

## On Emotion in Sport: Theoretical and Social Psychological Perspectives

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This paper presents and critically assesses four major cognitive theories of emotion. Theories were selected on the basis of their pertinence to a social psychological study of emotion in sport. Four cognitive theories of emotion by Schachter (1964), Lazarus (1966), Arnold (1960), and Weiner (1981) were reviewed. Strengths and weaknesses of these theories were examined. Cognitive theories of emotion were also shown to be amenable to theoretical research in sport. It was suggested that a comprehensive theory of emotion in sport should incorporate aspects of different cognitive theories of emotion thus leading to a better understanding and prediction of emotion in sport settings. Such a comprehensive theory, however, must await future research. Issues for a social psychology of emotion in sport were formulated. It was argued that emotion research in sport should be incorporated within a social psychological framework. To this end it was suggested that a better understanding of the antecedents and consequences of affect is needed in order to fully understand emotion as experienced by sport participants.

At present the field of social psychology is undergoing a profound change. In effect, whereas the 1970s proved to be the decade of the study of cognitions, the present trend indicates that the '80s may very well be the decade of the study of emotion or affect.<sup>1</sup> Harter (1981), in line with several other psychologists, has welcomed this change:

It is refreshing to see that psychologists have recently rediscovered affect. Emotion is now in. Hedonic tone is legitimate. We've reinvented another wheel. And we feel good about it . . . ! I would like to convince others that any compelling theory must make room for affect as well as cognition and behavior. Lots of room. In fact, affect should be given center stage. (p. 5)

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<sup>1</sup>Emotions and affect will be considered as synonymous in the present discussion.

Sport represents an area wherein emotion constitutes an important aspect of one's involvement either as an athlete, coach, referee, or fan. Individuals who have participated in sport and related activities have experienced the pervasiveness of emotion. One can experience anxiety before the competition, pride in achievements, and shame in failure which may influence our decision to pursue participation in sport (Weiner, 1979). On the other hand, one can also express anger toward the official for blowing a call and gratitude toward teammates for helping, or again be the target of emotional behaviors such as aggression from opponents and criticisms from the coach. Thus, not only does emotion appear to have important consequences for our own behavior but it also appears to have some bearing on our interpersonal behaviors in sport. Emotion, then, seems to be the cornerstone of a complex network of behavioral consequences for the individual both at the intra- and interpersonal levels. Consequently, emotion in sport would appear to deserve experimental scrutiny. Yet, surprisingly, it has scarcely been studied by sport psychologists.

The purpose of this paper is to kindle interest in the study of emotion in sport. More specifically, the purpose of the paper is to critically review cognitive theories of emotion and show how each one may lead to a better understanding and prediction of emotion in sport. The paper is divided in three major sections. In the first section, issues and problems related to the definition of emotion are presented briefly. Deci's (1980) definition of emotion is introduced. This definition incorporates the subjective, physiological, and behavioral components of emotion. The second section deals with the cognitive theories of emotion. The theories of Schachter (1964), Lazarus (1966), Arnold (1960), and Weiner (1981) are introduced and assessed. It is further shown how each theory may help understand distinct emotional phenomena. Finally, the third and last section deals with social psychological issues in the study of emotion in sport. Issues dealt with include the study of cognitions as antecedents of emotions, and the nature of the intra- and interpersonal consequences of emotion.

### Emotion Defined

Defining emotion represents a very difficult task. Boucher (1979) suggests that "a summation of the art of studies of emotion [is that] we are looking for a definition" (p. 159). Similarly, Strongman (1973) submits that "at present emotion defies definition" (p. 2). In fact, Strongman (1973) believes that the field of emotion is in such a state of confusion that he refuses to disclose his own definition of emotion for fear that it may bring even more confusion! The major source of the problems encountered in attempting to define emotion originates from the lack of communication and integration of the different areas of research, especially as they pertain to different theoretical approaches. In effect, it is not surprising that psychologists postulating the perturbing nature of emotion (e.g., Young, 1961) tend to define emotion in a different fashion than those psychologists who attribute to emotion motivational properties (e.g., Arnold, 1960; Leeper, 1948, 1963; Tomkins, 1962, 1963).

Although it appears rather difficult to arrive at a thorough comprehensive definition of emotion, it is still possible to indicate the components of emotion which have been studied experimentally. Young (1973) suggests there are three such components. The first refers to the conscious or subjective experience of emotion. This constitutes what is subjectively experienced by the individual while he or she is emoting. An athlete may thus experience feelings of competence, anger, or happiness

following a basketball game. This dimension of emotion has been studied primarily by psychologists endorsing a cognitive and/or phenomenological approach (e.g., Arnold, 1960; Lazarus, 1966; Schachter, 1964; Weiner, 1981).

A second component of emotion which has been studied experimentally is that of the physiological changes in the autonomic nervous system that take place during emotion. Examples of such changes are increases in heart rate, blood pressure, galvanic skin response, and visceral functioning. According to this view, an individual would be angry if vasodilation of blood vessels in the face is found. Psychophysicologists (e.g., Cannon, 1927/1968) have been the major proponents of this position. A third and final component of emotion which has been studied experimentally is observable emotional behavior. To grind one's teeth, for instance, or to verbally threaten someone may be seen as indicative of the emotion of anger. This approach to the study of emotion has been followed chiefly by behaviorists (e.g., Millenson, 1967), although some cognitive social psychologists (e.g., Schachter & Singer, 1962) have also made use of this behavioral (or expressive) component of emotion.

In considering the three fundamental aspects of emotion presented above, Deci (1980) has offered a general definition of emotion. Although not integrative as such, this definition highlights the importance of each of the three components of emotion.

An emotion is a reaction to a stimulus event (either actual or imagined). It involves change in the viscera and musculature of the person, is experienced subjectively in characteristic ways, is expressed through such means as facial changes and action tendencies, and may mediate and energize subsequent behaviors. (p. 85)

### On the Importance of Cognitive Theories of Emotion for Sport Research

The research domain of emotion is vast and accordingly, several theories have been formulated in order to understand this complex phenomenon. The purpose of this section is not to introduce all these theoretical formulations. This task is left to other authors (e.g., Izard, 1977; Strongman, 1973, 1978). Rather, the goal of this section is twofold. First, cognitive theories of emotion are introduced and assessed. The present analysis restricts itself to cognitive theories of emotion because a considerable amount of research has accumulated over the last 25 years indicating that cognitions play a causal role in the experience of emotion (London & Nisbett, 1974). Thus, other theories important for historical reasons (e.g., Cannon, 1927/1968; James, 1884/1968) but which do not deal with the cognitive mediating process leading to emotion are not discussed. The cognitive theories presented herein have been selected on the grounds of: (a) sound theorizing, (b) their influence on current research and theorizing, and (c) their potential contribution to the understanding of emotional phenomena in sport. These theories are: (1) Schachter (1964), (2) Lazarus (1966), (3) Arnold (1960), and (4) Weiner (1981). The second purpose of this section is to show how each cognitive theory pertains to distinct emotional phenomena and how research organized along the lines of each one can lead to a better understanding of emotion in sport.

## Schachter

*The theory.* One of the most popular theories of emotion from a social psychological standpoint is that of Schachter. Following the lead of Duffy (1962) and Lindsay (1951), who suggested that most emotions are accompanied by a rather general level of arousal, Schachter and Singer (1962) posited that emotion results from a labeling of this arousal produced by a cognitive interpretation of the situational context. Schachter and Singer (1962) summarized the theory as follows:

- (1) Given a state of physiological arousal for which an individual has no immediate explanation, he will 'label' this state and describe his feelings in terms of the cognitions available to him . . . (2) Given a state of physiological arousal for which an individual has a completely appropriate explanation . . . no evaluative needs will arise and the individual is unlikely to label his feelings in terms of the alternative cognitions available . . . (3) Given the same cognitive circumstances, the individual will react emotionally or describe his feelings as emotions only to the extent that he experiences a state of physiological arousal. (pp. 381-382)

Thus, according to Schachter's theory, both arousal and cognitions are necessary determinants of emotion. For example, successful athletes who experience a high level of arousal following the game would search the environment in order to explain this increase of arousal. This epistemic search may indicate that they have played well. The athletes would then label their state of arousal as being joy or happiness and would feel and behave accordingly. However, to the extent that these athletes are unaroused or already have an appropriate explanation for their arousal, no epistemic search would take place. The theory does not indicate how athletes would come to feel happy in such an instance. Schachter's theory is summarized in Figure 1.

Schachter's theory has been of great importance in social psychology. It has generated a lot of research which has evidenced the importance of cognitions as well as the situational context as determinants of emotion. Although this research has been theoretical in nature (e.g., Schachter, 1964; Schachter & Wheeler, 1962; Singer, 1963), it has also been concerned with applied areas such as romantic love (e.g., Berscheid & Walster, 1974; Dutton & Aron, 1974), psychopathy (Schachter & Latane, 1964), aggression (e.g., Zillman & Bryant, 1974; Zillman, Johnson, & Day, 1974; Zillman, Katcher, & Milavsky, 1972), and obesity (Schachter & Gross, 1968). Still, the theory has been criticized harshly on at least three grounds. First, research purporting to support the theory has been attacked on a methodological basis. Plutchik and Ax (1967), for instance, argue convincingly that the Schachter and Singer (1962) study, which has been presented by Schachter as important evidence for the theory, is replete with methodological flaws. Furthermore, the results from two recent studies (Marshall & Zimbardo, 1979; Maslach, 1979) have failed to yield results consistent with Schachter's theory. More specifically, results from these two studies reveal that unexplained arousal does not lead to an epistemic search but rather to negative affective states. While Schachter and Singer (1979) presented a convincing rebuttal to these studies, the fact remains that little experimental validation for the theory has come outside Schachter's laboratories.

A second critique addressed to Schachter's theory concerns its incompleteness in explaining precisely how cognitions and arousal combine in producing emotion (Leventhal, 1974, 1980). Indeed, the theory posits that both cognitions and arousal

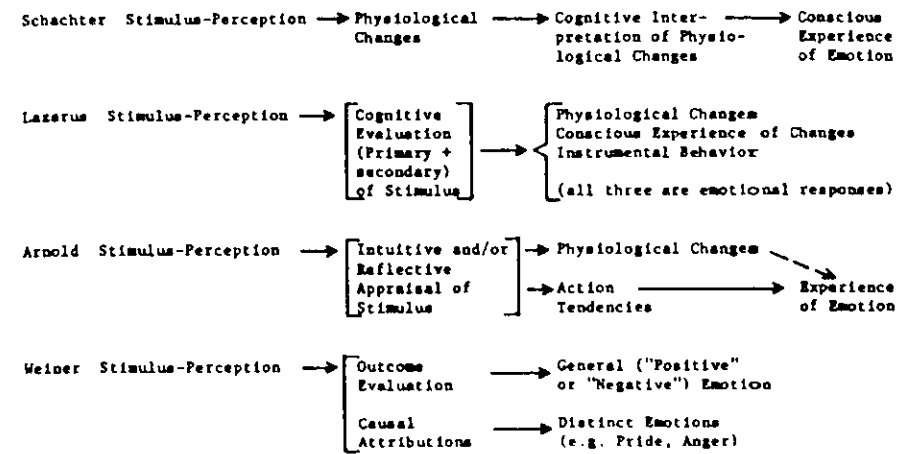


Figure 1--Summary of the cognitive theories of emotion reviewed.

represent necessary (but insufficient) determinants of emotion. However, the theory only pays lip service to the interplay between these two components of emotion. A third and final critique is presented by Zillman (1978). Zillman has challenged the theory for not specifying the origin of arousal. In effect, the theory "suffers from a basic theoretical deficiency: It fails to explain why the individual responds in an aroused fashion to certain stimulus conditions in the first place" (p. 354).

*Implications for sport research.* Because Schachter's theory of emotion appears to account primarily for emotional experience in situations wherein individuals do not know the cause of their arousal, much of the research dealing with the theory has focused on the misattribution of arousal (see Harris & Katkin, 1975, for a review of this literature). In general, research has shown that it is possible to modify a person's emotional reaction toward a given stimulus by leading the individual to attribute (or misattribute) the change of arousal to a cause other than the actual stimulus.

Zillman and his colleagues (Zillman & Bryant, 1974; Zillman, Johnson, & Day, 1974; Zillman, Katcher, & Milavsky, 1972) have conducted research on this issue which appears relevant to a social psychological approach to the study of emotion in sport. In one of their studies, Zillman et al. (1974) investigated the effects of residual excitation from strenuous physical exercise on anger and aggressive behavior. Subjects were provoked, engaged in exercise, and were provided with an opportunity to retaliate against the instigator. Opportunity for retaliation was either offered immediately after exercise or after a brief recovery period. In line with Schachter's theory of emotion, Zillman et al. (1974) posited that anger and aggression would be higher in the "partial recovery" condition than in the "no-recovery" condition because in the partial recovery condition all cues (either exteroceptive or interoceptive) related to the physical exercise would be removed thus allowing the possibility that the individual's increased arousal would be misattributed to the annoyer's presence. Results from the study supported this analysis. Subjects retaliated more after the partial recovery period than immediately after the exercise period.

The results from the Zillman et al. (1974) study provides support for Schachter's theory within this type of context. They also point out the interesting possibilities

that this experimental paradigm may hold for emotion research in sport. For instance the Zillman et al. (1974) approach could be readily used to study anger, aggression, and violence in sport. Take the example of the hockey player who skates toward the corner in order to get the puck. Suddenly, he sees an opposing player getting ready to hit him. The former player gets ready for the hit and experiences an increase of bodily arousal. To the extent that the source of this arousal is unknown to the player and that it persists following the body check, the source of this arousal could be misattributed to the malevolent intent of the other player. The arousal could then be labeled as anger and potentially lead to aggression and violence against the annoyer. The Zillman et al. (1974) analysis of Schachter's theory is also exemplified by the coach who comes in irritated at practice following a terrible day at work. During practice, he or she realizes that Bill, one of the players, is just going through the motions. Still feeling irritated, the coach now misattributes this unpleasant feeling to Bill's lack of effort, experiences anger toward Bill, and lets him have it.

The preceding examples underline how anger and aggression may be understood from Schachter's point of view. Although it was seen earlier that the theory is incomplete in several respects, it nevertheless presents an interesting explanation of social phenomena to be found in sport. Future research along those lines appears promising.

### Lazarus

*The theory.* Richard Lazarus and his colleagues (e.g., Lazarus, 1966, 1968, 1975; Lazarus & Averill, 1972; Lazarus, Averill, & Opton, 1970; Lazarus & Cohen, 1977; Lazarus & Launier, 1978) have developed a theory of emotion (mainly negative emotions) in which cognitions play a crucial part. Contrary to Schachter's theory, which suggests that cognitions serve only a labeling function of a preexisting state of arousal, Lazarus posits that how one appraises the situation produces the arousal as well as the ensuing emotion (e.g., Lazarus & Alfert, 1964; Lazarus, Speisman, Mordkoff, & Davidson, 1962). Furthermore, cognitive appraisal is specific to each emotion and serves an adaptive function. In effect, according to Lazarus emotion represents a coping process unique to each person-situation interaction.

Lazarus and his colleagues (Averill, Opton, & Lazarus, 1969) conceive of emotion as being a rather complex system comprising three subsystems. The first subsystem refers to the stimulus properties. Perception of the stimulus, according to Lazarus, is not a passive process but rather constitutes an active interaction between the perceiver and the object according to the objective and subjective properties of the object. The second emotional subsystem consists of the "appraiser subsystem." The appraiser subsystem serves the function of cognitively appraising stimuli. The evaluation can be primary or secondary. Whereas the primary appraisal determines if the stimulus is stressful, secondary appraisal attempts to identify the best way to cope with the stimulus. Generally, when the primary appraisal reveals that the stimulus at hand is not menacing, secondary appraisal does not take place and no emotional reaction is produced. One the other hand, if the stimulus is deemed potentially threatening, secondary appraisal goes into operation. Different types of coping strategies or emotional reactions can then result from this secondary appraisal process. These emotional responses represent the third emotional subsystem and they can be of three kinds. That is, they can be cognitive (e.g., rationalizations), expressive (e.g., facial expressions), or instrumental (behavioral) in nature.

Lazarus' theory of emotion thus represents an intricate relationship among three interrelated subsystems wherein emotional experience and behavior results from cognitive appraisal processes. An example in sport may help illustrate how Lazarus' theory explains emotion. A hockey player skates toward the corner in order to get the puck. Suddenly from the corner of his eye, he perceives an opposing hockey player who comes flying at him with his stick held face-high. According to Lazarus, the first hockey player would then assess through the primary appraisal process that the stimulus at hand (aggressive hockey player) represents a threat. Through secondary appraisal, coping mechanisms would be triggered in order to cope with the threatening stimulus (hockey player). Emotional reactions such as feelings of fear, high GSR, and self-protective behavior (raising his stick and elbows) could then result. Lazarus' theory is summarized in Figure 1.

Lazarus' theory has been supported by several studies, most of which came from his own laboratories (see Lazarus, Kanner, & Folkman, 1980, for a review). However, this has not prevented the theory from being criticized by several psychologists. For instance Arnold (1968) has argued that it is not clear from Lazarus' writings how primary and secondary appraisals interact. Nor is it specified how threatening a stimulus must be judged in order to trigger the secondary appraisal mechanism. Shapiro and Schwartz (1970) contend that the theory only pertains to the coping process and does not constitute a theory of emotion in the broad sense. Finally Buck (1976) blames the theory for being rather incomplete. In effect, Buck correctly argues that a complete theory of emotion must address the issue of both positive and negative emotions. Although recent attempts have been made by Lazarus and his colleagues (1980) to incorporate positive emotions into the theory, these efforts have not been very convincing (see Averill, 1980, for an excellent discussion on the paucity of research on positive emotions).

*Implications for sport research.* As it was seen earlier, Lazarus' theory of emotion posits that emotion represents a coping process triggered by cognitive appraisals. This coping process is experienced at the subjective, physiological, and behavioral or instrumental levels.

Although it has been criticized for not dealing fully with positive emotions, the Lazarus model may represent a very useful theoretical framework to study negative emotions and coping processes in sport. For instance, Smith (1980) has elaborated a conceptual model to stress management training for athletes which borrows heavily from the Lazarus model. This model underscores the role of appraisal processes in emotion and the continuous interaction between the cognitive, physiological, and behavioral domains. By keeping a close relationship between his model and the actual assessment of athletes' reaction to stress (or other emotional problems), Smith can then offer a more specific treatment through intervention at either of the three levels depending on individual and situational factors. This should make for a more effective therapeutic strategy.<sup>2</sup>

The approach proposed by Smith could also lead to several important clinical studies. For instance "Which type of intervention works best for which type of individual and in which type of situation?" "Which type of intervention is likely to

<sup>2</sup>Rachman (1981) recently has suggested a similar approach to the treatment of emotional disorder which is termed a three-systems-model of emotion. See also Hughdahl (1981) for a critique of Rachman's approach.

generalize and persist in actual competition?" "Should we attempt to deal with only one 'channel' of anxiety response or should we work according to a multimodal approach when helping athletes?" These are some of the questions which could be worth investigating. It thus appears that Lazarus' theory, which has given impetus to the Smith model, represents a useful approach to the study of negative emotions, and especially stress, in sports. It is believed that models for other negative emotions experienced in sport based on Lazarus' theory could also be constructed fruitfully.

### Arnold

Magda Arnold is another psychologist who puts a marked emphasis on the cognitive evaluation of the situation in her analysis of emotion. According to Arnold and Gasson (1954/1968):

an emotion or an affect can be considered as the felt tendency toward an object judged suitable, or away from an object judged unsuitable, reinforced by specific bodily changes according to the type of emotion. (p. 203)

This definition represents a good starting point to understand Arnold's (1960, 1970a) theory. Arnold posits that cognitive appraisals represent the critical determinants of emotion. This appraisal is always made according to one's well-being "here and now" and it can be of two types. The first type of evaluation is intuitive and almost automatic. The second type of appraisal is more rational or reflective in nature. While intuitive appraisal is seen in the theory as being essential to the formation of emotion, reflective appraisal only serves to modify, change or reinforce the primary appraisal and it is not indispensable in the production of emotion.

Arnold's theory further points out that cognitive evaluation (whether primary or secondary) produces a felt tendency toward or away from the emotional stimulus and specific bodily changes. Contrary to Lindsley (1951) who suggests that most emotions are accompanied by a general level of arousal, Arnold (1945) submits that each emotion is accompanied by specific physiological changes and that these contribute to the experience of emotion. Arnold argues, however, that the "felt action tendency" is the major basis of emotional experience which leads to emotional behavior. Take the example of two opposing basketball players who collide on one play. The referee calls a foul and moves toward the players in order to designate the culprit. As one player perceives the referee moving toward him, he becomes angry and is ready to jump on the referee for having made a bad call . . . until he realizes that the referee was rather moving toward the other player behind him. The first player's emotion then changes from anger to relief. A secondary and more reflective appraisal of the situation enabled the player to correct his appraisal of the referee's behavior and thus change his emotional experience and behavior accordingly. Arnold's theory is presented in Figure 1.

Although Arnold's theory has been presented here in regard to the psychological aspects, it should be kept in mind that she has devoted much effort to the neurophysiological aspects of her theory (see Arnold, 1960, Vol. 2, 1970b). We will not detail this analysis. Suffice to say that Arnold presents the possible neurophysiological processes involved in the perception-emotion-action sequence. Although this colossal effort deserves consideration, it has nevertheless received criticism for being speculative (see Strongman, 1973).

Other criticisms have been directed at the psychological aspects of Arnold's theory. For instance, Strongman (1973) has submitted that if primary appraisal is almost automatic, as suggested by Arnold, then it may not be necessary to distinguish it from the perception process. Furthermore, such a primary cognitive evaluation process may be more parsimoniously explained by a conditioning process (Buck, 1976).<sup>3</sup> Nevertheless, critiques toward Arnold's theory have been less harsh than those directed at the other cognitive theories such as those of Schachter and Lazarus. The reasons for this state of affairs seem threefold. First, Arnold's theory takes into account the human propensity to evaluate things in relation to oneself. Second, it explains how increases in arousal and physiological changes come about. And third, it deals with both positive and negative emotions. Arnold's theory thus appears to represent an important and rather complete theory of emotion. For reasons which should become clear later, implications for sport research derived from Arnold's theory are presented jointly with the implications stemming from Weiner's theory of emotion.

### Weiner<sup>4</sup>

*The theory.* We have seen earlier that both Arnold and Lazarus posit an appraisal process which elicits emotional reactions. Realizing that no systematic research had investigated specific links which may exist between cognitions and affects, Weiner decided to probe this relationship in two studies (Weiner, Russell, & Lerman, 1978, 1979). In these studies, subjects were instructed to read scenarios in which another person failed or succeeded at a task for a given reason or attribution (Weiner et al., 1978) or to recollect one's success and failure experiences as attributed to different causes (Weiner et al., 1979). Subjects were then asked to write the affects which would result from each situation. The results from these two studies were essentially the same and form the basis of Weiner's theory of emotion. Weiner (1980a) summarized his theoretical position as follows:

In achievement situations there are (at least) three sources of affect. First, there are emotions tied directly to the outcome. One feels 'good' given success and 'bad' given failure, regardless of the reason for the outcome. These probably are the initial and strongest reactions. Second, accompanying these general feelings are more distinct emotions, such as gratitude or hostility when success or failure is due to others; surprise when the outcome is due to luck; and so on. Third, the affects that are associated with self-esteem, such as competence, pride, and shame are mediated by self-ascriptions. Many emotional reactions are common to ascriptions of either ability or effort, the two dominant internal attributions. (p. 368)

<sup>3</sup>Such a critique could also be directed to Lazarus' theory. In effect, the theory also posits a primary appraisal process which assesses the encountered stimulus almost automatically.

<sup>4</sup>The inclusion of Weiner's theory of emotion could be questioned on several grounds. First, the theory does not discuss sufficiently how it deals with physiological arousal and thus may appear to be incomplete. And second, the theory is not well articulated and does not represent a compelling theoretical statement. The theory was included, however, because it follows nicely on the work of Lazarus and Arnold and attempts to map the links between specific cognitions and emotions. The theory is also presented here because it has already been introduced to sport psychology researchers (Weiner, 1981). The reader thus may be already familiar with the theory and may see it as being directly applicable to the sport domain.

Thus, according to Weiner (1980b, 1981) the subjective experience of emotion is diversified and depends on the meaning attached to the situation. As indicated above, the subjective outcome leads to a general type of affect whereas causal ascriptions for the outcome lead to more distinct emotions. Finally, causes can be dimensionally linked and these attributional dimensions can lead to enduring types of emotions. Although the dimension of locus of causality has been the subject of most research (e.g., McFarland & Ross, 1982) recent studies have also assessed the effects of the attributional dimensions of stability (Golin, Sweeney, & Schaeffer, 1981) and of control (Meyer, 1980; Meyer & Mulherin, 1980; Weiner, 1980c, 1980d) on affect. The results from these studies reveal that all three dimensions are involved in the elicitation of affect, and they may even combine themselves in producing affect (Forsyth & McMillan, 1981; Weiner, 1979). Weiner's theory is summarized in Figure 1.

Because Weiner's theory of emotion is very recent, it is too early to present a comprehensive critique of the theory. Certain points deserve mention, however. First, the theory is mainly issued from two studies (Weiner et al., 1978, 1979) with methodological flaws (see Ryan, 1981, for a discussion on this issue). Thus, the theory should be considered tentative in nature and may be subject to revision in the near future. Second, because of his methodological approach (mainly through imaginary scenarios) to the study of emotion it is unclear whether Weiner's theory is one of emotion or a theory of thoughts about emotion. A third point is that the theory appears to be restricted to situations wherein the individual has ample time to make elaborate causal ascriptions and may have problems dealing with instantaneous-type of emotions such as fear. The theory will have to address this point in the future.

A fourth and final issue to be raised refers to the relative unimportance accorded to the effects of outcome on affect. Weiner's position which suggests that outcomes produce only general-type of affects such as feeling "good" and "bad" is not only at odds with results from a body of research which shows that success/failure experiences influence athletes' feelings of satisfaction (e.g., Gill & Gross, 1979; Passer & Scanlan, 1980), anxiety (Scanlan & Passer, 1978, 1979), and competence (Vallerand, 1981; Vallerand & Reid, Note 1) but it is also in disagreement with results from Weiner's own studies (see Ryan, 1981). It thus appears that the effects of the subjective outcome on affect deserves more attention than it is currently given in Weiner's theory. Future research should seek to determine how the effects of the subjective outcome differ from that of attribution and the causal dimensions.

In sum, Weiner has presented a highly rational theory of emotion which represents an important first step toward a mapping of which cognitions produce which affects. More work is needed, however, in order to disentangle some of the issues and criticisms raised in this paper.

*Arnold and Weiner: Implications for sport research.* As it was seen earlier, the theories of Arnold and Weiner differ on several accounts. For instance Arnold posits that the intuitive appraisal is very important and implicated in all emotions. Weiner, on the other hand, suggests that the intuitive appraisal (or outcome in achievement situations) only determines general positive and negative emotions (e.g., feeling good/bad), in the case of success and failure, respectively. With respect to other emotions, Weiner proposes that they result from causal attributions. While Arnold would not negate the influence of reflective (attributional) appraisal on emotion, she would nevertheless argue that this influence of causal attributions is secondary and

only takes place after the intuitive appraisal. Although the two theories are different, they do agree on certain points. First, both theories postulate the existence of cognitions as elicitors of emotion. And second, they both posit the existence of a reflective appraisal process. Thus, the two theories posit some common mechanisms.

Vallerand (1981) recently proposed a conceptual model which attempts to present an integrative view of the antecedents and consequences of self-related affects (e.g., feelings of competence, pride, etc.) in achievement situations in sport while incorporating several lines of research, including the Arnold and Weiner theories. For the present, only the aspect of the antecedents of self-related affects will be discussed.

In line with Arnold, Vallerand (1981) posited that emotion in sport is the result of appraisals which can be intuitive and reflective. Vallerand proposed that the subjective perception of performance represents a case of an intuitive appraisal in sport. It was also suggested that Weiner's causal attributions correspond to Arnold's reflective appraisal process and that when the attributions made are internal, self-related affects should be experienced (Weiner, 1979). Further, based on recent developments in the field of achievement attributions (Frieze, Francis, & Hanusa, 1983; Maehr & Nicholls, 1980), the model proposes that both highly positive and highly negative performance appraisals lead to internal ascriptions. Thus, in retrospect, the conceptual model proposed by Vallerand (1981) postulates the existence of the following causal temporal sequence. Following performance, the athlete subjectively evaluates his or her performance. This judgment of performance then produces the emission of internal causal attributions—this in order to explain the performance level attained. The judgment of performance and internal causal attributions then produce jointly an increase of (positive or negative) self-related affects.

In order to test his theoretical model in a sports setting, Vallerand (1981) conducted a study with basketball players. Immediately following the first game in provincial basketball tournaments, male and female basketball players were asked to answer a questionnaire regarding their personal performance. This questionnaire asked several questions including some concerning judgment of personal performance, causal attributions, and self-related affects. Following certain preliminary statistical analyses, path analyses were performed separately on the data for individuals who reported having experienced personal success and failure. Results from the path analyses yielded strong support for the proposed causal sequence. More specifically, results indicated that in both the personal success and failure conditions, self-related affects resulted from the joint contribution of judgment of performance and internal causal attributions. In line with Arnold but contrary to Weiner it was found that judgment of performance had more pronounced effects on affect than internal attributions.

Thus, the Vallerand (1981) study provides support for the model which posits that positive and negative self-related affects result from the effects of intuitive (performance) and reflective (attributional) appraisals of one's performance. Future research should attempt to determine how other types of emotions (e.g., interpersonal affect: gratitude, anger, etc.) are linked to these appraisal processes.

### Summary

In this section, the theories of Schachter (1964), Lazarus (1966), Arnold (1960), and Weiner (1981) were presented and critically assessed. It was shown how each theory may be amenable to emotion research in sport, and how each theory appears

best suited to deal with different emotional phenomena. For instance, Schachter's theory appears to deal with emotion best in conditions where individuals are uncertain about their feelings. Lazarus' theory, on the other hand, deals very well with stress and coping. While Arnold's theory is comprehensive in nature, Weiner's theory appears to be mostly a theory of the effects of rational appraisal on emotion. It was shown how the latter two theories could be integrated into a theoretical model on the antecedents of self-related affects. Much research is needed before we can fully understand how each of the cognitive theories apply to emotion. It is believed, however, that through systematic research it will be eventually possible to propose a model which incorporates the best of each theory, thus providing a better understanding and prediction of emotion in sport.

### Issues on a Social Psychology of Emotion in Sport

Emotion traditionally has been studied in the area of experimental psychology (Lindsley, 1951; Young, 1973). Within the experimental paradigm, emotion has often been studied in a vacuum devoid of the social elements usually found in the environment. However, as it was proposed by the cognitive theories presented in this paper and as underlined by the literature on the effects of cognitions on emotion, how one construes the social environment is a primary determinant of emotion. It then follows that the experimental psychological approach to the study of emotion (e.g., Cannon, 1927/1968; Young, 1961) represents a special case of the social psychological approach wherein the critical variables and parameters have been arranged to have zero values. It is the social psychological approach which represents the general case. It is argued that advances in the field of emotion will only be achieved when this is recognized and emotion is studied within the context of the social milieu. In this last section, I would like to briefly outline certain issues which will need to be addressed from a social psychological standpoint in order to lead to a better understanding and prediction of emotion in sport. These are presented below.

#### *Cognitions as Antecedents of Emotions*

It is now accepted that emotion is a function of how the situation is appraised by the individual. Yet very little *systematic* work has been done on the nature of this appraisal system. Pursuing Arnold (1960), it would appear fruitful to delineate the conditions under which the intuitive and reflective appraisals are operative. Already we know that the reflective appraisal is likely to be in operation when negative and unexpected events take place (Wong & Weiner, 1981), as well as when uncertainty sets in (Schachter & Singer, 1962). Thus, at least under these conditions emotion could result from the reflective appraisal. Situations in which the intuitive appraisal is operating still remain to be determined. Is it always in operation as posited by Arnold? It is hoped that the recent work in social cognition (e.g., Fiske, 1981; Lowe & Kassir, 1980) will provide the necessary impetus for such study to take place.

Not only do we need to determine when the intuitive or reflective appraisal (or both) produce emotion, but we also should seek to determine if the *process* is the same for all emotions or if the process changes with the *content*, or the emotion. Weiner and Graham (in press) posit that it is possible to formulate a theory of both content and process of emotion. Indeed Weiner's theory is representative of such a

theoretical formulation. As indicated earlier, however, Weiner has neglected the fundamental importance of the intuitive appraisal system in his analysis. Further, the methodology used by Weiner and his colleagues contains certain methodological inadequacies (Ryan, 1981). Future research on emotion should assess the relative contribution of the intuitive and reflective appraisal processes to the elicitation of certain classes of emotion as experienced by participants in sports, but while improving on the methodology used by Weiner and his colleagues. Such a research approach should help us determine if content (or the type of emotion) matters or if the development of a nomothetic theory of emotion is an attainable objective for a social psychology of sport.

#### *On the Consequences of Emotion*

In the previous subsection it was argued that an important area of future research is the determination of which cognitions (intuitive and/or reflective) are involved in eliciting emotion. Now, it is argued that an equally important area of future research lies in delineating the consequences of emotion for human behavior in sport. Generally, two clashing positions have been presented on the consequences of affect, namely, emotion has been seen as either perturbing (Young, 1973) or facilitating (Arnold, 1960; Leeper, 1948, 1963) behavior.

Although the two traditional approaches disagree on the effects of emotion on behavior, according to Young (1973) this major disagreement appears to be a question of terminology and definition:

The view that emotion facilitates goal-directed behavior is very different from the view that emotion is an acute affective disturbance. But there would be little room for argument if for 'emotion' we substituted terms like affective process, interest, mood and the like. Positive forms of affective processes are facilitative and organizing rather than disruptive. Negative affectivity also may lead to adaptive behavior. The matter boils down to a question of terminology and definition. (p. 28)

Thus, it can be safely suggested that certain types of emotions may be disorganizing whereas others may be organizing behavior. Yet again, very little research has ascertained the effects of emotion on behavior in sport. It is suggested that an important avenue of research in sport lies in outlining the link between emotions and their consequences. These consequences appear to take place at both the intra- and interpersonal levels.

*Intrapersonal consequences of emotion.* The intrapersonal consequences of affect on behavior have been a concern for sport researchers. Without question the effects of anxiety (A-state)<sup>5</sup> on performance represent the affective intrapersonal consequences which have been studied the most. The existing evidence on the A-state-performance relationship tends to support the inverted-U hypothesis (Klavara, 1978; Martens & Landers, 1970). That is, performance improves as A-state increases up to an optimal level; additional increases in A-state undermine performance (Landers,

<sup>5</sup>A-state and arousal often are used interchangeably. While the two terms are closely related they are not synonymous. Arousal refers to the intensity dimension of emotion while A-state refers to both intensity and direction (Martens, 1977). The term A-state is used here because it is more in line with the theme of this paper.

1980). This basic inverted-U relationship between A-state and performance appears to be qualified by task and individual characteristics. More specifically, the optimal level of A-state appears to be higher on easy than difficult tasks (Carron, 1965). Further, for a given task certain individuals may have an optimal level of A-state which is considerably higher than that of other individuals (Klavara, 1978). Thus, A-state affects performance. Future research should assess whether other emotions produce similar effects on performance. Clearly more research is needed in order to fully understand the emotion-performance relationship.

Other sport investigators (e.g., Vallerand, 1981; Vallerand & Reid, Note 1) have assessed the relationship between self-related affects (i.e., feelings of competence, pride, etc.) and intrinsic motivation. In line with tenets from cognitive evaluation theory (Deci, 1975, 1980; Deci & Ryan, 1980), results from these studies reveal that positive self-related affects produce increased intrinsic motivation. On the other hand, negative self-related affects lead to a decrease in intrinsic motivation toward the activity. Thus, emotions not only may affect one's performance but also one's intrinsic motivation and decision to pursue or terminate participation in sport.

With respect to motivational considerations, Weiner (1977) has suggested that emotions represent major determinants of motives and that distinct emotions are linked to specific motives. For instance, anger leads to an aggressive motive, feelings of pity to a helping motive, etc. Thus, Weiner (1977) posits that a mapping of which affects underlie which motives should be undertaken because it could lead to a better understanding and prediction of motivation and behavior. Surprisingly, no research has followed from Weiner's suggestions. It is felt that the approach proposed by Weiner deserves empirical assessment in sport. Such research could lead to an understanding of which affects underlie which motive and also of how the effects of affects on motives may be augmented or nullified by situational conditions. For instance, it is expected that the effect of anger on aggression against an opponent is mediated by the presence/absence of the referee. That is, the effects of anger on the aggression motive may be thwarted by the presence of the referee whereas they may be augmented by his or her absence. The study of this emotion/motive relationship would appear to be a stimulating research area for sport researchers.

*Interpersonal consequences of emotion.* Another important aspect of the consequences of emotion from a social psychological perspective refers to the role emotion may play in interpersonal relationships. There are at least two types of effects emotion may have on interpersonal relationships and both would appear to be important for a social psychology of sport. The first refers to the type of behavior displayed toward an individual which follows the affect experienced toward this person. For instance, if a coach is upset at a player during a game, he or she may substitute the player for another one. The same is true of the goalie who does not get any help from his teammates and keeps getting goals scored against him. He may get very upset with his teammates and begin cursing at them. One can readily see that emotion may play an important role in interpersonal relationships in sport.

The second way emotion may affect interpersonal relationships is through the effect one person's display of emotion may have on another person's thoughts, feelings, and behavior toward this first individual. Take the example of the basketball player who is called for a foul and who expresses anger at the official for having "goofed" at the call. What effects will this expression of emotion have on the referee's thoughts and feelings toward the player? How will the official behave the next time he or she is in a position to make a call involving the player? The same

questions could also apply to coach-players and teammates relationships. Thus, overall research on the interpersonal consequences of affect could potentially lead to important theoretical and applied advances as it concerns emotion and interpersonal relations in sport. Future research in sport along those lines would thus appear promising.

### Summary and Conclusions

This paper presented and critically assessed four theories of emotions from Schachter (1964), Lazarus (1966), Arnold (1960), and Weiner (1981; Weiner & Graham, in press). In spite of conceptual and methodological weaknesses, cognitive theories and especially that of Arnold seemed to account for a parsimonious explanation of emotions as experienced in sport. It was proposed that future emotion research in sport be conducted under sound theoretical guidelines. To this end, it was suggested and shown that the cognitive theories of emotion introduced could apply to the diversified emotional phenomena to be found in sport. Perhaps a comprehensive model incorporating the best of those cognitive theories could lead to a nomothetic theory of emotion applicable to sport. It was also suggested that emotion research in sport should be conducted within a social psychological framework. In line with this proposition, issues for future research were discussed. These pertained to the antecedents and the intra- and interpersonal consequences of emotion.

Very little work in emotion has been done up to now in sport. It is hoped that this paper has served the purpose of underscoring the importance of the study of emotion in sport as well as proposing research strategies. It is believed that research efforts in line with those proposed here could lead to advances in our understanding of emotion and the consequences it may have for sport participants.

### Reference Note

1. Vallerand, R.J., & Reid, G. *On the causal effects of perceived competence on intrinsic motivation*. Manuscript submitted for publication, 1983.

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