects reached statistical significance.

In a second study, Weiner and Kukla had male subjects perform a skill task which required them to guess the next number in a sequence. At the end of the task, subjects were asked to estimate how many of their total number of correct responses were due to skill rather than lucky guessing and how much effort they had expended at the task. For the purpose of statistical analyses, subjects who scored in the upper one third of the outcome distribution were defined as successful, and subjects in the lower one third

as failing. The results indicated that males high in achievement motivation were more likely to attribute success to ability and failure to lack of effort than males low in achievement motivation.

In summary, the study of personality variables indicates that there are individual differences in the tendency to accept responsibility for success and failure. It is possible that individual differences of this nature reflect motivationally induced distortions of causality, but it is also possible that these differences simply reflect differential performance expectancies (cf. Feather, 1969). For example, people high in achievement motivation may be motivated to distort their perceptions of causality in a manner which enhances their feelings of mastery and achievement, or, alternatively, their achievement-oriented dispositions may render them more likely to expect success than people low in achievement motivation. Indirect support for this latter possibility is provided by Kukla (1972), who found that following either success or failure at a task, subjects high in achievement motivation rated themselves as higher in ability than did subjects in the low-motivation group.

It is also possible that individual differences in causal attribution stem from a differential concern with the covariation between behavior and the consequences of behavior. To stay with the dimension of achievement motivation, people high in achievement motivation may very well be more sensitive to the covariation between behavior and consequences than people scoring low on this dimension, and this may account for the tendency of the former to assume more credit for success relative to failure than do the latter.

In any event, there appear to be individual differences in the attribution of causality, and future research should attempt to assess the relative explanatory values of motivational and nonmotivational interpretations of these differences.

COMPARISONS WITH OTHERS

Attributions of causality for success and failure at skill tasks have rarely been examined in a social context. This is surprising

because it would seem that a social situation is well suited for determining whether biases and misperceptions do occur. For example, do we attribute more causality to ourselves for a successful performance at a task than we would to another person who performed equally well? Alternatively, do we attribute more responsibility for failure to another person than to self, given equal performance levels? Once again, however, any confidence that we place in interpersonal comparisons as a basis for assessing motivational biases must be tempered by the recognition that the covariation between behavior and outcomes is likely to be considerably more salient for self than for others.

Feather and Simon (1971a) devised a situation in which two subjects worked simultaneously but independently at anagrams tests. Comparisons of attributions made to self and another showed that the other's success was more often attributed to ability than was one's own success, while the other's failure was more often attributed to such external factors as bad luck than was one's own failure. These results are directly opposite to those predicted by a self-enhancement hypothesis.

Wortman et al. (1973) obtained results consistent with those of Feather and Simon (1971a). In their experiment, subjects worked independently at a social perceptiveness test, at the end of which they were asked to make causal inferences for their own performance and that of a highly successful other. Subjects indicated that their own performance was due more to luck and less to ability than the other's performance. Further evidence against the presence of self-serving biases comes from the fact that subjects' own performance levels did not affect their causal interpretation of the others' (always successful) performance.

The Feather and Simon (1971a) and Wortman et al. (1973) studies differed from other relevant research (Streifert & Streifert, 1969; Wolosin et al., 1973) in two important respects. Most importantly, the outcomes of the participants in these latter studies were interdependent. In the competitive set (Streifert & Streifert, 1969; Wolosin et al., 1973, Experiment 2) there could only be one win-

ner, and in the cooperative set (Wolosin et al., 1973, Experiment 1) both participants received the same outcome. In contrast, Feather and Simon (1971a) had subjects work independently at a task in which their outcomes were in no way related. Second, whereas Feather and Simon (1971a) and Wortman et al. (1973) assessed causal attributions on bipolar scales, the other studies required subjects to assign percentages of responsibility to self (or own team), other (or opposing team), and situation (or causes other than the decisions made by the other team), with the sum of the three percentages always equaling 100%. Thus, the Streifert and Streifert and Wolosin et al. procedures seem likely to make interpersonal comparisons of task skill extremely salient. As a result, these latter studies might be expected to provide a particularly facilitative setting for self-serving distortions in attributions of causality.

The results of these studies do yield some support for a biased attribution process. Streifert and Streifert (1969) found that approximately equal responsibility was assigned to own and other team for failure by one's own team. When one's own team succeeded, however, more causality was attributed to it and less to the decisions of the other team. Wolosin et al. (1973) also found that subjects attributed greater responsibility to themselves for success than to their partners. This was true in both the competitive and cooperative games. In the failure condition, Wolosin et al. expected subjects in the cooperative game to attribute responsibility to their partner. In the competitive game, however, it was expected that subjects would blame the situation since attributing responsibility to the partner would imply that he was better at the game. Neither of these predictions was strongly substantiated. In both the cooperative and competitive games, failure produced approximately equal attributions of responsibility to self and others—a finding consistent with Streifert and Streifert's results. In the competitive game, failure did cause subjects to attribute more responsibility to the situation than to self or another. However, between-group comparisons suggest that subjects who received failing outcomes did not attribute any more responsibility to the

situation than did subjects who received neutral outcomes. Moreover, Streufert and Streufert reported no tendency for failing subjects to increase situational attributions. In fact, Streufert and Streufert's successful subjects attributed significantly more responsibility to causes external to the decisions made by either team than did failing subjects.

In summary, studies in which the outcomes of the participants were independent yielded no indication of self-serving biases in interpersonal attributions (Feather & Simon, 1971a; Wortman et al., 1973). Three studies in which the outcomes of the participants were directly related did appear to obtain self-enhancing attributions because success at the task tended to be self-attributed. On the other hand, subjects showed no strong tendency to deny responsibility for failure by attributing it to the other person(s) or the situation. Moreover, to return to an earlier point, even self-attribution of success need not be due to motivational biases. A person is likely to be more aware of the covariation between his own responses and the resultant outcomes than he is of the relation between the outcomes and behavior of the other participant(s). Hence, he may be expected to attribute greater responsibility to himself for success. Constant failure may be less likely to be self-attributed because the response-outcome covariation may be less apparent. Changes in responding are not associated with variation in outcomes when subjects continually fail at the task (Kelley, 1967; Wolosin et al., 1973).

Another interesting finding is that self-attributions of causality seem to be affected by the degree of interdependence of outcomes. Since independent and interdependent situations have not been directly contrasted experimentally, any conclusions are speculative at present. A comparison of the Feather and Simon (1971a) study with those conducted by Streufert and Streufert (1969) and Wolosin et al. (1973) does suggest, however, that increasing the interdependence of outcomes increases the likelihood that subjects will assign more responsibility to themselves for successful outcomes. A comparison of the Chaikin (1971) and Streufert and Streufert studies lends credence to this interpretation.

The Chaikin experiment, involving only a single subject playing a skill game at each session, failed to obtain significant effects for attributions of causality to self following descending versus ascending success at the task. This contrasts sharply with the very strong results obtained by Streufert and Streufert for the same patterns of performance in a competitive, interdependent game situation.

Why might interdependence lead to an increased tendency for individuals to take credit for success? One possibility is that interdependence increases the subject's motivation to do well, to perform better than the other participant. A strong desire for success in combination with a high degree of effort would be expected to result in individuals perceiving themselves as personally responsible for success. In contrast, success achieved under conditions of lower levels of effort may be attributed, in part, to external factors such as good luck.

Is the Failure to Obtain Self-Protective Biases due to the Nature of the Experimental Tasks?

As the present review has shown, there is very little experimental evidence to support the hypothesis that people in general attempt to avoid blame for negative outcomes by attributing responsibility to external factors. Possibly, the tasks employed in these studies failed to arouse the level of ego involvement necessary to elicit self-protective reactions. Most of the experimental activities were relatively trivial (anagrams, guessing games, etc.), and failure could not be expected to provide a telling blow to the ego. On the other hand, almost any task may appear important by virtue of the fact that it is employed in an experimental setting. As studies of evaluation apprehension (Rosenberg, 1969) have indicated, experimental subjects want very much to appear intelligent in the eyes of the experimenter.

Furthermore, research by Lerner (1970) indicates that people often do, in fact, accept responsibility for nontrivial negative consequences. Pairs of subjects reported to the laboratory for an experiment in which one of them would receive strong electric shock, while the other would be in a control condition. The decision as to who would receive

shock was determined by which of two slips of paper the first subject selected in a random draw. The interesting conditions here were: (a) Subject A drew a slip assigning Subject B to the shock and (b) Subject B drew a slip assigning himself to the shock. Subject A was later asked to assign responsibility for his own and B's fate to either self, other, or the experimenter. When Subject A drew the slip, we might have expected him to assign responsibility to the experimenter and hence avoid blame for committing the other subject to shock. Moreover, this would be quite a rational attribution. Was it not the experimenter who determined that one of the subjects would receive shock and arranged the draw to designate which one it would be? Nevertheless, approximately 47% of the subjects who drew the slip committing B to shock accepted responsibility for their own and B's fate, as compared to less than 10% when the shock victim drew the slip himself. Thus, subjects do not seem to be strongly motivated to deny responsibility for the other's fate. An examination of the "transgression-compliance" literature also indicates that people are very willing, perhaps too willing, to accept responsibility for another person's negative fate (Carlsmith & Gross, 1969; Darlington & Macker, 1966; Freedman, Wallington, & Bless, 1967; Rawlings, 1968; Regan, 1971; Wallace & Sadalla, 1966).

It seems likely, therefore, that the trivialness of the tasks employed in many of the experimental investigations is not responsible for the preponderance of negative results. Nevertheless, this possibility should be explored in future research in which the potential seriousness of failure for the subject is varied. In doing so, however, it will be important to control *subjects' expectations* of success in the different achievement situations (cf. Feather, 1969).

Finally, it should be pointed out that there is *some* evidence to suggest that people are motivated to avoid feelings of responsibility for failure. Research examining the relationship between performance expectations and expended effort, for example, has consistently found that people who are led to expect failure on a particular task are inclined to expend less effort on that task than people expecting

success (Archibald, 1974; Diggory, 1966; Diggory, Klein, & Cohen, 1964; Feather, 1963). One interpretation of this finding is that people who expect failure are inclined to expend low degrees of effort so that they will be able to *legitimately* locate causality for their anticipated failure in sources which are nonthreatening to their self-esteem (i.e., personal effort).

Once again, however, a very different process may underlie this phenomenon. In the face of anticipated failure, individuals may simply feel that it does not make sense to try hard because their efforts will likely go for naught. Support for the argument that differences in expended effort under failure and success conditions reflect rational decision making comes from a study (Weiner, Heckhausen, Meyer, & Cook, 1972) in which subjects were asked to indicate "the best performance strategy" in tasks of varying difficulty. When there was little chance of success, subjects indicated that effort was of little importance and advocated a "low-effort" strategy. As the likelihood of success increased, the perceived importance of effort generally increased, although under high expectations of success, effort also ceased to be regarded as an important factor.

SELF-ENHANCING BIASES IN THE ATTRIBUTION PROCESS

While evidence for self-protective attributional biases is minimal, there are at least some data consistent with a self-enhancement position. In a number of the experiments reviewed above, successful outcomes led to greater self-attribution of performance than either failing or neutral outcomes. As noted earlier, the self-enhancement effect need not be explained in motivational terms. Conceivably, subjects are simply more likely to perceive a relationship between their behavior and its outcome when they succeed than when they fail. This may occur for any or all of the following reasons: (a) People are more likely to accept responsibility for expected outcomes than for unexpected outcomes (Feather, 1969; Feather & Simon, 1971a, 1971b), and, in general, people intend and expect success not failure (Parducci, 1963, 1965, 1968); (b) a covariation between behavior and outcome is

more likely to be perceived under conditions of increasing success than under conditions of constant failure, where changes in behavior are not perceived to be associated with changes in outcome; and (c) an erroneous conception of contingency leads people to associate control primarily with the occurrence of the desired outcome (cf. Jenkins & Ward, 1965; Smedslund, 1963).

In conclusion, existing data seem readily interpreted in information-processing terms. It would be clearly premature, however, to deny the possibility of self-serving causal attributions. An examination of the literature on perceptual defense may be instructive in this regard. Early, methodologically flawed research supported the perceptual defense hypothesis; later evidence contradicted the hypothesis on logical and empirical grounds and supported a rational, decision-making explanation. The most recent evidence, however, has once again supported the perceptual defense hypothesis (Dixon, 1971; Erdelyi, 1974). It is our belief that the self-serving bias hypothesis may suffer a similar fate, for it is too intuitively appealing to be summarily abandoned. The challenge remains for future researchers to assess the relative explanatory values of the motivational and nonmotivational interpretations of asymmetrical causal attributions.

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