Attributions in the Sports Pages

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Attributions in the Sports Pages

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The present investigation extended the generality of attribution research by exploring several important issues in a highly involving real-world setting in which attributions naturally occur: athletic competition. Newspaper accounts of baseball and football games were coded for attributional content. These data supported a motivational or self-enhancement explanation for the tendency to make internal attributions for success and external attributions for failure. No support was found for Miller and Ross's contention that this tendency is mediated by expectancies. It was also found that more attributions were made after unexpected, as opposed to expected, outcomes. And in accordance with Weiner's attribution model, there was a tendency for relatively more stable attributions to be given after expected outcomes. The advantages and disadvantages of studying attributions in archival data and the possibility of attributions justifying behavior rather than explaining behavior are discussed.

An important motivator of human thought is the desire to understand the determinants of behavior. Like the psychologist, the average person is assumed to test "causal theories" concerning the reasons behind his or her own actions and the actions of other people. Such causal knowledge is highly adaptive, yielding to lay attributors an understanding of (and consequently the ability to predict and control) many situations in which they find themselves.

The desire to achieve an understanding of the causes of human behavior has always been considered the chief motivation underlying the attribution process (e.g., Jones & Davis, 1965; Kelley, 1967, 1971). Rather than studying attributions in important human situations, however, most attribution research has asked some captive population (typically college undergraduates) to give causal explanations for their own or some other person's behavior in hypothetical or fairly trivial situations. These attributions are almost always recorded on forced-choice, closed-ended scales. Therefore, the type of attributions that can be made (and even whether or not to make attributions at all) is generally determined by the experimenter.[1]

But how relevant are the results of such laboratory-based experiments to real-world settings in which attributions occur? Causal explanations that are made in the course of everyday human interaction may serve purposes beyond understanding the determinants of behavior. For instance, Kelley's research has led him to ask, "What if the person learns and is motivated to make attributions not for some abstract understanding of the world, but rather, to explain his own actions and to attempt to control the actions of his close as-

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[1] Such a preclusion, of course, is not inherent in closed-ended scales. For instance, subjects could be offered a wide variety of possible attribution scales and explicitly instructed to respond to only those scales that they thought were relevant. But in practice this is rarely done.

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sociates?" (Orvis, Kelley, & Butler, 1976, p. 379; see also Kelley, Note 1). Certainly attributions serve a variety of motivations, and the determinants or consequences of the atttribution process could be very different when attributions are serving different purposes. It is therefore important to explore the generality of the findings from laboratory-based attribution research in real-world settings.

The sports pages are a natural setting where explanations for behavior are frequently given by players, coaches, and sportswriters. There are several good reasons why the sports pages are an excellent site to study the attribution process. First, as noted above, the typical laboratory experiment gathers attributions on forced-choice, closed-ended scales. In the sports pages, on the other hand, the players, coaches, and sportswriters have a much greater range of possible responses available to them. They are, of course, constrained by plausibility and the norms or conventions of that setting, but certainly the scope of possible explanations is much greater in such free responses than is usually the case in the laboratory.

Second, athletic events are highly involving. Avid sports fans "live and die" with their teams every game, and players and coaches are even more involved. They spend a great deal of time, energy, joy, and suffering to win games. Moreover, a string of bad performances could possibly cost professional athletes or coaches their jobs. Such high levels of involvement are rarely achieved in the laboratory.

The current study examined explanations for the outcomes of sporting events given in the sports pages. The actual explanations were coded for attributional content. Using these data, several important questions in the attribution area were addressed.

A good deal of research has documented the tendency to make internal attributions for success and external attributions for failure. A recent controversy concerns whether this tendency (often called "hedonic bias") reflects a motivational bias or not (see reviews by Bradley, 1978; and Snyder, Stephan, & Rosenfield, 1978). A motivational interpretation of hedonic bias is consistent with the notion that attributions frequently serve self-presentational purposes. Such a motivational interpretation predicts that the general tendency for success to be attributed internally and failure to be attributed externally should increase with the ego-involvement of the attributor, a prediction that has been tested in other investigations of hedonic bias (Harvey, Arkin, Gleason, & Johnston, 1974; Miller & Norman, 1975; Snyder, Stephan, & Rosenfield, 1976). In the present context, a motivational hypothesis would predict that coaches and players would show a greater tendency to attribute success internally and failure externally in comparison with sportswriters, since the former should be more ego-involved with the outcome.

Miller and Ross (1975) contend that most support for a motivational or self-enhancement interpretation of hedonic bias has come from fairly trivial experiments, and they see the case as far from proven. As an alternative, Miller and Ross offer a nonmotivational explanation for the phenomenon. They argue that people typically expect and intend to succeed; hence, success is attributed internally, and unexpected and unintended failures are attributed externally. For instance, Feather and Simon (1971a, 1971b) found that unexpected success or failure was more likely to be attributed to external factors than was expected success or failure. In the current investigation, this nonmotivational explanation would predict that expected success should result in more internal attributions than unexpected success, whereas unexpected failure should result in more external attributions than expected failure. The ego-involvement of the attributor should be irrelevant.

There are several aspects of the setting being investigated here that could affect the motivational hypothesis. One is the fact that these attributions are given publicly, and there is an informal norm among athletes to be humble about their successful performances and to accept blame for their failures. This factor could mute evidence of a hedonic bias for players and coaches. On the other hand, the involvement of players and coaches in the outcome is much greater in this study than is true in most laboratory experiments,

and this could accentuate a hedonic bias (if the motivational interpretation is correct). Evidence for or against a motivational bias in the current study must be considered in light of the above aspects of this setting.

A second question addressed in the current study concerns *when* attributions occur. Little research to date has directly investigated this question (Wong & Weiner, Note 2, is the only exception we know of). Indeed, the use of closed-ended rating scales to gather attribution data (as is typically done in attribution research) generally precludes the possibility of participants either simply not making causal attributions or varying the number of attributions made. Kelley (1971) has suggested that unexpected events will evoke cognitive processing by the individual, since prior explanations that underlay the person's expectations would be called into question. For example, if a bad team defeats a good one, a wide variety of explanations become plausible (such as weather, luck, very high motivation on the part of the underdog or low motivation for the favorite, injuries). But if the favorite wins as expected, the relative abilities of the two teams are clearly the most plausible explanation. Thus unexpected events may prompt an "attributional search" (assuming the event is of some importance to the individual) in which a variety of explanations are tested both for their plausibility and for their satisfaction of the individual's needs and motives. So it is hypothesized that unexpected outcomes will lead to a greater number of causal attributions being made.

Finally, based on Weiner's (1974, 1979) attribution model, it is hypothesized that expected outcomes of games should result in stable causal explanations irrespective of whether the outcome is successful or unsuccessful. On the one hand, this hypothesis seeks to replicate prior laboratory research supporting Weiner's model (e.g., Feather & Simon, 1971b; Frieze & Weiner, 1971; Weiner, Frieze, Kukla, Rest & Rosenbaum, 1971). But given that (a) the setting is so involving, (b) the explanations are coded from free responses, and (c) the attributions may be serving self-presentational purposes, the current situation is in many ways very different from the typical context in which Weiner's model has been tested.

Method

Procedure

Articles covering 33 major sporting events in eight daily newspapers during the fall of 1977 were analyzed for attributional content. These events included the six games of the World Series and a variety of college and professional football games. For the most part, articles from the city of one of the teams involved in the game were used, because only these articles were long enough to contain explanations for the results of the game. (Shorter articles about games of less interest to the readers of a newspaper are most often limited to descriptions of the game rather than including explanations for the outcome.) A total of 594 explanations from 107 articles were identified.

Eight advanced undergraduates collected the attributions. These students were all thoroughly trained to identify any explanations offered for the outcome of a game. They worked in pairs, with one member of each team serving as a "check" on his or her partner to ensure that all explanations were recorded from each article.

Each explanation was written on one side of a 3 × 5 card. The game, newspaper, and source of attribution—player, coach, or sportswriter—were recorded on the back of the card. This procedure was designed to allow for "blind" coding of the attributions, although the source of the attribution was sometimes obvious from the explanation itself.

Coding

The content coding of attributions from an archival source is a new procedure to attribution research. Coding systems for open-ended causal explanations have been developed (e.g., Elig & Frieze, 1975), but only for attributional content derived in settings very different from the current one. Therefore, a new coding system was devised.

To test the hypotheses, it was necessary to code the causal explanations in terms of two causal dimensions: stability and locus of causality. These dimensions were coded directly from the attributional statements, based on the definitions of the two causal dimensions given by Weiner (1974). The following definitional criteria were used by the coders.

Stability. The stability of an attribution was defined temporally; an explanation was considered stable if it would predict the same outcome recurring in future games. Unstable attributions referred to factors that could vary over time, such as a great effort by a team or a bad call by an umpire or referee.

Locus of causality. For the locus of causality dimension, it was simply noted whether the attribu-

tion referred to something about one team or the other, or to the particular situation. For players and coaches, attributions referring to one's own team were categorized as internal, whereas attributions to the other team or to the particular situation were categorized as external. Likewise, attributions to the sportswriter's home team were categorized as internal, whereas attributions to the other team or to the situation were categorized as external. Such a categorization scheme was necessary so that the coding along the internal–external dimension would be comparable for players and coaches, on the one hand, and sportswriters, on the other. The coding of the locus dimension will be discussed at greater length below.

The following examples illustrate the coding scheme. After the fourth game of the World Series, a game won by the Yankees (giving them a 3–1 lead in the series), Yankee manager Billy Martin said of Lou Piniella, the star of the game, "Piniella has done it all." This statement refers to something about the Yankees, and it was said by a Yankee, so it was coded as internal. The verb tense of the statement ("has done") suggests that Martin was not referring simply to the one game, but to the course of the entire season. Hence the statement also seems to refer to a stable attribute of the individual in question (ability or stable effort) and was coded as stable along the stable–unstable dimension. After the same game, Ron Cey, a member of the losing Dodgers, said, "I think we've hit the ball all right. But I think we're unlucky." This is clearly an attribution to bad luck, and was coded as external (circumstances) and unstable. The next two statements were made by Dodger manager Tommy Lasorda after the Dodgers had lost the last game of the series. "It took a great team to beat us, and the Yankees definitely are a great team." This is an attribution to the Yankee's ability, and as it was said by a Dodger, it was coded as external and stable. Finally, of Reggie Jackson's performance in the sixth game, Lasorda said, "You're supposed to keep the ball in on him. Well, we didn't." Here the attribution is something "we" did, something "we" presumably could have done better, but did not. Hence it was coded as internal and unstable.

The two coders (the authors) initially agreed on 88% of the two dimensions coded for each attribution. Disagreements were discussed by the coders, and when a reconciliation could not be reached within 1 minute, the attribution was discarded. Over 96% of the original explanations were successfully coded into the two dimensions.

As described above, attributions to a player's or coach's team were coded as internal. For example, attributions to both one's own ability and to a teammate's ability were coded as internal. We decided on this coding for several reasons. The first is practical: Attributions to "my own ability" (effort, etc.) or "self" attributions were viable responses only for players, and therefore, it would be sensible to make this distinction only for players. But if we had tried to break down the attributions of players (about 22% of our total sample) by locus of causality, stability, or expectancies, the cell sizes would have become simply too small for analysis.

Second, both football and baseball are *team* sports. It is not clear how meaningful an attribution to one's own effort or ability is in determining the outcome of the game as a whole. And certainly attributions to a teammate are much more internal than attributions to the other team or to a cause such as luck. Moreover, there is some indirect evidence supporting this coding system. Iso-Ahola (1977) had 150 Little Leaguers attribute the outcome of a game to the coach, ability, effort, task difficulty, and luck with reference to their team and to themselves individually. These nine ratings were factor analyzed, and two clear factors resulted. The external factor involved high loadings for team luck, self-luck, team task difficulty, and personal task difficulty. The internal factor was defined by attributions to team effort, self-effort, team ability, self-ability, and to the coach. Hence subjects apparently did not discriminate between their coach, their team (and by implication, their teammates), or themselves in attributing causality for the outcome of a game (see also Ross & Sicoly, 1979).

Additional Measures

A further datum was recorded with each attribution. If there had been a clear favorite for a game, the result was categorized as expected or as unexpected, depending on the outcome. Games in which there had been no clear favorite were placed in a third category, regardless of outcome. Because the World Series is a series of games, it was difficult to say that there were clear expectancies for one of the teams to win any given game, although at the outset the Dodgers were expected to win most of the games. Football games are more discrete events, with teams usually meeting once or twice a season. Hence, only attributions taken from football games were used in analyses involving expectancies.

The odds established by Harrah's Reno Race Sportsbook as reported in the newspaper were used to determine favorites. If a team was favored by two points or less, however, the game was categorized as having "no clear favorite." In addition, if the result of a game was highly discrepant (more than 10 points) from the predicted outcome, even if the favorite still won, the result of the game was also categorized as unexpected. That is, if (a) the favorite lost the game, (b) a big favorite won by a very small margin, or (c) a slight favorite won by a very big margin, the result of the game was categorized as unexpected.

Clearly we were *not* measuring the "subjective" expectancies of our attributors. Moreover, players and coaches would probably rarely admit to expecting to lose. But certainly players, coaches, and sportswriters are not unaware of the roles of favorite or underdog in any game. Our more objective measure is a rough but probably valid indi-

cator of [redacted]ective expectancies, particularly since we are only making a dichotomous distinction. In any case it was the only measure of expectancies available.

Finally, the number of attributions from each article and the length of each article in inches were recorded. The number of attributions per inch was used as a measure of the frequency of attributions in an article.

Results

Hedonic Bias

The data were first analyzed for evidence of success–failure differences in the locus of causality. The percentage of internal and external attributions for winners and losers (combining the attributions of players, coaches, and sportswriters) were compared. As expected, clear evidence of a tendency to attribute success internally was found: 74.9% of the attributions from the perspective of the winning team were internal, while only 54.9% of the attributions from the losing team were internal. A log-linear analysis (Bishop, Fienberg, & Holland, 1975) on the 2×2 table formed by crossing locus of causality of the attribution with the outcome of the game indicated that this interaction was highly significant, $\chi^2(1) = 21.84$, $p < .001$.[2]

Given this evidence of a success–failure difference in causal explanations, further analyses compared the motivational versus expectancy explanations for this difference. To test for a motivational basis for the success–failure difference in locus of attributions, the attributions of coaches and players were compared to those of sportswriters. A motivational explanation predicts that the success–failure difference in attributions will be greater for coaches and players in comparison with sportswriters, based on the greater ego-involvement of the former group with the outcome.[3] Thus the perspective of the attributor should interact with the outcome in producing the resultant attribution.

To test for this effect, the loci of the attributions made by players and coaches versus sportswriters for winning and losing outcomes were compared, again using log-linear analysis. The percentages are shown in Table 1. As predicted by the motivational bias hypothesis, the 3-way interaction was significant, $\chi^2(1) = 4.47$, $p < .04$. Players and coaches showed greater evidence of a motivational bias, making more internal attributions for success and fewer internal attributions for failure, relative to sportswriters. It should be pointed out, however, that the evidence for a motivational bias here is only relative, since for both winning and losing (and for players, coaches, and sportswriters), the majority of the attributions were internal.

Table 1
Test of the Motivational Bias Hypothesis

	Players and coaches		Sportswriters	
Attribution	Win	Loss	Win	Loss
Internal	80.3	52.8	68.5	57.1
External	19.7	47.2	31.5	42.9
n	132	144	111	140

Note. Figures are in percents.

A closer examination of Table 1 suggests that differences in attributing causality between players, coaches, and sportswriters occur chiefly after wins. Players and coaches are much more likely to attribute a good outcome to internal causes than are sportswriters, but only slightly less likely to attribute a bad outcome to themselves than are the writers. When the data in Table 1 were rearranged to explicitly test this difference, players and coaches differed from sportswriters in locus of attribution only after wins, $\chi^2(1) = 3.88$, $p < .05$, but not after losses, $\chi^2(1) = .38$,

[2] All chi-squares are likelihood ratio (rather than Pearson) chi-squares. Log-linear analyses were used because this technique allows one to consider more than two variables simultaneously and to have a separate significance test for each effect (i.e., association). We should note that the use of chi-square is not entirely appropriate here, because some observations (those made by the same person about the same game) are not completely independent. No one knows exactly how much bias any degree of dependence between observations causes in the use of chi-square, however. We assume that the degree of dependence in the current data is small enough, relative to the sample size, to not be a serious problem.

[3] Players and coaches were initially analyzed separately, but as the results were very similar, the two groups were combined and contrasted with sportswriters.

Table 2
Test of the Expectancy Hypothesis

Attribution	Winners		Losers	
	Expected	Unexpected	Expected	Unexpected
Internal	78.7	79.7	63.0	62.3
External	21.3	20.3	37.0	37.7
n	89	69	54	130

Note. Figures are in percents.

ns. This finding is consistent with previous work that has found evidence of self-serving biases chiefly after success but not failure (see Miller & Ross, 1975).

The expectancy explanation proposes that expected events will be attributed internally, whereas unexpected outcomes will be attributed externally. Since players and coaches typically expect and intend to succeed, the argument goes, their successes are attributed internally. In the current data, there are games that a losing team should clearly expect to lose, as well as games that a winning team should clearly expect to win; both of these cases would be predicted to produce internal attributions. Cases in which the winning or losing outcomes are unexpected should, on the other hand, produce external attributions. So the expectancy hypothesis predicts an Expectancy × Locus (Internal–External) interaction.

Table 2 presents the percentage of internal and external explanations for expected and unexpected outcomes separately from the perspective of winning and losing teams. Clearly, more internal attributions were made for wins than for losses, $\chi^2(1) = 11.54$, $p < .001$. But just as clearly, expectancies did not mediate this effect. Both the Expectancy × Locus and Expectancy × Locus × Win–Loss interactions were trivial, $\chi^2(1) = .21$, *ns*, and $\chi^2(1) = .03$, *ns*, respectively. Expanding this analysis to compare the attributions of players and coaches to sportswriters provides no additional evidence for the importance of expectancies. All interactions involving expectancies and source of attribution (players and coaches or sportswriters) were nonsignificant.

Frequency of Causal Attributions

A second set of analyses concerned when the attributions occurred, with the number of attributions per inch of newsprint serving as an index of how frequently causal explanations were made for a particular game. It was predicted that unexpected outcomes would elicit a greater number of attributions, regardless of whether the outcome was a win or a loss. A 2 × 2 analysis of variance (ANOVA), crossing expected and unexpected outcome with win–loss, was conducted to test this hypothesis. Because the number of attributions typically reported in each article differed between newspapers, the number of attributions per inch for each article was centered (by subtracting the mean) for the different newspapers separately, and then these centered measures were analyzed. Such a centering procedure is preferable to standardization because it removes mean differences while retaining the variances. The only significant effect found was for expected versus unexpected events, $F(1, 62) = 4.42$, $p < .04$, with unexpected outcomes eliciting a greater number of attributions per inch (see Table 3). Thus as hypothesized, unexpected outcomes produced a greater number of explanations.

Expectancy and Stability

Finally, based on Weiner's (1974, 1979) attribution model, it was predicted that expected outcomes would elicit more stable causal attributions than unexpected outcomes. The

Table 3
Frequency of Attributions as a Function of Expectedness of Outcome and Win-Loss

Outcome	Win	Loss
Expected	−.027	−.032
n	22	10
Unexpected	.036	.032
n	12	22

Note. Cell entries are a centered measure of the number of attributions per inch of newsprint. Negative entries indicate fewer attributions than average, positive entries indicate more attributions than average.

relevant data are shown in Table 4. There was a tendency for this hypothesis to be supported, although the results did not reach conventional levels of significance, $\chi^2(1) = 3.03$, $p < .09$. Also notable in Table 4 is the preponderance of unstable attributions. Fully two thirds of all attributions were coded as unstable. This indicates the strong preference for explanations involving effort (such as great concentration or making a spectacular play) on the part of their team or the other team by attributors. Other research has also indicated that effort is the most frequent attribution in achievement settings (e.g., Elig & Frieze, 1979).

Table 4
Stability and Expectancies

Condition	Expected	Unexpected
Stable	37.8	29.0
Unstable	62.2	71.0
n	164	186

Note. Figures are in percents.

Discussion

The results from the current study support a variety of predictions from attribution research in a real-world setting. The empirically well-established success versus failure difference in the locus of causal attribution was found in the current context. The results supported a motivationally based explanation for this success–failure difference, in contrast to a nonmotivational explanation based on expectancies. Attributions were also found to be more frequent following unexpected outcomes, as predicted. Finally, some support was found for the prediction from Weiner's (1974, 1979) attribution model that expected outcomes lead to more stable causal explanations.

The causal accounts gathered here were freely given by the attributors (although the attributions were sometimes given in response to "why" questions from the sportswriters) and were less constrained in form and content than those generated in laboratory settings. The causal attributions made by the attributors were also very public, and may therefore serve more to justify performance (by the athletes and coaches) or to justify predictions for a specific game (by the sportswriters) than to reach an abstract causal understanding of the events.

This raises a question concerning whether these public statements differ from the private explanations made by the attributors. Do the causal attributions collected in the present study reflect the attributions "really" made by the players, coaches, and sportswriters? Although we have no means of assessing private attributions, the answer to this question is most certainly *no* in some instances and *yes* in others. For example, norms concerning social behavior (e.g., humility or bravado) may affect the public explanations offered by the attributor, but not the private ones really believed. On the other hand, one could argue that the attributor, to maintain consistency, brings his or her private attributions in line with his or her public statements.

The only research we know of that addresses this question of public and private attributions found only one instance in which the two differed. Folkes (1978) examined the differences between the public explanations given by people when refusing a date and the actual (private) reasons for their refusal. Her findings indicate that only when the real reason for the refusal had something to do with internal characteristics of the person being rejected (e.g., he or she was physically unattractive) did people give some other (external) public explanation for their refusal. Folkes' subjects did not "lead on" the person being rejected by inaccurately communicating the permanance (stability) of their rejection, however.

Do possible differences between public and private attributions (about which we can only speculate) make our findings irrelevant to previous attribution research? As mentioned above, research conducted by Kelley and his colleagues (Orvis, Kelley, & Butler, 1976) has suggested that the attribution process may often serve impression management or self-presentational purposes. Attributions as *justifications* rather than as *explanations* for behavior may be more prevalent in highly involving real-world settings such as the present one. The relevance of the present study

to previous research lies in extending the findings of laboratory-based investigations to a situation in which public attributions are quite possibly serving self-presentational purposes.

The present study supported a motivational basis for the success–failure differences in the locus of causal attribution over an explanation relying on expectancies. As noted above, however, more internal attributions were made for both success *and* failure, although the frequency of internal explanations was much higher for success. Miller and Ross (1975) have argued that evidence for a self-serving bias in attributions requires evidence of both internal causal ascriptions for success (self-enhancing attributions) and external ascriptions for failure (self-protective attributions). The present results do not provide evidence for a self-protective bias.

One could argue, however, that the typical or base-rate attribution for sports performance in general is internal and that any self-protective or self-enhancing attributional bias must influence this modal attribution. The work of Weiner (1974, 1979) and others on causal explanations in achievement contexts has found that explanations for achievement outcomes are typically internal for both success and failure (see also Scanlon & Passer, Note 3). Any attributional bias must operate within the context in which attributions are being made, and the effect of the bias will always be relative to the modal attribution for this situation. Placing self-serving biases in this perspective, it seems more reasonable, as Bradley (1978) suggests, to see both self-protective and self-enhancing biases as reflecting a general tendency to view oneself positively, and to consider the modal locus of causality used to explain events in the situation under study when predicting how an attributional bias will reveal itself.

Another issue we have addressed is the "when" of attribution. As was pointed out earlier, the sports pages are a real-world setting in which attributions frequently occur. The effect of one variable, whether the result of the game was expected or not, was found to have a significant influence on the prevalence of causal explanations. As a cautionary note on interpreting the finding that more attributions are made following unexpected events, we should note that the results most appropriately apply only to the sportswriters. They make as many attributions as they want in their stories. The sportswriters also serve as gatekeepers in that they decide which statements by players and coaches to print. The writers are of course limited by what the players and coaches say, but they certainly do not print every word uttered. Therefore, although there is every reason to expect players and coaches as well as sportswriters to make fewer attributions after expected events than after unexpected events, these data are most germane to the writers.

The current findings clearly demonstrate the usefulness of archival data to attribution research. It is possible, and we might argue more appropriate, to study the attribution process in natural settings. Such settings are almost always more involving than laboratory experiments, and questions of external validity are easily addressed.

Of course there are problems with coding free-response data. A particularly difficult issue that we faced involved the coding of attributions to one's team or teammates along the internal–external dimension. We finally decided to code such attributions as internal. In general, the issue of what is internal and what is external is not always evident. For instance, as Monson and Snyder (1977) suggest, most internal statements can be rephrased into external statements, and vice versa. Steve Garvey's statement that "They played better than us," for example, could be just as easily restated as "We played worse than them." These two statements are semantically equivalent, but would be coded as external and internal to the Dodgers, respectively, in the current coding scheme. Ross (1977), in discussing the distinction between situational and dispositional explanations for behavior, also addresses this problem. According to Ross, the above two statements are identical in content, but differ in form, and the comparable content argues for not distinguishing them in terms of locus of causality.

In defense of the current coding scheme, evidence of logical or semantic comparability does not necessarily imply that the two statements are psychologically identical. The fact

that Garvey chose to say that the Yankees played better than the Dodgers may indeed imply that he was making an attribution to the Yankees. Simple logical analyses such as that done by Ross are not sufficient to resolve these difficulties in understanding the meaning of different causal explanations to the attributor, and further research is needed as an aid in coding attributions. We would like to suggest that the results of the current investigation provide construct validity for the coding system we devised (Cronbach & Meehl, 1955).

Despite these problematic issues, the current study will hopefully encourage future researchers to investigate the attribution process in the real-world contexts where it naturally occurs by using archival data or assessing ongoing thought processes.

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