

Exploratory Analysis of the Prevalence of Self-Related Affects in Achievement Situations

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ABSTRACT. In recent years, several theories of emotion and motivation have focused on the role of self-related affects in human experience and behavior. Such models are grounded in the belief that self-related affects represent a prevalent aspect of the lives of individuals when engaged in achievement endeavors. Some results, however, suggest that affects tied to the outcome (outcome-related affects) might be even more prevalent (Weiner, Russell, & Lerman, 1978, 1979). One purpose of this study was to assess whether self-related affects represent the most prevalent type of affect experienced in achievement domains. A second purpose was to test for the effects of situational factors on the prevalence of self-related affects. Male and female collegiate athletes (basketball players, $N = 116$) were asked to recollect instances of personal and team success and failure and to report how they felt in each of the four situations. Results revealed that across conditions, self-related affects were reported significantly more often than other emotions (63% vs. 37%). In addition, self-related affects were found to be more prevalent in failure (77%) than in success (57%) conditions. There was no effect of the personal versus team variable. The results provide strong support for the assumption that self-related affects represent an important and prevalent experience of participants engaged in achievement related activities.

IN RECENT YEARS MUCH ATTENTION has been accorded the concept of emotion or affect (these two terms are considered synonymous in this article). Indeed, much research has recently been done to understand more fully this ubiquitous psychological phenomenon. Harter (1981) has even proposed that affect be given center stage in psychological research and theorizing.

In line with Harter's view, the 1980s has seen a surge of interest in emotion research and theorizing, especially with respect to the cognitive antecedents of affect (e.g., Krantz, 1983; Lazarus, 1984; Roseman, 1984; Smith & Ellsworth, 1985; Smith & Klengel, 1982), the role of affect in motivation

(Buck, 1985; Deci & Ryan, 1985; Weiner, 1985), and the relationship of emotion to the self-concept (Epstein, 1983, 1984; Harter, 1986; Weiner, 1984, 1985).

Through these and other studies, knowledge has accumulated on a specific type of affect termed "self-related affect" (Vallerand, 1987a,b). Self-related affects refer to emotions experienced in relation with one's self-esteem and identity that may have immediate or future consequences for motivated behavior and self-concept. Obviously, the self is implicated in all types of emotions. However, with respect to self-related affects, the self becomes the target of the emotion. Thus, self-related affects do not refer to a mere reaction to an event because of which an individual may feel sad or happy. They refer rather to affects directed at the self that connote an evaluation of the self and a judgment of it. As de Rivera (1984, p. 125) wrote, "Self-emotions involve ways of valuing the self in its relations with its own activities in the world."

For instance, following a poor performance, one may evaluate oneself as not having done well and may come to feel incompetent, guilty, or ashamed. On the other hand, following a subjectively appraised good performance, one may come to feel competent, proud, or efficient. Self-related affects are thus related to core elements of the individual's self-concept and self-esteem systems (see Weiner, 1980). As such they may have important effects on how individuals come to perceive their ability and proficiency in various domains and how they come to see themselves generally. Ultimately, self-related affects may have important effects on motivated behavior.

Recently, self-related affects have been the subject of much research, especially as they pertain to their antecedents and consequences. Much of the research on the antecedents of self-related affects, in which the important work of Weiner has led the way, has been conducted in achievement situations. Weiner (1979, 1985; Weiner, Russell, & Lerman, 1978, 1979) posited that internal attributions for success produce positive self-related affects. A certain number of studies (see Weiner, 1985, for a review) have supported this hypothesis.

Pursuing the work of Arnold (1960), Vallerand (1983, 1984, 1987a,b) has recently proposed a model for the antecedents of self-related affects in

achievement situations. This model posits that emotions related to the self are the result of appraisals that can be intuitive and reflective in nature. Whereas subjective perceptions of personal performance are thought to represent an instance of intuitive appraisal, the reflective appraisal process can take several forms, including intellectualization, comparison (self, outcome, and social) processes, information-processing functions, mastery-related cognitions, and causal attributions for performance. The intuitive appraisal (perceptions of performance) is always implicated in the formation of emotion, whereas the reflective appraisal is not necessary for self-related affects to take place and serves only to minimize, maintain, or augment the effects of the intuitive (or performance) appraisal. Recent research in the realm of sport (Vallerand, 1987a,b) supports the model.

Much research and theory have also focused on the consequences of self-related affects, especially by theorists who ascribe self-related affects a causal role in motivated behavior. For instance, Deci and Ryan (1985) propose in their cognitive evaluation theory that feelings of competence produce increases in intrinsic motivation, whereas feelings of incompetence lead to converse effects. Research by Vallerand and Reid (1984, 1988; see also Vallerand & Blais, 1987) supports this aspect of the theory. Through path analytic techniques, it has been shown that self-related affects such as competence-incompetence, pride-shame, and others play a causal role in intrinsic motivation changes following success and failure experiences. In a similar vein, Atkinson (1964) and Weiner (1979, 1985) proposed that self-related feelings such as pride and shame have a causal impact (jointly with future expectancies in the case of Weiner) on achievement motivation. Finally, learned-helplessness theorists such as Seligman and his colleagues (Abramson, Seligman, & Teasdale, 1978) suggest that in certain instances negative self-related affects may play a major role in the onset and intensity of depression.

Although much theoretical research has focused on the antecedents and consequences of self-related affects, very little research has assessed the prevalence of this type of affect in the real world. Weiner et al. (1978, 1979) have performed the only pertinent studies to date. In these studies, Weiner et al. attempted to relate attributions for various achievement outcomes to several affects. Two different methodologies were used. In the first study (Weiner et al., 1978), subjects were asked to indicate how they thought that another individual would feel, given the reason (attribution) for his or her success or failure. In the other study of interest (Weiner et al., 1979, Experiment 1), subjects were asked to recall (through the critical incident technique) how they felt when they experienced success and failure due to various attributions. In the 1978 study, subjects were asked to rate the intensity of the affect and in the 1979 study to write the affects experienced. These studies led to two notable findings. First, self-related affects were more likely to be experienced when internal attributions were made. And second, irrespective of the

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attributions made, affects related to the outcome, such as happy, satisfied, and good in the case of success or, conversely, sad, unsatisfied, and bad in the case of failure, were rated as generally more important than self-related affects. In addition, close inspection of these latter findings suggests that these outcome-dependent affects seem to be reported more often than self-related affects.

Unfortunately, because they were conducted to test the attribution-affect linkage, the studies conducted by Weiner et al. do not represent an appropriate test of the prevalence of self-related affects relative to other types of affect under unsolicited conditions in achievement situations. In fact, Weiner (1980, p. 367) stated, "Whether achievement strivings are linked most closely with any particular affective reaction remains to be discovered." To this day, his evaluation remains true. Thus, one purpose of the present study was to assess whether self-related affects are more prevalent than other types of affects in achievement situations. Although the emotion and motivation theories reviewed above would lead one to predict that self-related affects are indeed more prevalent than other affects, the finding of Weiner et al. (1978, 1979) that outcome-dependent affects appear to be the most intense and most prevalent affects reported tends to contradict such an assumption. It thus appears important to verify whether self-related affects are more prevalent than other types of affects to determine whether research and theory on emotions related to the self are restricted to a trivial phenomenon or whether they pertain to an important human experience worthy of scientific scrutiny.

In addition to ascertaining the overall prevalence of self-related affects, it was important to assess the impact of situational factors on the occurrence of self-related affects. The first factor that appears important in achievement domains is outcome. Two rival hypotheses can be discerned from social psychological research. The first is derived from the attributional research that reveals that individuals generally make more internal attributions following success but more external attributions following failure (e.g., Zuckerman, 1979). Since internal attributions have a much more potent influence on self-related affects than external attributions (e.g., Weiner, 1985), it follows logically from the above that more self-related affects should be experienced in success than in failure conditions. The second hypothesis originates from recent work on self-focusing tendencies following outcome (e.g., Greenberg & Pyszczynski, 1986). Such research reveals that individuals are more self-focused after failure than after success. Since self-focus (or self-awareness) is likely to lead to self-related affects (Wicklund, 1975), one would expect self-related affects to be prevalent in failure relative to success conditions. Research is needed to assess the veracity of these two rival hypotheses.

A second factor that we assessed for purposes of generalization is the personal relevance of the outcome. Blais et al. (1982) have shown that male and female athletes distinguish between personal and team success and fail-

ure. It thus appeared important to assess whether self-related affects were more prevalent under personal than team outcomes.

Thus, the purpose of the present study was twofold. The first purpose was to assess the prevalence of self-related affects in achievement situations. In line with Davitz (1969) and Weiner et al. (1979, Experiment 1), this was done through the critical incident technique (Flanagan, 1954). Male and female basketball players were asked to recollect instances of past personal and team success and failure experiences in their sport and to indicate the effects experienced in such instances. On the basis of recent work on self-related affects (e.g., Vallerand, 1987a), it was hypothesized that overall, self-related affects would be reported more often than other (miscellaneous) types of affect. The second purpose was to assess the impact of outcome (success vs. failure) and its personal relevance (personal vs. team) on the prevalence of self-related affects. Because of the equally plausible hypotheses involved in the case of the outcome variable no hypotheses were formulated regarding this variable. Finally, it was hypothesized that more self-related affects would be reported in the personal than in the team condition.

Method

Subjects

Subjects were 86 male and 30 female basketball players from the province of Quebec. These French-Canadian athletes were members of 13 basketball teams of CEGEP AA and AAA (CEGEPs are the equivalent of junior colleges in the American educational system) and university level. At the time of this study, subjects had been playing competitive basketball for a mean of 5.8 years. Their ages varied from 16 to 25 years, with a mean of 19.4 years.

Questionnaire

Subjects were asked to fill out a five-page questionnaire. On the first page, they responded to questions about their sex, age, team's name, and number of years of experience in competitive basketball. Following these questions, on the lower half of page 1 the following instructions were presented:

In the present questionnaire, you will find questions asking you to recall personal and team success and failure instances. If this is impossible for you, please imagine these situations. For each of these instances, refer to a given situation as experienced in basketball. It is important to note that questions refer to your own perception of success and failure in basketball. Answer in your own terms and in a legible fashion. Please note that there are no good or bad answers. An honest and thoughtful answer would be very appreciated, however.

Subjects were then asked to answer the subsequent four pages of questions. Each page dealt with one of the four conditions resulting from the fol-

lowing 2 × 2 (Outcome × Relevance: personal vs. team) design. The four pages were presented in a random order. On each page subjects were asked to define in their own terms the relevant situation, for instance, "For you, what is a personal failure in basketball?" This question served the purpose of leading subjects to focus on the situation at hand (see Flanagan, 1954). Following this question, subjects were asked to recall as vividly as possible a particular game in which they had experienced a personal or team success or failure. They were then asked, "How do you feel in light of this personal [team] success [failure]?" Subjects had space to put down several affects.

The critical incident technique was used in this study for two reasons. First, we believed it was an appropriate first step to test the hypothesis of the study because it could eventually be corroborated by other methodologies. Second, this methodology has been used repeatedly in the past (see Davitz, 1969; Flanagan, 1954; Weiner et al., 1979, Experiment 1), and results obtained with it have generally been comparable to those obtained with more situational methodologies.

Procedure

Data collection. Data were collected during an invitational basketball tournament for the 11 CEGEP teams and prior to a practice session for the two university teams. Except for the location where the questionnaire was completed, procedures were the same for the two groups of subjects. Prior to the tournament (and the practice session for the university teams), we met with the head coaches of the teams to solicit their collaboration in the study. Coaches were told that the purpose of the study was to discover more about how athletes react to success and failure. They were told that participation was important because it could lead to a better understanding of motivational factors that influence athletes' behaviors. All coaches agreed to participate with their teams.

Teams responded to the questionnaire on an individual basis, one team at a time, in a classroom near the gymnasium and at least 2 hr before their first game (or just prior to the practice for the university teams). Subjects were thanked for agreeing to participate in the study and were told that the study was not a test but rather a survey of athletes' attitudes toward success and failure in basketball. They were also assured that their answers would not serve for selection purposes. Subjects were told, however, that their answers were important because they could contribute to the enhancement of coaching and training techniques in basketball. They were finally told that they should not put their names down and were thus assured of confidentiality. Following these instructions, the questionnaire was verbally described and subjects were encouraged to ask any relevant questions. Questionnaires were then distributed. Completing the questionnaire took 15 to 20 min. Following completion

of the questionnaire, subjects were thanked for their cooperation and dismissed.

Coding. A total of 701 responses were collected from the subjects. This amounted to an average of 1.5 affects per subject per condition. However, to avoid correlated data within conditions and thus ensure proper analysis of the data, it was decided that only the first affect per condition would be retained for analysis; this led to a maximum total of 116 responses per condition (see Blais et al., 1982, for similar procedures).

To provide a stringent test of the prevalence of self-related affects, affects were dichotomized into self-related and other (non-self-related) types of affects. In line with the definition presented earlier, self-related affects referred to emotions experienced in relation with one's self-esteem and identity that may have immediate or future consequences for one's self-concept. Other, or miscellaneous, types of affects were simply affects other than those related to the self. To test for the reliability of this self-other dichotomy, four psychology graduate students were provided with the definitions described above and asked to correctly place the various affects obtained in this study in the two hypothesized categories. Reliability estimates were calculated through Scott's (1955) pi formula (see also Holsti, 1969). Very high reliability estimates were obtained for both the success (.95) and the failure conditions (.92), thereby supporting the dichotomy of affects used in this study.

Results

The frequencies and percentages of occurrence for each of the 22 different affects as a function of conditions appear in Tables 1 and 2. Because a certain number (less than 5% overall) of subjects' answers were uninterpretable, the total frequency scores do not always add up to 116. Affects coded as self-related affects in the success conditions were competent, proud, confident, accomplished, and encouraged. Self-related affects in the failure conditions were incompetent, guilty, discouraged, resigned, and determined. Happy, pleased, satisfied, surprised, indifferent, and relaxed were the other type of affects obtained in the success conditions, whereas disappointed, frustrated, surprised, angry, dissatisfied, unhappy, and indifferent were coded in this category in the failure conditions.

The prevalence of self-related affects was assessed in three ways. First, the overall proportion of reported self-related affects was compared with that of the other affects across conditions. Second, an assessment of the prevalence of self-related affects was performed within each of the four conditions. This was done to verify whether self-related affects were more often reported than other types of affects in each of the four conditions. Third, the prevalence of self-related affects as a function of condition was assessed. This last anal-

TABLE 1
Numbers and Percentages of Self-Related and Other Types of Affects in the Personal and Team Success Conditions

Affect	Personal success		Team success	
	%	No.	%	No.
Self-related				
Proud	50.9	58	49.1	57
Competent	7.0	8	4.3	5
Accomplished	0.9	1	0.9	
Encouraged	0.9	1		
Confident			0.9	1
Total	59.7	68	54.3	63
Other types				
Happy	26.3	30	32.9	37
Satisfied	5.3	6	6.0	7
Relaxed	5.3	6	3.4	4
Indifferent	1.7	2		
Surprised	1.7	2	1.7	2
Pleased			1.7	2
Total	40.3	46	45.7	52
Total—all affects	100	114	100	115

ysis was conducted to determine whether the situational factors of this study (outcome and personal relevance of outcome) elicited different levels of self-related affects. Overall, the present statistical strategy allowed us to test for the prevalence of self-related affects relative to other types of affects while assessing whether self-related affects are experienced more often under certain conditions than others. Finally, it should be pointed out that statistical analyses were initially carried out while incorporating sex as an independent variable. Because no sex differences were found, the data were collapsed across sex.

Prevalence of Self-Related Affects Across and Within Conditions

Across conditions, subjects reported a higher proportion of self-related affects (63.33%) than of other types of affects (36.66%). A test of proportion (Bruning & Kintz, 1977) revealed that these percentages were significantly different ($z = 7.72, p < .001$). Thus, across conditions, self-related affects were more prevalent than other types of affects. In addition, internal analyses assessing the prevalence of self-related affects within each of the four conditions were performed. Results revealed that self-related affects were reported sig-

TABLE 2
Numbers and Percentages of Self-Related and Other Types of Affects in the Personal and Team Failure Conditions

Affect	Personal failure		Team failure	
	%	No.	%	No.
Self-related				
Discouraged	37.3	40	34.6	36
Guilty	30.8	33	26.9	28
Incompetent	8.4	9	4.8	5
Resigned	2.8	3	6.7	7
Determined	0.9	1	2.0	2
Total	80.2	86	75.0	78
Other types				
Disappointed	5.7	6	7.6	8
Angry-aggressive	5.7	6	1.0	1
Indifferent	3.8	4	7.6	8
Surprised	2.8	3	6.8	7
Frustrated	0.9	1	1.0	1
Unhappy	0.9	1	1.0	1
Total	19.8	21	25.0	26
Total—all affects	100	107	100	104

nificantly more often in three of the four conditions (all $\chi^2 > 4.25$, all $p < .05$). Only in the team success condition was the percentage of self-related affects not significantly different from that of other types of affects. The mean percentages (54.3% vs. 45.7%), however, were in the expected direction. Mean percentages appear in Tables 1 and 2.

Prevalence of Self-Related Affects as a Function of Condition

To assess the effects of Outcome and Relevance on reported self-related affects, a 2×2 repeated measures analysis of variance was performed on the percentage of reported self-related affects following arc-sine transformation (see Winer, 1971). Because a listwise deletion approach was adopted and because of the repeated measures design, only 97 subjects were used in this analysis. Results revealed that a significantly higher proportion of affects were reported in failure (77.2%) than in success conditions (57%), $F(1, 96) = 13.09, p < .001$. The personal vs. team condition main effect was not significant, $F(1, 96) = 2.44, p < .13$ (70% vs. 64.15%, respectively). Finally, the interaction was not significant ($F < 1$).

Discussion

The purpose of this study was to ascertain the prevalence of self-related affects in achievement situations. Results show that across conditions, 63.3% of all affects reported were self-related affects. These findings were basically supported by additional internal analyses that revealed that self-related affects were reported more often than other types of affects in the four conditions; however, the results were not significant in the team success condition. Thus, the main hypothesis of this study was generally supported: Self-related affects do represent prevalent experiences of individuals involved in achievement situations. These findings are important for emotion theories and models, especially those that place a marked emphasis on self-related affects. It appears that self-related affects are prevalent in achievement situations and theories devoted to their understanding deserve attention. Thus, the models of Vallerand (1987a,b), Weiner (1979, 1982, 1985), and others appear justified in giving center stage to self-related affects. Future research on these and other self-related affect models therefore appears justifiable on both theoretical and ecological grounds.

It is also noteworthy that the present results provide external validity to some important theories of motivation. Indeed, results of the perceived success and failure conditions revealed that certain types of self-related affects were reported consistently as predicted by several theorists. For instance, the affects competence and incompetence were consistently reported in the four conditions. According to cognitive evaluation theory (Deci & Ryan, 1985), feelings of competence and incompetence play a major role in intrinsic motivation changes. The finding that these types of affects are indeed reported is reassuring from an ecological perspective.

In the same vein, results showing that the affects resigned and discouraged were consistently reported in the failure conditions appear to support notions that learned helplessness (cf. Abramson et al., 1978; Seligman, 1975) can be experienced in achievement situations such as sport. Although we agree with Dweck (1980) that learned-helpless individuals are probably rare in self-selected activities such as sport, it nevertheless appears plausible that individuals engaged in achievement-oriented activities may, at times, experience self-related affects akin to those present in a learned-helplessness state.

A self-related affect that was reported often in the failure conditions was guilt. Recently, Weiner and Brown (Brown & Weiner, 1984; Weiner, 1984; Weiner & Brown, 1984) have attempted to identify the antecedents of guilt and shame. They have found that guilt is likely to be experienced in a private fashion, whereas shame is more readily experienced in a public context. Their research might shed light on the present findings, which revealed that guilt but not shame was reported by individuals in failure situations. Because the present situation was private in nature (affects were reported individually, and

subjects remained anonymous), it is possible that guilt affects were overrepresented at the expense of shame affects. Future research on this issue appears important because it may lead to a better understanding of the antecedents and consequences of these two types of self-related affects.

The present findings on guilt also corroborate Deci and Ryan's (1985) analysis of competitive settings. These authors suggested that individuals involved in such environments are likely to demonstrate an introjected motivational style. More specifically, individuals in such contexts are assumed to put their self-esteem on the line. After success they reward themselves affectively through pride and after failure punish themselves through guilt and shame. The present findings that guilt and pride are prominent self-related affects therefore lend credence to Deci and Ryan's analysis. In the same vein, findings in the success conditions that pride was the most often reported affect provide support for the interactional (Atkinson, 1964) and attributional (Weiner, 1972, 1979, 1985) achievement motivation theories that ascribe motivational properties to pride and shame in success and failure situations, respectively. Shame, however, was not reported (at least not as the first response). Thus, this aspect of these theories was not supported by the data of this study.

The effects of the situational factors on the prevalence of self-related affects proved to be quite interesting. More self-related affects were reported in failure than in success conditions, which is contrary to the motivational interpretation of the self-serving attributional bias (in which people take credit for their successes but deny responsibility for their failures; see Zuckerman, 1979). On the other hand, these findings are in line with recent results from Greenberg and Pyszczynski (1986) on self-focusing tendencies. These researchers have shown that individuals are more self-focused following failure than following success and that such a self-focusing style is likely to serve at least a maintaining function and perhaps a triggering role in the experience of negative self-related affects such as depression (see Pyszczynski & Greenberg, 1987). Thus, future work on the antecedents of negative self-related affects may lead to important insights for psychotherapeutic purposes.

Finally, it should be emphasized that these findings held for both personal and team success and failure experiences. However, there was a nonsignificant tendency ($p < .13$) for self-related affects to be more prevalent in the personal than the team condition. Thus, although the personal versus team variable did not lead to as strong effects as expected, there was a tendency in the predicted direction. The reason for this lack of significant effect seems to lie in the team condition, where a hefty 64% of all affects reported dealt with the self. Although somewhat surprising, these findings are nevertheless in line with those of Ross and Sicoly (1979), who have shown that individuals engaged in group ventures ascribe themselves more responsibility for team outcome than they ascribe to other team members. Through such a bias, in-

dividuals may allow themselves to experience more self-related affects in team conditions than is probably warranted.

In sum, the present results provide strong support for the assumption that self-related affects represent an important and prevalent experience of participants engaged in achievement-related activities. Future work on theories devoted to their understanding is therefore deemed important.

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