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Temporal Effects on Attributions for Academic Performances and Reflected-Glory Basking

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Two studies were conducted to test the generalizability of temporal effects on attributions found in laboratory research. In Experiment 1 undergraduate students made attributions for a successful midterm examination that became more dispositional over a four-day period. Students who felt they had done poorly on the examination gave attributions that became more situational over time, thus matching the pattern found in laboratory research. Experiment 2 examined whether this effect could be extended to attributions for others with whom we form cognitive unit relationships. College students gave attributions for the school's basketball team's performance that became more dispositional over the course of several days when the team was victorious. Attributions for a team defeat also tended to become more dispositional over time. The findings are consistent with the concept of unit relationship and the "Basking in Reflected Glory" phenomenon.

Common observations tell us that our explanations of events change over time. Our immediate reactions to an important personal experience often are modified after a few days or weeks. Many of the important areas to which findings from attribution research have been applied, however, such as depression (Abramson et al., 1978), academic difficulties (Dweck and Licht, 1980), and achievement contexts (Weiner, 1974) are concerned with problems that stem either from events over a long period of time or from attributions about those events that are maintained over a long period of time. Thus, it seems that a better understanding of how attributions change over time is necessary before more fully understanding how attributions might affect behaviors in these applied situations.

Unfortunately, laboratory research has presented a somewhat mixed view of temporal effects on attributions. Some investigators found that attributions for one's own behaviors became more dispositional over time (Burger and Rodman, 1983; Moore et al. 1979). That is, people were found to give themselves more credit for their performance a few days after the experimental task than if asked immediately afterward. On the other hand, some researchers found that people tended to give attributions that were more situational over time (Funder and Van Ness, 1983; Miller and Porter, 1980). In these studies subjects were more likely to attribute their performance to something about the situation a few days after the task than if asked immediately afterward. Thus, the research findings appear to be inconsistent at best, and contradictory at worst.

In a recent effort to resolve this issue, Burger and Huntzinger (1985) examined the effect of task outcome on attributions over time. Several of the earlier investigations had utilized tasks that may have had success and failure implications (e.g., an anagram task, the prisoner's dilemma game, a debate). Yet the subject's perception of the outcome was not manipulated in any of these investigations. Only Burger and Rodman (1983) controlled for task outcome, but in this study all subjects

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were told they had performed well on a crossword-puzzle task.

Because none of the other investigators reported whether subjects perceived their performances as successes or failures. Burger and Huntzinger (1985) found that the potential effect that task outcome has upon attributions over time could not be determined from this literature. Therefore, these experimenters manipulated perception of task outcome directly in two investigations. In both experiments it was found that college students who felt they had performed well on a laboratory task (supposedly measuring an important perceptualmotor skill) gave attributions that became more dispositional over a three-day period. Subjects who were led to believe they had performed poorly on this task gave attributions that were more situational over time. The researchers thus concluded that attributions can become either more dispositional or more situational over time, depending upon the perception of task outcome.

The researchers explain this effect in terms of a motivated selective forgetting. That is, these individuals were motivated to remember or forget aspects of the situation in a selfflattering way. Recalling primarily dispositional reasons for one's successes and recalling situational reasons for one's failures serves to maintain one's sense of self-esteem. In support of this interpretation, Burger and Huntzinger (1985) found that subjects were able to describe more dispositional sources for their successes and more situational reasons for their failures over time when asked specifically to list those reasons by the experimenter.

Although this research provides a better understanding of how attributions for one's own behavior change over time, the generalizability of these findings to more naturalistic settings needs to be established. There are several reasons to question whether these findings might be found outside of the laboratory. First, the trait supposedly measured in the Burger and Huntzinger (1985) research was described as one for which subjects had no previous exposure. This was done so that subjects would find the bogus feedback of either success or failure credible. However, it is reasonable to ask whether subjects would respond in a similar manner when dealing with a task for which they have a long history of information about their behavior. One incidence of social rejection, for example, may not be attributed by a popular individual as a sign of his or her incompetence. Second, it is not clear that subjects were motivated to make veridical attributions for their performances in the laboratory experiments. That is, how concerned were these subjects with coming up with an accurate explanation for their test performances? It is possible that an individual making attributions for the failure to get a promotion, for example, might be more highly motivated to come up with an accurate, and therefore useful, explanation for the event than the student in the laboratory. Thus, it is not clear that the laboratory findings about the relationship between time and task outcome on attributions would be found in more real-world settings.

Experiment 1

Experiment 1 was designed to test the generalizability of the Burger and Huntzinger (1985) findings in a naturally-occurring field setting. Undergraduate students were asked to give attributions for their performances on a midterm examination. This situation was one in which the person has had many occasions to observe his or her behavior. In addition, making an accurate attribution for one's performance on an examination is important for improving one's performance on future tests. Thus, the situation provided a good test for the generalizability of the phenomenon. In addition, a midterm examination is an event for which there are fairly clear success and failure implications, unlike other field events in which a person might not use a success-failure analysis.

METHOD

Subjects

Students enrolled in two sections of an introductory psychology course taught by the same instructor at the same university served as subjects. The two classes were taught in a nearly identical manner and met on the same days of the week, a few hours apart. The instructor used the same examinations for both sections. It should also be noted that attribution processes had not yet been covered in the course.

Procedure

Immediately prior to returning the first of three examinations in the course (worth onethird of the course grade), subjects were asked to indicate on a short questionnaire the grade they would be satisfied with and the grade they would be disappointed with on the test. This allowed the subjects to report their subjective feelings of success or failure, rather than relying upon the experimenter to make this judgment. Next, subjects had the test returned to them and were given a few minutes to look it over.

Following this, subjects in one of the classes (*Immediate* condition) were given a second

questionnaire to complete. The questionnaire asked the subject to list "as many reasons as you feel apply" for why he or she did "as well or as poorly on the test as you did." Although space was provided for ten answers, subjects were told to list only those reasons they felt genuinely applied. Next, subjects were instructed to indicate the relative importance of each of the responses listed by dividing 100 points among the various reasons (e.g., if a reason explained 50 percent of the performance, then a score of 50 was assigned). Subjects in the other class, the Delayed condition, were given this second questionnaire four days later. In neither class were subjects allowed to keep the tests.

RESULTS

Subjects were divided into Success and Failure categories by comparing their examination grade with the grade with which they indicated they would be satisfied. Those students who received a grade equal to or better than the "satisfaction" grade were placed in the Success category, whereas those whose actual grade was below their satisfaction grade were placed in the Failure category. In addition, subjects were categorized into either the Immediate or Delayed condition, depending upon which class they were in. A comparison of the two classes revealed that they did not differ significantly either in terms of the grade they reported they would be satisfied with (M =3.08 on a 4-point scale for Immediate and 3.00 for Delayed) or on the actual grade received (M = 2.59 and 2.61 for the Immediate and Delayed conditions, respectively).

Questionnaire responses were coded independently by two trained judges blind to the purpose of the study and unaware of subject condition. These judges coded each of the responses as either personal (e.g., "I didn't study enough," "I don't do well on tests") or situational (e.g., "Test items were ambiguous," "There was not enough time"). The two judges agreed on 93 percent of the codings. Where disagreements occurred, the author decided the classification, also blind to subject condition. A personal attribution score from 0 to 100 was calculated for each subject by totaling the points assigned to the attributions classified as personal. Because all attributions were classified, examining situational attributions would provide redundant information.

The personal attribution score was examined within a 2 (Successful-Failure outcome) by 2 (Immediate-Delayed attribution) ANOVA. A significant main effect for outcome was uncovered, F(1,69) = 7.61, p < .007. Successful students gave more personal attributions for their performances than did failing students, thus replicating the well-known self-serving bias (cf. Zuckerman, 1979). More importantly, a significant interaction also emerged in this analysis, F(1, 69) = 3.96, p < .05. As shown in Table 1, Success subjects gave more personal attributions in the Delayed than in the Immediate condition, whereas Failure subjects showed the opposite pattern. Subsequent cell comparisons found that only the two Delayed conditions differed significantly, Newman-Keuls test, p < .05.

DISCUSSION

The results of Experiment 1 replicate nicely the time and outcome interaction found in earlier laboratory research. People sometimes become more situational and sometimes become more dispositional in their attributions over time, depending upon their perception of task outcome. This was found in a situation, a college midterm examination, in which the individuals had a long history of experience and one in which they should have been motivated to make accurate attributions. Thus, because the attributional pattern was uncovered in a field setting with subjects who were experienced with and fairly highly involved with the event, substantial external validity was established for the phenomenon.

At least two points require a tempering of these conclusions, however. First, the changes in attributions over time demonstrated in this and the earlier laboratory research are limited to situations in which there are success and failure implications. These data do not aid in understanding how attributions for less achievement-oriented events, such as those often found as antecedents to depression, change over time. Second, it should be noted that the immediate-delayed variable employed in Experiment 1 is quasi-experimental in nature. That is, it was assumed that students in the two classes were similar on all relevant dimensions at the beginning of the experiment and that differences on the dependent measure therefore could be attributed to the immediate-delayed variable. An examination of the desired and obtained grades did not uncover any differences between the two classes. Nonetheless, although no differences are ap-

Table 1. Mean Personal Attribution Scores^a

	Immediate	Delayed	
Success	82.5	94.0	
Failure	75.8	65.9	

^a The higher the score, the more subjects attributed their performance to personal causes.

parent, the lack of experimental manipulation leaves open the possibility that the students who took the mid-morning class differed in some unknown but important way from those who took the mid-day class. On the other hand, because the effect uncovered here has also been found in laboratory research with manipulated variables, greater confidence in the findings can be held.

Experiment 2

Now that temporal effects on attributions over time have been found to be a function of the perceived outcome of the event, it is reasonable to ask to what other areas this phenomenon might be extended. One possibility concerns attributions for others with whom we associate ourselves. Heider (1958) introduced the concept of "unit relationship." He argued that we often place ourselves and certain others into the same cognitive unit when we somehow are distinguished from the nonmembers of this unit in an important way. For example, two Californians meeting in Massachusetts may form a unit relationship. This association is less likely to be formed between these two in Los Angeles. Subsequent research on the unit relationship concept generally has been supportive of Heider's theorizing (e.g., Arkin and Burger, 1980; Insko and Wilson, 1977; Tyler and Sears, 1977).

One extension of the unit relationship concept was introduced by Cialdini et al. (1976). These researchers identified a tendency for people to form a unit relationship association with a famous or successful person or persons. such as feeling proud to be a resident of the same state or from the same ethnic background as a famous person. In three experiments, Cialdini et al. found that college students were more likely to identify themselves with the college football team when the team was successful than when the team suffered defeat. That is, students formed unit relationships with the athletic team when it won ("We won"), but not when the team lost ("They lost"). Cialdini et al. termed this phenomenon "Basking in Reflected Glory" (BIRG).

Experiment 2 was designed to test the generalizability of the temporal effects on attributions uncovered in earlier research to the BIRG phenomenon. If individuals form unit relationships with a victorious athletic team, then perhaps they make attributions for the team's performance in a manner similar to the way they make attributions for their own performances. It might be expected, therefore, that the changes in attributions over time demonstrated in Experiment 1 and the Burger and Huntzinger (1985) research also would be found when making attributions for a sports team one identifies with.

To examine this, college students were interviewed about the reasons for the performance of their men's basketball team after a victory and after a defeat. Some of the students were interviewed shortly after the game and others several days later. It was predicted that, like attributions for one's own behavior, students would become more dispositional in their attributions for the team's victory over time. However, the attribution pattern uncovered in earlier research for one's failures might not be found when making attributions for a basketball team's defeat. This is because, as Cialdini et al. demonstrated, unit relationships are not formed with losing teams. In fact, people may be motivated to dissociate themselves from a losing team. Thus, if the tendency for people to attribute their failures more to situational causes over time is the result of self-flattering motives, as Burger and Huntzinger (1985) argue, then we would not expect to find this pattern when no unit relationship, and thus no need for self-flattering distortion, is present.

METHOD

Subjects

Eighty undergraduates served as subjects. Each was randomly selected from a student directory of undergraduates at a private liberal arts university. As described below, the experimenter, using a random numbers procedure, selected and called students from the directory. Those who could be contacted during the appropriate time period and those who had attended the basketball game of interest were included in the sample. No subject meeting these criteria refused to participate.

Procedure

Subjects were contacted at one of four times. First, the experimenter telephoned subjects on the morning after a home-court evening basketball game by the school's varsity men's basketball team which the team had won. Similarly, the experimenter also contacted subjects by telephone on the morning after a homecourt evening game which the basketball team had lost. In addition, some subjects were contacted during the morning four or five days after each of the two games. Thus, four conditions were created. Subjects were asked about a game that the team had either won or lost (Success-Failure outcome) and were asked about the game either shortly after the event or several days later (Immediate-Delayed).

The experimenter, who was blind to the ex-

perimental hypotheses, began each phone call by asking the subject if he or she had attended the basketball game in question. Those who said they had attended (about 25 percent) were asked if they would spend a few minutes answering a few questions about the game (none refused). The experimenter then asked subjects "Why do you feel the basketball team (won/lost) the game?" The experimenter wrote down the responses verbatim. When subjects appeared to have stopped answering the question, the experimenter asked if there was "anything else" they wanted to add. This prompting was done once for each subject.

If the subject had given more than one response the experimenter then repeated each of the reasons given and asked the subject which he or she felt was the most important reason. This was done instead of asking the subject to assign weights to the responses, as in the earlier research, because it was felt that asking subjects to divide points among each of the reasons would be too difficult and confusing over the telephone. Having subjects indicate their most important reason, however, did provide some information about the relative importance of the responses.

Subjects in the immediate conditions were contacted during the morning following the game. Although this was several hours after the event, most students do not return home from the games until after 11:00 p.m., and it was felt that this was too late to begin random telephoning for subjects. Subjects in the delayed condition were contacted in the morning four or five days after the game. In addition to the questions described above, these subjects were asked if they had read a newspaper account of the game and to indicate on a 10-point scale the extent to which they had discussed the game with others. These data were collected to better assess what impact intervening sources of information might have had upon the attributions made by subjects in the delayed conditions. The experimenter continued calling subjects from the directory until 20 subjects had responded in each of the conditions.

RESULTS

It was expected that subjects would be more likely to form unit relationships with the bas-

ketball team when it was victorious than when it lost. To test for the presence of this BIRG phenomenon, subjects' initial response for the team's performance was coded for the presence or absence of "we" terms. That is, following Cialdini et al. (1976), a subject who described the team's performance in terms of "we" (e.g., "We played well," "They couldn't stop us") can be described as having formed a stronger unit relationship than the subject who did not use a "we" term in describing the team's performance. Two judges independently coded the responses for the presence or absence of such terms. The judges agreed on 100 percent of the codings. To avoid the problem of nonindependent data points, only the first response by each subject was coded. It was found that 75 percent of the subjects used a "we" statement when the team won, whereas only 52.5 percent of the subjects used such terms when the team lost, χ^2 (1, N = 80) = 4.38, p < .04. The use of "we" terms did not vary as a function of the immediate-delayed variable. Thus, the BIRG phenomenon appears to have been present in this study.

Next, each attribution for the team's performance was coded independently by two trained judges who were blind to the experimental hypotheses and the subject condition. Each attribution was coded as either dispositional (e.g., "We are a great team," "Our team played lousy defense") or situational ("The opposition played a great game," "Our team didn't get any fan support"). The coders agreed on 98 percent of the responses. Where disagreements occurred, the author decided the categorization, also blind to subject condition.

A dispositional percentage score was calculated for each subject. For example, if three of a subject's four responses were coded as dispositional, a score of 75 percent was used. Once again, because all responses were coded as either dispositional or situational, analysis of only one of these types of attributions was necessary.

A 2 (Success-Failure outcome) by 2 (Immediate-Delayed) ANOVA was conducted on the dispositional percentage score. The means for this analysis are presented in Table 2. As can be seen in the table, two significant main effects emerged. First, there was a significant effect for outcome, F(1, 76 = 7.14, 7.16)

	Success (Won)		Failure (Lost)	
	Immediate	Delayed	Immediate	Delayed
Percentage of Dispositional Attributions	42.95	67.95	68.80	85.00
Percentage with Dispositional Most Important Attribution	40	80	80	85

p < .009, with subjects providing more dispositional attributions after the team's loss than after a victory. In addition, a significant effect for time of attribution was found, F(1, 76) =6.58, p < .01, with subjects providing more dispositional attributions in the delayed than in the immediate conditions.

When specific cell comparisons were made, it was found that subjects making attributions for their team's victory became significantly more dispositional over time, t(39) = 2.20, p < .05. The comparison for the subjects in the Failure condition, however, fell short of significance.

The percentage of subjects within each of the conditions who indicated that the most important reason for the team's performance was a dispositional one also was calculated. As shown in Table 2, the pattern for these scores resembles that of the dispositional percentage data. However, these differences fell short of significance.

Subjects in the delayed attribution conditions were asked whether they had read a newspaper account of the game and the extent to which they had discussed the game with others. A majority of the subjects had read about the game in a newspaper (62.5 percent), and this did not differ significantly as a function of the game's outcome. Subjects also appeared to have done a moderate amount of discussing of the game with others (M = 4.25 on a 10-point scale, with 10 the highest amount of discussion). Again, this did not differ significantly as a function of game outcome. A correlation of .12 was found between the extent of discussion with others and the percentage of dispositional attributions. Finally, the number of attributions provided by subjects in each of the four conditions was examined. No significant effects emerged on the ANOVA, thus indicating no significant difference between conditions in the number of attributions given for the team's performance.

DISCUSSION

The results of Experiment 2 extend the phenomenon uncovered in earlier research concerning temporal effects on attributions for our own behavior to attributions made about others with whom we identify. Consistent with Heider's unit relationship concept and the Basking in Reflected Glory research by Cialdini et al. (1976), students' attributions for their school's basketball team's performance became more dispositional over time when the team was victorious. In victory, students tend to form unit relationships with their team and therefore should be motivated to recall events in the game in a self/team-flattering manner. As proposed by Burger and Huntzinger (1985), these students engaged in a selective forgetting process in the days that followed the game. Situational explanations for the team's victory, such as the poor play of the opposition, were more likely to have been forgotten than the dispositional explanations, such as the fine play of the home team.

As in other cases of testing laboratory findings in a field setting, the inability to control certain features of the situation allows for the possibility of alternate explanations. For example, it is possible that discussions with friends or reading about the game would systematically alter the attributions subjects made several days after the game. In a test of this possibility, it was found that the extent to which subjects reported discussing the game did not correlate with the attributions given about the game. However, one factor contributing to this low correlation may have been the restricted range of the dispositional percentage scores in the delayed conditions. It also is possible that the outcome of the second game (a victory) influenced the attributions made for the first game (a defeat) in the delayed condition. The delayed attributions for the defeat were assessed after the second game. Thus, the attributions for the loss could have changed over time because of new information about the team based upon the next game's performance. Arguing against this possibility is the fact that the second game was a victory. One might expect that a victory after a loss would make the subjects more likely to attribute the defeat to the situation rather than to the team. However, the opposite was found in this condition.

Finally, the pattern uncovered in the Failure condition indicates that the way attributions change over time for one's own behavior may be different from the way attributions change for someone we are observing. Indeed, if Burger and Huntzinger (1985) are correct in arguing that a self flattering loss of memory is responsible for temporal changes in attributions, then the findings for how people attribute causes for their own behavior would not be expected to resemble the way our attributions for others change over time. Clearly, as always, this finding provides grounds for future laboratory and field research.

GENERAL DISCUSSION

The two experiments reported here provide additional validation of the laboratory results reported by Burger and Huntzinger (1985). When giving explanations for their performance on a midterm examination, students in Experiment 1 tended to become more dispositional over time when they succeeded on the

test. These students gave attributions that were more situational over time when they failed. Subjects in Experiment 2 similarly gave more dispositional attributions for their team's victory over time, but the laboratory pattern of increasingly situational attributions for a failure over time was not found for attributions for defeat. This predicted result is explained by the students' failure to form unit relationships with the basketball team when it loses, and therefore the absence of self-flattering forgetting about the game. Although the absence of control over certain variables leaves open the possibility of alternate explanations for these two field studies, in combination with the earlier laboratory finding, it can be concluded that temporal effects on attributions for one's own behavior appear to be a function of perceived task outcome.

The results of this research and the earlier experiments of Burger and Huntzinger (1985) also are consistent with motivational explanations for attributional errors as a function of success and failure (e.g., Stephan and Gollwitzer, 1981; Zuckerman, 1979). Subjects appear to have forgotten situational accounts of their successes and personal explanations of their failures as time passed, yet recalled more readily flattering attributions for their performances over time. In the case of the basketball study, subjects appeared to utilize similar ego-protecting forgetting to the extent that they tied their self-esteem to the team.

Because attributions have been related to a wide variety of behaviors, it is important to better understand how these attributions change over time. For example, research in achievement settings (Weiner, 1974) has found that how an individual explains what happens to him or her will influence the amount of effort he or she puts into the next task. But events that cause us to change our achievement motivation probably take place over an extended period of time or are thought about and influence behavior over time. It might be speculated that the pattern uncovered here (more dispositional for success and more situational for failure) would result in an exaggeration over time of the effects of attributions on subsequent performances. However, at this point, how temporal changes in attributions relate to changes in behavior remains grounds for further investigation.

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