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## The Importance and Application of Explanatory Style, Emotional Control, and Goal Setting for Athletes: A Psychological Skills Program

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# The Importance and Application of Explanatory Style, Emotional Control, and Goal Setting for Athletes: A Psychological Skills Program

## Abstract

It has been determined that one's performance as an athlete is determined by both mental and physical skills, both learned and innate. Many psychological skills under the heading of Positive Psychology are of great importance to athletes if they wish to maximize performance and well-being in a sport. This paper illustrates how explanatory style, emotional control, and goal-setting contribute to the well-being, self efficacy, and improved performance of an athlete, and offers several exercises to help athletes put these mental skills to use in their chosen sport.

## Keywords

Athletics, Explanatory style, emotional control, goal setting, self efficacy, mental toughness, performance

## Disciplines

Other Mental and Social Health | Other Psychology | Psychological Phenomena and Processes | Sports Sciences

The Importance and Application of Explanatory Style, Emotional Control, and Goal Setting for  
Athletes: A Psychological Skills Program

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In Partial Fulfillment of the Requirements for the Degree of  
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Advisor: Gloria Park-Perin

August 1, 2011

The Effects of and Importance of Explanatory Style, Emotional Control, and Goal Setting for Athletes: A Preliminary Psychological Skills Program

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Abstract

It has been determined that one's performance as an athlete is determined by both mental and physical skills, both learned and innate. Many psychological skills under the heading of Positive Psychology are of great importance to athletes if they wish to maximize performance and well-being in a sport. This paper illustrates how explanatory style, emotional control, and goal-setting contribute to the well-being, self efficacy, and improved performance of an athlete, and offers several exercises to help athletes put these mental skills to use in their chosen sport.

## **Introduction**

### **Positive Psychology Overview**

Positive psychology is the study of the factors that enable people, families, organizations, and societies to flourish and function optimally (Gable & Haidt, 2005). Consider a scale of well-being with negative ten representing severe mental illness, ten being complete flourishing, and zero being neither mentally ill nor flourishing. Research in traditional psychology has focused on helping move to the right- more positive side- the part of our population who fall in the “mental illness” or unhappy range. While this is extremely important for the mentally ill and languishing, it doesn’t do much to help the other 90% who do not classify themselves as unhappy or clinical patients (Gable & Haidt, 2005). Traditional psychology does very little for the nine out of ten people who classify themselves as “very happy” or “pretty happy” and it was from this dearth of research on the aspects of psychology that lead to high levels of satisfaction and engagement (e.g. virtues and character strengths) that positive psychology was born (Gable & Haidt, 2005). While the term “positive psychology” might sound soft or imply that the rest of psychology is negative, that is not the case (Seligman, 2010). Positive psychology is, in essence, the science of flourishing, and deals with issues that face the every-day person. As this paper will address, there are many skills under the umbrella of positive psychology that can be learned and refined to produce greater life satisfaction and happiness for those who are already on the positive side of the scale mentioned above. Although positive psychology is helpful to people of all ages, it can be argued that the younger one learns them, the easier it is for new patterns of thought and action to be acquired permanently.

Many researchers in the field (e.g. Seligman, 2010; Reivich, 2011) have noted that younger generations are lacking in resilience. Whatever the reason, this lack of resilience causes these members of our society to face very real challenges during every day activities and can ultimately lead to decreased self-efficacy, self-esteem, life satisfaction, and even depression (Reivich, 2011). If resilience- the ability to deal with and overcome adversity in a manner that leaves one stronger after the setback than they were before it (Reivich, 2011)- could be taught to our youth before their maladaptive thought processes are allowed to fully develop, we might be able to combat the rise in depression and other conditions that prevent flourishing. One medium that both interests and reaches many youth is sports. The trials and tribulations of playing and mastering sports for our youth can be used as a conduit to deliver the principles of positive psychology that comprise resilience to millions of children nationwide (or worldwide). For this reason, this paper focuses on both why and how that can be accomplished. There are many skills that are necessary for finding success and flourishing on both the athletic fields and in life in general, and the following discussion examines three of these important areas of research in the field of positive psychology.

### **Mental Toughness**

One widely used cliché in sport is “The game is 90% mental”. It seems to have originated from a quote that is usually attributed to baseball legend Yogi Berra: “90% of baseball is mental...the other half is physical.” As much as coaches throw this phrase around, the vast majority spends one hundred percent of allotted practice time teaching and honing physical skills. Sure, a coach might recognize that the mind plays a part in success and he might casually throw out “clear your mind” or “relax” to a foul shooter at the end of a tight game, for example, but those phrases have little or no impact on an athlete who hasn’t been taught the necessary

psychological skills to make that advice effective. Research by Rogerson and Hrycaiko (2002) supports the notion that mere physical practice is not sufficient to sustain improvement over the course of a season or a career. Their research shows that if mental skills are not taught and employed, physical improvement will eventually plateau and/or drop off over the course of a season or similar period of time. In addition to physiological factors that have the ability to negatively affect performance (and ultimately, self-efficacy, confidence, and enjoyment) there are several psychological factors that have similarly negative effects: anxiety, nerves, poor concentration, and self-doubt, to name a few (Gee, 2010). If we are not arming our young athletes with both the physical capability and the mental skills to combat these varied physiological *and* psychological forces, we are doing them a disservice by limiting their overall performance potential and other benefits that can come from athletics. This paper explores three very specific types of mental skills: Explanatory style, emotional control, and goal setting, as these three have been shown to have significant impact on the performance, self-efficacy, and enjoyment of athletes. Exercises in all three are offered as a tool to help coaches guide athletes through the acquisition of the mental skills to compliment their physical training. This author recognizes that these three skills are not the only mental skills that are of importance to an athlete, and the paper concludes with additional recommendations of mental training to round out a complete mental skills training program for athletes.

## **Part 1: Explanatory Style**

### **Introduction to Optimism**

The research on optimism indicates that there are two ways to measure optimistic thinking: how likely one believes a positive event is to occur before it happens, and a method of explaining events that have already occurred (Gordon, 2007). With these two types of optimism

come two different scales with which to measure them. The former, often referred to as dispositional optimism, is frequently measured using the Life Orientation Test (LOT) created by Scheier and Carver (1978). The Attributional Style Questionnaire (ASQ) (Peterson et al., 1982) most often measures the latter. While quantitatively, there are two ways to perceive and measure explanatory style, both are constantly working together in the real world to explain past performances and shape future ones.

There are two reasons why the following discussion focuses mostly on the second type of optimism- that which explains events that have already happened. First, as humans who generally do not possess the gift of sight into the future, we rely on the analysis of past events to predict what is likely to happen moving forward. Second, thousands of encounters throughout our development mold us to have a particular disposition (either optimistic or pessimistic, to varying degrees). This disposition generally reaches through all domains of our existence. It is far easier to help change one's explanatory style in one domain, such as athletics, than it is to try to change their entire disposition. In addition, since we are used to looking at the past to help navigate the future, it makes sense to start with looking at past events and working on existing attributions. These attributions already exist and are concrete, which makes it an easier entry into working with one's explanatory style when compared with trying to assess beliefs about what might or might not happen, but hasn't happened yet. The following discussion attempts to do the following three things: to define both types of explanatory style, to offer evidence showing that explanatory style can affect athletic performance, and to show that it is possible to change one's attributions towards the optimistic side. The final section will talk about several gray areas in the research between optimism and pessimism, and relating to control.

### **Definition of Explanatory Styles**



According to Martin Seligman (2006), there are two ways that one can explain the occurrence of the positive and negative events that they experience on a daily basis: either with an optimistic explanatory style or with a pessimistic one. Other researchers have used the term “attribution” to mean the same thing, as one attributes the cause of an event to a particular phenomenon. Both “attribution” and “explanatory style” will be used throughout this discussion. In *Authentic Happiness* (2002), Dr. Seligman describes an optimist as one who believes the cause of a positive event is personal (as a result of one’s own skill or ability), permanent (almost always present), and pervasive (across all domains). Succinctly, an optimist explains a positive event in terms of “me, always, everything” (Seligman, 2010). Conversely, an optimist believes the cause of a negative event to be unrelated to his skill but to some external cause, that it won’t always be a factor, and that it will not affect all domains of his existence. Seligman (2006) defines a pessimist on the other hand as having the exact opposite explanations than an optimist. A pessimist will attribute the cause of a negative event to a personal trait or skill, a stable phenomenon, and one that reaches across all domains. For positive events, a pessimist will believe them to be caused by an external factor, to be fleeting and unstable, and to occur only in the present domain. From Seligman’s research, it is understood that a positive event would lead an optimist to gain a feeling of mastery, achievement, and confidence, whereas a pessimist would feel like he was just lucky and at the next opportunity, he would find a less positive result.

If negative events were to keep occurring and one felt as if their cause was external, stable, and global, one might learn from the repeated negative outcomes that he was helpless to stop them. Seligman named this phenomenon “learned helplessness” when he discovered it in the 1960’s (Seligman, 2006). This downward spiral of lack of belief in one’s own skill or

control over the situation has been shown to lead to low performance and in many cases can result in varying degrees of depression. In his study with dogs, Seligman (2006) found that those who had learned to be helpless were then unable to help themselves when shown that they had the control and the ability to do so. This learned helplessness phenomenon is very important to consider in many domains of life, especially when teaching, raising, or interacting with children and young adults.

In the world of athletics, athletes are constantly facing events deemed positive and negative by not only themselves, but also by friends, family, and in some cases, by thousands or even millions of people. At face value, one might guess that having an optimistic explanatory style would lead to greater and more consistent performance. There is a substantial amount of research that supports this conclusion as well, and the following section details several studies that have proven the effect of explanatory style on athletic performance at different levels.

### **Evidence Showing the Positive Effect of Explanatory Style on Performance**

In one significant study, Seligman, Nolen-Hoeksema, Thornton, & Thornton (1990) showed that swimmers with an optimistic explanatory style performed better than expected and swimmers with a pessimistic explanatory style performed worse than expected. For this study, the researchers had elite swimmers swim their best event. They were all given false feedback, which led the swimmers to believe that they had swum slightly slower than they actually did. The athletes were then asked to swim the same event again after they were rested. Those with an optimistic explanatory style swam as fast or faster than they had after the first disappointing time. The pessimists in general swam less well than they previously had. Their findings provide strong evidence to support the idea that talent alone does not dictate performance, but

that performance is driven by both an athlete's talent and pattern of explanation of events, both positive and negative.

Rettew and Reivich (1995) performed research with swimmers that supported the findings of Seligman et al. (1990). In addition to swimmers, Rettew and Reivich (1995) have also shown that having an optimistic explanatory style correlated positively with the performance of both Major League baseball teams and professional basketball teams in the NBA. They found that the baseball teams that had an optimistic explanatory style (either infused by the coaches, or a majority of the members thought optimistically) won more games than those with a more pessimistic explanatory style, and basketball teams with an optimistic explanatory style performed significantly better in games following a loss than did their pessimistic counterparts.

Gordon (2007) demonstrated the positive effect that optimism has on performance in a study on soccer players. They coded eight videotaped soccer games of one particular team for positive and negative actions, and connected those performances with match outcomes and explanatory style. Gordon (2007) showed that those players with optimistic explanatory styles completed more passes and took more shots on goal, despite winning or losing, in contrast to their pessimistic peers. Put differently, the optimists maintained a higher and consistent level of performance despite having won or lost previous games.

There has been some research that contests the findings that optimism fosters higher levels of performance. A study by Davis and Saichkowsky (1998) did not support the conclusion that optimistic thinking boosted the performance of hockey players and a study by Hale (1993) proved less-than-conclusive when he compared the ASQ results of athletes classified as "elite" with those classified as "non-elite". In both of these studies, actual

performance was either not measured at all (Hale, 1993), or measured indirectly (Davis & Saichkowsky, 1998); therefore leaving the results open to criticism. The studies by Seligman et al. (1990), Rettew and Reivich (1995), and Gordon (2007), each directly measured performance and showed rather robustly that having an optimistic explanatory style positively impacted performance, especially performances coming after a defeat.

### **Can Explanatory Style Be Changed?**

Early research by Seligman et al. (1988) showed that people suffering from depression were able to change their explanatory style through therapy. Not only did clinicians have success in changing the patient's explanatory style, but also shifting a person's explanatory style towards an optimistic way of thinking, which in turn alleviated depressive symptoms. If changing the explanatory style of one who is in hopeless despair and clinically depressed has been shown to work, it can be assumed that it would be possible and potentially easier to shift the explanatory style of a non-clinical member of the population, such as a collegiate athlete. In some cases, continued poor athletic performance can lead to a feeling of helplessness and despair on the court, so this research is especially relevant for one who has lost hope in at least one domain of his or her life. Another finding by Seligman et al. (1988) showed that changes in explanatory style were long-lasting and were measurable at least one year from the end of treatment. This is important to note because if one can assume that given the tools to evaluate events more optimistically, an athlete can continue to do so without additional help or interventions.

A study done by Miserandino (1998) evaluated the possibility of changing one's attributions in the sport of basketball, specifically with regard to shooting percentage. The results of this study proved that training can serve to alter an athlete's attributional style, and

that this change can subsequently improve performance. Also promising was the fact that the training period was relatively brief (only four weeks) but still showed significant results. She points out that an attributional training program that was integrated into the entire season would have even an even greater impact for the athletes, their attributional change and performance improvement.

A different study by Orbach, Singer, and Murphey (1997) also looked at changing attributional style in basketball. They proved that it was possible to change one's attributional style in an athletic domain. Participants in the non-control groups had significantly adjusted their patterns of explaining negative events through the training they received during the series of trials compared with those who were not trained to use more functional attributions.

Orbach, Singer, and Murphey (1997) pointed to some studies that report findings both consistent and inconsistent with their own. For example, Andrews and Debus (1978) found that internal attributions regarding effort predicted persistence and that it was possible to change attributions to cause more persistent behavior, and thus success, during subsequent challenging tasks. On the other hand, Orbach, Singer, and Murphey (1997), found just as many examples of studies that had findings inconsistent with their own, such as Medway and Venino (1982), who found attributional retraining to be unsuccessful. There are several reasons that might help to explain this research that is not consistent with the findings of Orbach et al. (1997). First, in several experiments, the participants were youth who were responding to an adult when answering questions to measure results. It is possible that they answered in accordance with how they perceived the interviewer might want them to respond. Second, the majority of the inconsistent findings were done at a single point in time, and changing one's habit of attribution decisively, most likely will not happen in one single day. Finally, the level of importance that

the participants placed on the task in the experiment can explain this inconsistency. Those deeming the task to be useful and important showed significant improvement in explanatory style adjustment, while those who felt the task was menial or useless did not show much change (Orbach, Singer, & Murphey, 1997).

### **Gray Areas**

**Self-handicapping, defensive pessimism, and strategic optimism.** There are three concepts that are part of the research on explanatory style, but that don't fit in neatly with either pessimism or optimism, and they are self-handicapping, defensive pessimism, and strategic optimism. Norem (2001) describes all three of these constructs as coping strategies, or strategies that one develops over time in order respond to past or upcoming events. She also explains that these strategies might be used "without awareness of the process, the motivation, or the consequences" (p. 79). While they are not the only three strategies that one might employ, they are all present in and relevant to athletes and sports.

Self-handicapping is a strategy in which one does something to sabotage his chances of performing well on an upcoming task by taking on or proclaiming an impediment to performance. Examples of this include drinking too much alcohol before an event, not practicing before a big game (Norem, 2001), or even forgetting one's usual pair of sneakers. This strategy is purely to protect one's self-esteem as a self-handicapper can blame poor performance on whatever situation he created to handicap his performance without damaging his self-esteem. This strategy is commonly used to combat high anxiety before an important task (Norem, 2001).

Another strategy athletes use to combat pre-event anxiety is defensive pessimism. This strategy causes the user to set low expectations as a result of the anxiety, and then has him

visualizing different ways the task can play itself out (Berglas, 1985). While both self-handicapping and defensive pessimism come about in the face of high anxiety, they differ in that defensive pessimists do not lower their effort as many of the self-handicappers do. They merely lower their expectation so that the result is less of a blow or surprise (Norem, 2001). There is perhaps a price to pay for defensive pessimism, as defensive pessimism seems to provide less of a boost to self-efficacy and confidence than more optimistic thinking might. Some research has shown that females adapt this coping style more often than do their male counterparts (Gordon, 2007).

Defensive pessimism differs from dispositional pessimism in that it is domain-specific and only employed in response to a particular challenge. It differs from the pessimistic explanatory style described by Seligman et al. (1990) in that it is a preparation strategy before the event, and not a way of attributing causes after the fact (Norem, 2001). Strategic optimists tend to have very low or non-existent anxiety and have high belief in their control and ability of most situations. They avoid over-thinking about upcoming events or particular outcomes that might occur, especially negative ones, while preparing what they need to perform the task (Norem, 2001).

**Control.** In the above discussion of the types and definitions of explanatory style and learned helplessness there was no explicit mention of control as a factor. According to Rees, Ingeldew, and Hardy (2005), “controllability is an important attribution dimension that should be directly assessed” (p. 194). Their reasoning, supported by the research of Anderson and colleagues (e.g. Anderson & Riger, 1991), is that people make attributions in order to increase control over situations they face. If they can attribute an event to a controllable cause, they are more likely to feel capable of dealing with similar events in the future. While only some

literature and research includes controllability and others don't, control is an important factor in the performance of an athlete. If an athlete perceives control, he is more likely to work harder to achieve his goal because he believes that if he expends enough effort to change what he can control, that it will have a positive effect on his performance and goal attainment. An athlete with little control will be less motivated to work hard because, to him, he has little influence over the outcome.

There is a phenomenon in sports that encourages athletes to internalize the cause of defeat and externalize the cause of winning. It is difficult to hear an athlete say, "We won because I played really well. I was the best player on the court tonight and I not only hit several big baskets, but I shut down my opponent" during an interview after a game. More frequently (and pleasantly) we hear "Our team played well", "The coach had a great game-plan", or "We got lucky on a few calls and hit our foul shots down the stretch." After a loss, "We just didn't play hard enough down the stretch" is much preferable to "My teammates really blew this one. Sean should have passed it to me but instead he turned it over on our last possession." This would seem to be in direct contrast with an optimistic explanatory style, proven to improve performance, which would dictate that success was attributed to personal causes and defeats to external ones. Grove, Hanrahan, and McInman (1993) provide an excellent explanation for this contradiction. They acknowledge that people make internal attributions because society expects them to or because coaches frequently do not tolerate anything that sounds like it might be an excuse (which is how almost every external attribution would sound.) They posit that internal attributions do not necessarily have to be detrimental because attributing the loss to a personal or internal cause implies that one has the power to change it, and it need be neither stable nor global. In this manner, Grove, Hanrahan, and McInman (1993) have shown that in the domain



of athletics, an internal locus of causality can actually serve to increase motivation for future performances. In this explanation, the work of Mueller and Dweck (1998) is of particular relevance. Mueller and Dweck (1998) highlight the effect that different kinds of praise, and the beliefs that arise because of them, have on motivation and achievement. They found that praise (or critique) of one's state (i.e. effort) serves to motivate while praise (or critique) of one's traits (i.e. ability) tends to de-motivate. An athlete who internalizes the cause for a loss or bad performance should be careful to attribute it to something they did or lack of effort rather than lack of ability or skill. The latter, if repeated enough will lead to decreased performance and belief in one's own capabilities.

### **Practical Application of Explanatory Style to Athletics**

It should be noted, however, that using one strategy across all athletic situations is not the most effective way to achieve top performance at all times. Being pessimistic all the time has obvious negative consequences, as does being optimistic in all situations. Consider the athlete who decides to go to a frat party and drink the night before the big game, thus hindering his performance. It would not be constructive for him to adopt an optimistic style in this situation and attribute his bad performance externally, since the blame does lie with him. This example illustrates the need for athletes to be flexible and accurate in their attributions and to know when to adopt the different explanatory styles (Reivich & Shatté, 2002) so that they may derive maximum psychological and physiological benefit from their sport.

The explanatory style exercise (Appendix I), is intended to show the athlete both optimistic and pessimistic styles of thinking regarding a particular event, and allow him to select the most accurate and constructive explanation of why an event with a negative outcome occurred. This has three purposes: First, to raise an athlete's awareness of his default

attributional style, second, to force the athlete to find explanations outside of his usual pattern of thought, and third, to allow the athlete to feel control in the situation by letting him choose the explanation that is most accurate, thus eliciting a positive response that can have an impact on future performances.

### **Conclusion of Explanatory Style**

The research has shown that the manner in which an athlete explains negative and positive events can have an impact on performance. A more optimistic explanatory style will serve to increase performance and lead to more consistency while a pessimistic style can lead to more poor performances than usual and a decrease in motivation. This explanatory style can be domain-specific and is not the same as dispositional optimism. It has also been proven that it is possible to retrain athletes to have a more optimistic explanatory style and that the resulting shift leads to improved performance. Different strategies such as defensive pessimism, strategic optimism, and self-handicapping fall into gray areas between optimism and pessimism, but are used to deal with upcoming challenges, whether the athlete is aware of what he is doing or not. Finally, the norm in sports is to attribute success externally and failure internally. According to the explanatory model, this would seem to be detrimental, but if control is taken into account, attributing a loss to lack of effort or focus gives the athlete control over the situation and motivates him to correct the problem the next time since he believes it to be in his control. In short, explanatory style has been shown to have significant impact on the performance of athletes, and it is for this reason that explanatory style training is included in this psychological skills program for athletes.

## **Part II: Emotional Control**

### **Introduction to Emotion**

According to Lazarus (2000), emotion is an organized response to one's environment that is both psychological and physical, and that is usually, but not always interpersonal or social. This reaction manifests itself on three levels: internal reports of a subjective experience, the impulses to act or actions that accompany those reports, and physical changes to the body such as a faster heart rate or sweating. These three responses echo the work of Vallerand and Blanchard (2000), who write about essentially the same three human responses to emotion. Some researchers such as Vallerand and Blanchard (2000) and Lazarus (2000), include the somatic component that accompanies the feeling in the definition of the word "emotion". Many others (e.g. Neiss, 1988), however, use the term "arousal" to incorporate the somatic component of the feeling itself. In this discussion, emotion will be used in the way that both Vallerand and Blanchard (2000) and Lazarus (2000) do, including the somatic component.

Researchers seem to be split into two groups when taking a stance on what causes emotion. One group believes that it is a thought or cognition that causes the emotion (e.g. Smith & Ellsworth, 1985), while the other group believes that all forms of information processing (e.g. Izard, 1992), including cellular (coding that takes place in cells and genes), sensory (e.g. taste → disgust), biophysical (e.g. hearing a strange loud noise → fear), and cognitive processing, work to cause emotion (Vallerand & Blanchard, 2000). Despite the fact that the cause of emotion is not always clear, the reason for emotion seems to have roots in evolutionary theory.

Whether positive or negative, emotions help us prioritize our brains to help us attend to what is important in a given moment (Easterbrook, 1959). Evolution, and its "fight or flight" theory shows us that the negative emotions evolved to help us survive (Fredrickson, 2009). For example, the function of fear is to help us avoid situations we know to be dangerous, and to flee

life-threatening situations that arise. In the case of an encounter with a man-eating tiger, this negative emotion makes the heart race and produces adrenaline, among other things to help us either fight or flee the dangerous stimulus with maximum speed and strength. This example illustrates all three responses that Lazarus (2000) puts forth (seeing the tiger and deciding it is dangerous, getting the urge to flee from it, and physiological changes that enable that impulse to be as successful as possible). According to Fredrickson (2009), an additional role of negative emotions is to narrow our focus and pare down what we are able to notice at one time. This makes sense in the tiger example, because in an encounter with the tiger, our focus becomes so narrow that the only thing we can possibly be thinking about if we are to preserve ourselves is to get away from the tiger. Thinking about a broader spectrum of things such as how nice of a day it is, or if we remembered to roll the rock back in front of the cave door when we left that morning is a sure-fire way to experience what it feels like to have our limbs torn off one by one. In a sports context, negative emotions serve the purpose of narrowing our focus on a particular task, as in responding to a particular threat of an opponent or challenge by the coach. Fear of losing a race might cause a swimmer to focus more on his stroke and allow him to gain a lead. In basketball, getting yelled at by a coach for not stopping one's opponent on defense, might cause anger, which could lead the player to focus on physically stopping him the next play.

Positive emotions are not just the absence of negative emotions (Lundqvist & Kentta, 2010), but distinct emotions that elicit the same three types of responses described above. That is to say that if someone is not sad, that does not automatically mean that they feel happy. Evolutionarily speaking, while negative emotions developed to help individuals survive, positive emotion evolved to help the species survive by cultivating connection among its members (Fredrickson, 2010). Under her "Broaden and Build" theory, Fredrickson (2009)

shows that positive emotions have the opposite effect of negative emotions: instead of narrowing our focus, they broaden it, opening our hearts and minds, allowing us to perceive more options, and to be more receptive and more creative. Fredrickson (2009) goes on to explain that positive emotions help the species survive because in contrast with negative emotions, which help survival in an instant, positive emotions help us survive over a long period of time. In her example Fredrickson, (2009) explains that playing joyfully with our young helps us build resources for the future (p.22). In this example, playing with young teaches them practical physical skills they will need to survive in the future as well as how to develop a close bond with family members, leading to an instinct to protect them if the need should arise. According to Fredrickson, another way that positive emotion helped our species to survive is that it “transforms people and helps them become their best. And when at their best, people live longer” (2009, p. 25). Living longer, even if just by a year or two, could have meant more years to reproduce for our early ancestors, thus lowering the chance of complete extinction.

This idea of preserving a species and building resources for the future is quite apparent in athletics; especially team sports such as soccer, basketball, baseball, etc. In soccer or basketball, feeling confident or content might help a player to broaden his awareness, enabling him to see passing opportunities that he might not otherwise have noticed if he were mad or frustrated. Very commonly in basketball, a player who is upset at not having gotten the ball or having missed the previous shot might tend to shoot too quickly the next time he receives it, trying to preserve his own self-efficacy, but in turn not noticing an open teammate with a much better or easier shooting opportunity. If the frustrated player were to have passed up his shot to give the ball to another teammate, the teammate would have most likely scored, and would be more likely to reciprocate with a pass or defensive help in the ensuing plays. He would feel

uplifted and positive, thus increasing his awareness and perception of what was taking place on the court. In the situation where the first player focuses on himself, the player who should have gotten the ball is now feeling some negative emotion as well, and instead of having one or maybe no players with negativity flowing through them, there are now two, and it continues. Simply letting the negative emotions go would have helped the player make the right pass, thus broadening his awareness and building personal and team resources for the future.

It is with this example in the sport of basketball that we see how emotions have the ability to create spirals, leading to more positive emotion or more negative emotion, depending on the situation (Fredrickson, 2010). These spirals can take place both within the team and within the individual. Consider the case of the first player in the example above. If he is frustrated that he missed a couple of shots, he becomes more and more focused on making shots and, in most cases not purposely, less and less focused on the needs of the team. The negative emotion focuses him and causes him to fixate on one facet of the game: to take shots that might not be as high of a percentage for him or that might just be bad shots because he is trying to “shoot his way out” of a perceived slump. Well, rushed or low percentage shots by definition will lead to more misses, and with them, more frustration, etc. Consider also the case of a NCAA rivalry basketball game between Princeton University and the University of Pennsylvania in 1999. Penn, as the home team, held a 33-9 lead over the Princeton tigers. Given the slow-down style of play of both teams, that lead was seemingly insurmountable. Princeton was out of sorts, couldn't even complete routine passes in the first half and went into the locker room down, but apparently not out, as they came back and won the game. Watching the second half showed a Princeton team who clawed and fought and never gave up, with each basket or defensive stop adding to their slowly but steadily growing pool of positive emotion.

Penn on the other hand turned the ball over time after time, became visibly negative both intra- and interpersonally and slowly assumed the role of incompetence that Princeton had in the first half, ultimately losing a heartbreaker. The spirals of positive and negative emotions were obvious for both teams and had very real effects on performance.

There has been much research done on emotion and its different dimensions. A two-dimensional model seems to have garnered more support than other models such as a circular one or a three-dimensional model, as most researchers can agree on the two most basic dimensions: pleasure and activation (Vallerand & Blanchard, 2000). This two-dimensional model then enables one to graph the level of pleasure one experiences with the level of physical activation or arousal elicited by a particular emotion (Vallerand & Blanchard, 2000). To illustrate this, one might consider the emotion anger. Anger makes our heart beat faster, causes us to sweat, show physical agitation, etc. so it is high on the activation scale but low on the pleasure scale. Emotions then could be categorized into four main groups under this model: high activation and high pleasure, high activation and low pleasure, low activation and high pleasure, and low activation and low pleasure.

The traditional view of positive and negative emotions was that they existed on one continuum. For example, the more negative emotion someone was feeling put him to the left of the spectrum and presented less of an opportunity for him to feel positive emotion. Similarly, if someone were overjoyed, she would not be thought to be experiencing much negative emotion at all. More recently, researcher John Cacioppo (2010) put forth his research that positive emotion and negative emotion are actually measured on separate scales, enabling one to experience both at the same time. Practically, this makes sense as many people in the throes of extreme grief over the loss of a family member can find themselves laughing at a memory of

that person, for example. Lazarus (2000) also provides evidence to support the idea of thinking of each emotion as a discrete entity rather than as a polar opposite of another. He contends that thinking of negative emotions as a group on the opposite side of positive emotions overlooks the fact that each emotion is distinct in the way it arises, affects the person experiencing it, and produces an action or impulse. This phenomenon is evident in an athlete who played terribly but whose team won the game. The seemingly conflicting emotions (if they are thought of as on opposite ends of the same spectrum and not considered discretely) of frustration and joy are experienced synchronously.

Emotion is a very complicated concept. There is disagreement in many areas of the research such as how many dimensions there are to an emotion, how emotions are experienced and how they are grouped, among others. The following discussion on emotional control will illustrate this complexity as individuality of emotion, emotional intelligence, strategies to control emotion, and the effect of these ideas on performance in sport are discussed.

### **Individuation of Emotion and Performance Effects**

As mentioned above, emotions are not only complex in and of themselves, but the same emotion has different effects- sometimes opposite effects- depending on the person experiencing them (Hagtvet & Hanin, 2007). Another individuation of emotion that relates to sport is that people require different intensities of an emotion to achieve optimal performance. It is important for athletes to understand their own emotional make-up and what they need to do in order to achieve optimal performance on a regular basis. For one, it might mean lowering his activation and for another it might mean raising his activation level (Robazza et al., 2004). Getting “pumped up” for a game is one way that those with low arousal can raise activation levels, but not every athlete needs to get “pumped up”. In some cases an athlete can get too



hyped up and impact his performance from the outset, and in that case, an athlete with an already high activation needs to settle down a bit and relax in order to turn in an optimal performance. As mentioned above, different emotions have different effects on different athletes. Anger, for example differs in whether it is directed at the self or at others, and in either case, that anger might help or hinder performance (Lazarus, 2000). No matter what the effect, Lazarus (2000) details seven emotions that are important to sports and they are: Anger, anxiety, guilt, shame, relief, happiness, and pride.

In addition, high levels of an emotional experience might facilitate top performance in one sport, but inhibit optimal performance in another (Vallerand & Blanchard, 2000). These differences in emotion and activation go beyond the sporting world. In fact, Vallerand and Blanchard (2000) point to these differences as determinants of broader dimensions of personality. How one responds to anger, joy, sadness, fear, love, etc. and the intensity with which one experiences them becomes a pattern across domains, shaping the personality within each person. Evolutionarily speaking, this concept fits in with Darwin's theory of diversity being a crucial factor in the survival and the evolution of a species.

According to Yerkes and Dodson (1908), every task has an optimal level of arousal, and complex tasks have lower optimal levels of arousal than simpler ones. For example, using the above statements, one might conclude that juggling requires a lower level of arousal to do successfully than sitting in a chair. While, sitting in a chair, one could be spitting mad with a racing pulse, sweating, and stewing over what it is that caused the anger. As long as the person is sitting down, he has achieved sitting in a chair successfully, and not much attention is needed. For juggling, a lower arousal level is needed to be successful. More attention needs to be placed on keeping the objects going and therefore there is less available to attend to the

emotion. Should the juggler become spitting mad and in the same condition as the chair-sitter, he would surely do less well than he would should he be juggling at a lower arousal level. This example would invite one to compare an angry juggler with a less-angry juggler, but since the same emotions act differently on different people, they might actually perform objectively the same, thereby falsely showing that the level of arousal doesn't in fact matter.

While the research by Yerkes and Dodson (1908) has stood up to more recent research, it is rather objective. Recent research by Hanin (1997) has built upon it to allow for the individuation of emotion within that framework. Hanin (1997) set forth the Individual Zones Of Functioning model (IZOF). This model explains the dynamics of the relationship between function and performance, and recognizes that each athlete has an individually optimal zone of emotional intensity (Robazza, Pellizzari, & Hanin, 2003).

Much of the research on emotion in sport deals with anxiety, but the IZOF model takes into account many emotions (and also shows that both positive and negative affect can predict performance) (Hagtvet & Hanin, 2007). The way in which the model accommodates all sorts of athlete-generated emotions is in a two-dimensional system where one dimension is pleasure/displeasure and the other is helpful/harmful. Each emotion is then classified by individual athletes as pleasurable and helpful, pleasurable and harmful, not pleasurable and helpful, and not pleasurable and harmful. This model is similar to the model discussed by Vallerand and Blanchard (2000) above, although the second dimension is different. To illustrate how this model accounts for individual differences in arousal, one athlete who experiences anxiety before a game might classify the emotion as not pleasurable and harmful to performance, while another might find her pre-competition anxiety similarly not pleasurable, but helpful to her performance.

As it turns out, the IZOF model shows that while optimal performances seem to have a consistent emotional profile with certain emotions predominating over others, the worst performances follow no such predictable pattern and vary widely from athlete to athlete (Hagtvet & Hanin, 2007). Hagtvet and Hanin (2007) also point out that the IZOF model shows that both pleasant and unpleasant emotions help shape both athletes' best performances and their worst ones. The difference is that it is the optimal pleasurable and not pleasurable emotions contribute to the best performances while the dysfunctional ones abound in the worst performances across athletes and sports.

Despite the individual nature of emotions, it is clear that each person has his own optimal mix of positive emotion and negative emotion that will produce an optimal performance, and it is critical for an athlete to discover this recipe. This knowledge of emotions as they relate to optimal and sub-par performance is key for athletes and it follows that emotional control is very important to how they perform. The following section details more specifically the effects that performance and emotions have on each other, and how one might become more in tune with one's emotional make-up.

### **Emotional Intelligence and Its Malleability**

Emotional intelligence, or our repertoire of emotional skills, is key to controlling our emotions, and is a major component in our quest to achieve our full potential (Averill & Nunley, 1992). Salovey, Caruso, and Mayer (2004) have put forth a very organized model for assessing one's emotional intelligence and where shortcomings might be. They call this model the "Four-Branch 'Ability' Model of Emotional Intelligence." The four branches are perceiving emotion, using emotions to facilitate thought, understanding emotions, and managing emotions. While all four branches are important to athletes and their performance, of these four branches,

perceiving emotions and managing emotions are vital. Salovey et al. (2004) include expressing emotions accurately, identifying emotions in other people, and discriminating between honest and dishonest emotions under the heading of perceiving emotion (p. 449). On an athletic team, it is important to be able to communicate your feelings and similarly read those of your coach and teammates accurately in order to help the team function optimally. When the team functions optimally, it is easier for the players to do as well. Under the heading of managing emotions, Salovey et al. (2004) include monitoring and reflecting on emotions, engaging or detaching from emotional states, and managing emotions in oneself and others. These skills enable an athlete to have some degree of control over his response to emotions and to minimize the chance that he will fall victim to both mental and physical responses to the emotion that might hinder or sabotage performance. In order to assess emotional intelligence, the authors have created the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). The score of this test shows the taker's emotional skills, or lack thereof, in each of the four areas named above and on eight individual tasks (Salovey et al., 2004).

Once emotional intelligence is assessed, whether officially with an inventory such as the MSCEIT or at face value with a glance at the groupings, it is important to take steps to fill in deficiencies. Research shows that emotional intelligence can be taught and learned, and that the skills acquired have a decided effect on athletic performance.

Hanin and Hanina (2009) developed the Identification-Control-Correction program to assist athletes in achieving top performances. While much of the model deals with the physical aspect and motor movement chains associated with a sport, they recognize that a crucial piece of the performance outcome is the emotional state of the athlete and that both action-coping and emotion-coping are necessary to gain skills to achieve top performances. In their model, an

appraisal is followed by an emotional state, which is then followed by task execution. In this model, it is clear that the authors believe that emotion plays a large part in an athlete's performance since emotion is actually followed by the task itself. The outcome of the task can actually influence emotion again which can then affect performance one way or another, but initially, emotion comes first.

In addition to Salovey et al. (2004), other research shows that it is possible to increase and improve one's repertoire of emotional skills. Robazza et al. (2004) found that treatment was very effective in adjusting the patterns of emotions, and in fact, the athlete who achieved the largest improvement in emotional management also showed the best improvement in performance. The athletes who made the effort to modify emotional patterns towards that which could enable best performance, actually did significantly improve their performance, while the participants that did not engage with the intervention and did not change emotional patterns did not show any performance improvement.

Also contributing to the research supporting the ability to acquire emotional skills is research on ice hockey goalies by Gelinis and Munroe-Chandler (2006). In their study, they found that psychological and emotional skills can be learned and practiced and can have a real effect on performance in both practice and competition.

The research provides strong evidence to support the notion that emotional intelligence, and specifically managing emotion, is crucial for athletes who wish to reach their maximum physical potential in their sport of choice. Not only is it important, but also it is possible to improve on one's emotional intelligence. The following section details some strategies for managing and controlling emotions, and thus improving performance.

### **Managing and Coping with Emotions**

Frequently, coping is not seen as a part of emotion theory, but of stress theory, however Lazarus (2000) argues that it would be a mistake to take coping out of emotion theory. Lazarus (2000) contends further that not only should coping remain in the emotion literature, but also it ranks second in importance behind only appraisal in the scope of emotion theory because it mediates the relationship between the emotion, and the reaction it provokes. Both Hanin and Hanina (2009) and Robazza et al. (2004) found that it was beneficial to incorporate both somatic coping strategies and cognitive strategies to help manage emotion and produce measurable and significant effects on performance. This idea makes sense since emotions have both a cognitive and somatic component. Robazza et al. (2004) also found that there was a cross effect of somatic and cognitive strategies, such that intervening on one would have some effect on the other. Jones (2003) also found evidence that interventions aimed at decreasing somatic arousal also decreased cognitive arousal (although to a lesser extent than the interventions aimed specifically at cognitive arousal) and vice versa, and supported regulating somatic arousal along with cognitive arousal.

Salovey et al. (2004) outline five steps for someone to take to manage his emotions (p. 450). They are: believing that he can modify his emotions, monitoring moods and emotional states accurately, identify the emotions in need of regulation, choose and put to use one or more strategies to either increase or decrease the targeted emotion, and lastly, to assess the effectiveness of the strategy employed. The following discusses those strategies that have been found to help athletes control, cope with, and manage their emotions. Research by Reivich and Shatté (2002) is in accordance with this progression as their version of the ABC Model (p. 90) guides one through an exercise designed to uncover the distinct emotions that one might feel during or as a result of a particular event. This tool is of great benefit to athletes as they deal

with the trials and tribulations of practice and competition, as it can help provide them with awareness of emotions that arise, and when done multiple times, can illustrate patterns of emotion that they can then work to manage in similar situations in the future. The ABC model can also emphasize to the athlete that they can have some control over their emotions by changing the way they think about a given situation. For this reason, the ABC exercise by Reivich and Shatté (2002) is included in the appendix as part of the mental skills workbook for athletes.

**Somatic Coping Strategies.** The somatic coping strategies include, but are not limited to, relaxation, and breath control (also referred to as centering). In general terms, relaxation includes any method to relax the body including consciously and systematically tightening and relaxing each muscle group in an effort to loosen the muscles (Gelinas & Munroe-Chandler, 2006; Gee, 2010) or mellowing out to some relaxing music and minimizing bodily movements. Bois et al. (2009) found that relaxation and emotional control (which will be discussed shortly) significantly improved the performance of golfers who had high levels of pre-competition anxiety. Furthermore, Bois et al. (2009) found that even among golfers who had already made the cut, those who used more relaxation fared better in the final rankings than those elite golfers who used less of these strategies.

Breath control is the practice of slow and measured breathing during practice or competition (Gelinas & Munroe-Chandler, 2006). Breath control has been found to have a positive effect on the performance of hockey goalies (Rogerson & Hrycaiko, 2002). Their study showed that breath control helped increase both save percentage (an objective statistic that demonstrates how well a goalie performs) and performance consistency (repeated higher save percentages). Savoy (1997) also found breath control to be an effective means of reducing

anxiety and thus improving performance in female college basketball players. While this study does have a limitation in that the sample size was very small, it lays the foundation for future research to replicate the findings on a larger scale.

**Cognitive Coping Strategies.** Cognitive coping strategies include, but are not limited to imagery and self-talk. While there are other strategies, these are the two that are very prevalent in the literature and do not take much time, thus they can be performed before and during competition. Athletes can perform imagery exercises to mentally rehearse both the physical skills that are required to play well, and the emotional reactions that might occur to events while playing. Martin et al. (1999) found that imagery was useful to help athletes alter their appraisals of situations, potentially causing them to see a situation in a more positive light, or one they have more control over, leading to higher self-efficacy and confidence, thus better performance. Gelinas and Munroe-Chandler (2006) describe several situations where imagery can be applied, such as having individuals imagine past situations where they lost emotional control and replay the situation as one in which they exhibited perfect emotional control and continued to perform strongly rather than allow the negative emotions to interfere with their physical performance. Gelinas and Munroe-Chandler (2006) also point to the positive effects imagery can have on performance when the actual physical skills required in a sport are visualized, as does Gee (2010) who points to imagery as a coping mechanism that can help both somatic and cognitive coping.

The research shows self-talk to be a useful tool for dealing with emotions, especially negative ones. As cited by Gelinas and Munroe-Chandler (2006), Hardy (2004) defines self-talk as out loud or internal statements addressed to the self and related to sport that are instructional and/or motivational. The following discussion illustrates the positive effect that



self-talk has on performance. Rogerson and Hrycaiko (2002) showed that self-talk helped to improve save percentage and performance consistency in ice hockey goaltenders. Lazarus (2000) speaks to the positive effect that self-talk can have on an athlete, but cautions that making positive statements to oneself does not always have a positive effect on performance. For example, a negative internal thought such as “I’m going to lose” or “I am just not going to be able to come back and win” are negative thoughts that if countered with some positive self-talk, can enhance performance. Other statements, such as “I’m playing so well today, I will cruise to the win” or “He scored three points in a row, but I am ahead by enough that it doesn’t matter” actually can undermine performance by allowing the athlete to remain unfocused on the task at hand and relax his competitive edge. Bois, Sarrazin, Southon, and Bolche (2009) did not actually find self-talk to have a significant positive effect on performance among golfers, but did find emotional control to have a major positive effect on performance. That is, those that engaged in emotional control performed objectively better (i.e. made the “cut” and then ranked higher in the final standings). While their findings were inconclusive regarding self-talk alone, it would stand to reason that self-talk used as an emotional control strategy would indeed have a positive effect on performance. Rogerson and Hrycaiko (2002) also found evidence that supports the notion that self-talk has a positive effect on performance on hockey goalies, and in that particular study, taught the goalies to use self-talk before, during and after competition.

### **Conclusion of Emotional Control**

The above discussion attempts to define emotion, explain what purpose they serve, why they are important to athletes, how athletes can understand more about their emotional state, and finally how they can manage emotion to take full advantage of their physical potential. Both positive and negative emotions are very important to the performance of an athlete and it is vital

that an athlete develops emotional intelligence, and then uses that emotional intelligence. While some techniques that help one cope with emotions relate to the somatic response and others to the cognitive response, both types of coping mechanisms are vital to the emotional strength of the athlete. The ABC exercise (Reivich and Shatté, 2002), exercises in visualization, breath control, relaxation, and self-talk are all included in the training planned for athletes to develop emotional strength. These mental skills will be beneficial to athletes who are committed to putting forth a strong effort and to practicing the techniques discussed above (Gelinis & Munroe-Chandler, 2006). The ABC exercise (Appendix II) is the first of several worksheets and exercises that will be used to help athletes get control over their emotions during practice and competition. The ABC will be the first exercise performed in the emotional control section because in Salovey et al.'s (2004) steps to managing emotion, identifying emotions in need of regulation comes before doing exercises to help regulate emotion. The exercises and worksheets to be created later would then be visualization, breath control, relaxation, and self-talk.

### **Part III: Goal Setting**

#### **Introduction to Goal Setting**

Goal-directed behavior is a necessity of survival for all biological organisms (Binswanger, 1990). According to Locke (1996), internal and goal-directed actions, such as digestion and cell repair, are automatic. Goals can also be borne of a conscious process of reasoning and can have any term from a few minutes to a lifetime (Locke, 1996). Since man is fallible and can make errors in choosing goals, it follows that not all goals facilitate survival. In some cases, a chosen goal may undermine it (Locke, 1996). Beyond survival, goals serve many functions. They facilitate achievement, regulate performance, can add to or detract from self-

efficacy, generate feedback on our performance, and mediate the effect of past performance results on future performances, among others (Locke, 1996).

Goals can be classified in many different ways. Some are short-term, while others are long-term. Some are large goals with large implications for our lives that are comprised of smaller goals along the way, while others are singular and more trivial. We set some while others are set for us, and some are individual goals while others are goals set by a group we belong to. No matter the form, goals direct our behavior and affect our motivation, enjoyment, self-efficacy, and performance. Athletics is an area where goal-setting behavior can have a significant impact on the participants. The following discussion highlights how setting goals can be of value to athletes' self-efficacy, a widely accepted classification of goals that are set, and the benefits and risks to an athlete for each type of goal. This discussion will also cover the fact that it is possible to change one's goal-setting behavior to produce better performance, increase self-efficacy, and avoid harmful goal-setting patterns, as well as the importance for athletes to do so. Finally, a goal-setting method for athletes will be suggested.

### **Self-efficacy and Goal Setting**

Self-efficacy is the first concept discussed in connection with goal-setting because the goals that people set result from their self-efficacy beliefs, and not the other way around (Bandura, 1997). In general, people will choose goals they believe to be attainable with the skills and motivation they possess, and will avoid goals that they believe might be too difficult to attain (Feltz, Short, & Sullivan, 2008). Efficacy beliefs influence not only the level at which goals are set, but the amount of effort used to reach the goals, what strategies one picks, and the reaction of the goal-setter to falling short of achieving his goal(s) (Bandura, 1997, p. 136).

While the level of one's self-efficacy affects the level of the goal set, whether or not one has a realistic sense of his self-efficacy or not is also important (Feltz et al., 2008). For example, someone who has an appraisal of his skill that is objectively too low might not try out for a basketball team because he believes he will surely fail, when in reality, he is athletic, has good defensive skills, is a team player, and would be an asset to the team. In this case, his too-low appraisal of his self-efficacy causes him not to undertake a challenge that might have brought him enjoyment, satisfaction, and a boost to his self-efficacy (not to mention the obvious physical benefits to playing basketball).

Those who appraise their self-efficacy as objectively too-high set themselves up for failure and prevent the undertaking of goals that are unattainable given their current skill level and ability (Feltz et al., 2008). For example, imagine a player who believes himself to be a much better player than he actually is. In this case, he tries out for the varsity team, only to find that he doesn't make it, despite the fact that he was expecting to. In this situation, the player might react to the failure in a way that keeps him from practicing fundamentals and developing basic skills to develop as a player. A realistic appraisal of one's self-efficacy will produce challenging goals that will neither cause missed opportunities nor hinder development (Feltz et al., 2008). The individual differences in reaction from one person to another to the same level of goal attainment/non-attainment are large. This is because we each have different sensitivities to both positive and negative feedback, which is reflected in differential reactions to the feedback (Ilies, Judge, & Wagner, 2010, p. 124).

Self-efficacy also affects how one views an occasion when one does not reach a goal. Those with high self-efficacy will view non-goal attainment as a challenge thus increasing their motivation, while those with low self-efficacy will view non-goal attainment as a threat, lose

motivation, and may potentially abandon the activity all together (Bandura, 1997). In this way, self-efficacy levels can determine commitment to a goal, and the response to failure. In general, those with higher self-efficacy attribute failure to a lack of effort, while those with lower self-efficacy attribute failure to a lack of skill or ability (Bandura, 1990). This idea is reminiscent of Mueller and Dweck's (1998) research on praise and motivation. Briefly, they found that those receiving praise on a trait such as intelligence (i.e. "You are really smart.") were much less motivated to take on a subsequent challenge. Those who were praised on a process item such as effort (i.e. "I can tell that you worked very hard.") were more apt to try a challenging task in the near future. If one is prone to the attribution of low ability due to self-efficacy beliefs they are, in effect, offering themselves a critique of ability, whereas those with higher self-efficacy critique effort, and therefore are more likely to view the failure as a challenge, remain committed to the goal, and develop an even stronger motivation to achieve it. In this way, higher self-efficacy leads to higher performance.

Goal-setting can be used to boost self-efficacy. Bandura (1986) points to short-term goals as the most effective type of goal to achieve this because short-term goals offer more frequent evaluation opportunities, which can stimulate self-efficacy beliefs and motivation. Also, goals in the short-term tend to be less lofty in general, therefore increasing the chance that they can be attained. Ilies et al. (2010) found that self-efficacy beliefs could be influenced to some extent by performance feedback in repeated-task goal situations. Those receiving positive feedback on the first task experienced a boost to self-efficacy and increased the chances of doing well on the second task, etc. More positive performance feedback led to higher self-efficacy and thus higher goals, which led to greater performance, etc. Feedback is actually important in all goal-setting situations (both long and short-term), as it gives information

connecting the internal aspect of the goal (a desire) and the external aspect of a goal (the object or situation sought) (Locke, 1996). Feedback lets one know just how close or far away they are from attaining the goal, and can play a role in maintaining or changing strategies (Zimmerman & Kitsantas, 1996). In Zimmerman and Kitsantas' (1996) study involving dart throwing, they were able to show that the group that had more frequent feedback throughout the task did significantly better than the group that had no feedback until the end.

As discussed, self-efficacy beliefs are important to the practice of goal-setting. The two are very closely connected and each affects the other. Goal-setting practice, however, affects self-efficacy to a lesser extent than does self-efficacy on goal-setting. Self-efficacy, through goal-setting, affects reaction to success/failure, commitment to the goal, motivation, enjoyment, and performance. The following section deals with the classification of goals themselves and the implications each class has for the goal-setter.

### **Classification**

**Two-group model.** Much of the goal setting literature separates goals into two groups: mastery goals and performance goals (e.g., Ommundsen, Lemyre, Abrahamsen, & Roberts, 2010). Sometimes, different terms are used, such as process and outcome (Vidic & Burton, 2010) but in all cases, one group refers to goals related to acquiring skills (mastery and process), while the other group refers to achieving a particular outcome as compared with others (performance and outcome). For the sake of simplicity, this section will use the terms “mastery” and “performance” to describe the group a particular type of goal belongs to, even if a particular author uses a different descriptor. One important distinction between these two groups is that mastery goals are seen as much more in control of the person who set them, while

performance goals are much more out of the control of the goal-setter, and dependent upon the performance of teammates or opponents (Feltz et al., 2008).

The study by Zimmerman and Kitsantas (1996) involving teaching groups of girls to throw darts also examined the effect that having a mastery goal or a performance goal had on performance, self-efficacy, satisfaction, and interest. The results showed that having a goal focused on learning the skill for the sake of mastering it (mastery goal) served to both increase intrinsic motivation, satisfaction, self-efficacy and performance much more than the group that held performance goals. The greater increase in self-efficacy for the group that held the mastery goal makes sense when the idea of control is considered. It makes sense that if one is in complete control over getting better the chance of no improvement with respect to the goal is slim, assuming that the participant was sufficiently invested in and focused on the task.

**2 x 2 Model.** Many studies and research take the two-group model a step further and break the mastery and performance groups each down into two separate groups of approach and avoidance goals (e.g. Stoeber & Crombie, 2010). (Again, there is differing terminology, but this discussion will use those terms for consistency.)

“Approach” describes a goal that strives to produce a desired behavior/outcome, for example “I will golf 3 times in the next two weeks”. “Avoidance” describes a goal that strives to not produce an undesired outcome, for example, “I will not miss any foul shots in the game today”. Distinguishing between approach and avoidance is valuable because it helps to measure task absorption, state anxiety, and intrinsic motivation (Conroy & Elliot, 2004), as well as fear of failure (Stoeber & Crombie, 2010). When mapped out, the following types of goals arise: Mastery approach (MAp)- striving to do better than one has previously done, mastery avoidance (MAv)- striving not to do worse than one has previously done, performance approach (PAp)-

striving to do better than others, and performance avoidance (PA<sub>v</sub>)- striving to not do worse than others (Stoeber & Crombie, 2010). The following figure is a visual representation of these four types:

***Performance Avoidance (PA<sub>v</sub>) Goals.*** PA<sub>v</sub> goals do the least amount of good for athletes compared with the other three types of goals. They predict state anxiety and procrastination and are negatively correlated with intrinsic motivation and performance (Conroy & Elliot, 2004). Also, according to the findings of Conroy and Elliot (2004), fear of failure predicts the behavior of setting PA<sub>v</sub> goals. Those who are worried that they will fail tend to set goals when they are comparing themselves to others, and in many cases, hope not to do worse than them. This finding is important in an athletic setting, because if a coach or parent detects this type of goal, it can be a marker for a fear of failure, and they can help the athlete overcome this fear that they might not have otherwise known about. However, not ALL PA<sub>v</sub> goals are set as a result of fear of failure, but it is an important connection.

***Performance Approach (PA<sub>p</sub>) Goals.*** Like PA<sub>v</sub> goals, PA<sub>p</sub> goals have also been connected with fear of failing (Stoeber & Crombie, 2010). Unlike PA<sub>v</sub> goals, however, PA<sub>p</sub> goals have also shown positive associations to perceived competence, extrinsic motivation and viewing competitive situations as a challenge and not a threat (Adie, Duda, & Ntoumanis, 2008). Elliot et al. (2006) studied the difference between PA<sub>v</sub> and PA<sub>p</sub> goals in actual performance of a basketball skill and found that of the two, PA<sub>p</sub> goals predicted significantly better performance than did PA<sub>v</sub> goals. Stoeber and Crombie (2010) also found that those with more PA<sub>p</sub> goals than PA<sub>v</sub> goals predicted a higher absolute performance in a championship competition than did those with a bigger balance of PA<sub>v</sub> goals. The above research shows that of the two performance goals, PA<sub>v</sub> goals predict many more maladaptive responses than do



PAP goals. This finding is important for athletes and coaches to be aware of so that the way they set goals and view performance in general can be monitored, and maladaptive goals and cognitions can be recognized and changed to afford the opportunity for less anxiety and better performance to the athlete(s).

***Mastery Avoidance (MAv) Goals.*** MAv goals are also positively related to fear of failing with the relationship being that fear of failing predicts MAv goals (as it does PAP goals) (Conroy & Elliot, 2004). For review, in the mastery sense, “failing” refers to doing worse than one has previously done on a specific task. Adie et al. (2010) found that players with MAv goals tended to be susceptible to seeing soccer competition as more threatening rather than challenging, and after experiencing some failure over time, seemed to feel that playing soccer was potentially harmful to their self-concept. MAv goals are also inversely linked to measures of well-being and directly linked to measures of ill-being (Adie et al., 2010).

***Mastery Approach (MAp) Goals.*** MAp goals have many benefits to the athlete. Adie et al. (2010) prove MAp goals to predict players viewing stressful events such as competition as challenging rather than threatening and those same players viewed these competitions as opportunities for personal development. MAp goals were the only ones of the four types to not be connected to fear of failure in any form, and were found to have a slight protective effect to develop fear of failure (Conroy & Elliot, 2004). Conroy and Elliot (2004) reason that MAp goals keep athletes from focusing on negative self-conscious states, for example shame, and it is those states that reside at the center of fear of failure. Athletes that set MAp goals are not then saddled with the negativity that is associated with avoidance-goals (e.g. fear of failure) and thus can focus on task mastery, effort, learning, and enjoyment of the task for the sake of doing it (Morris & Kavussanu, 2008). Perceived competence has also been associated with MAp goals

(Morris & Kavussanu, 2008), which contributes positively to self-confidence and self-efficacy (Ilies et al., 2010). A mastery environment positively predicts effort, enjoyment, and intrinsic motivation (van de Pol & Kavussanu, 2011), although it is unclear if this finding was based on MAp goals or MAp and MAV goals together. Finally, Adie et al. (2010) found that MAp goals were directly related to measures of well-being and inversely related to measures of ill-being.

*Note.* Many studies on goal-setting focus on PAp, PAv, and MAp goals. Conceivably, the two performance goals are of interest because most athletes are judged on performance. MAp goals are specifically interesting because they have many positive effects on self-efficacy, motivation, confidence, enjoyment, and performance. While there is less information on MAV goals, they still play an important part of the framework in the goal-setting research.

### **Distinctions**

**Performance vs. Competition.** There are some differences between effective goal-setting strategies for practice and competition scenarios. Van de Pol and Kavussanu (2011) found that athletes reported a higher mastery orientation in practice than in competition, and a higher performance orientation in competition than in practice. This finding demonstrates that goal-setting is not solely reliant on a trait tendency, but that the types of goals set are also influenced by the situation at hand. While there is a correlation between how players evaluate their performance, whether normatively (performance) or self-referenced (mastery) in both practice and in games (Castillo et al., 2009), that correlation is low enough that goals in practices and competitions should be considered separately (van de Pol & Kavussanu, 2011).

Van de Pol and Kavussanu (2011) also found that a mastery climate predicts the use of a psychological skill mentioned earlier - self-talk - and also goal-setting in general. In addition, a

climate that is too heavily influenced by performance in a team setting often lowers intrinsic motivation, and can even induce amotivation in some players (Ommundsen et al., 2010). This information is important to both coaches and athletes alike. If a coach can create a mastery climate, he is creating a situation that fosters the use of psychological skills that have been shown to have a positive effect on performance in both practice and games, as was discussed in the previous section.

**Individual Sports vs. Team Sports.** For individual sports, the climate can afford to fall very heavily on the side of mastery. In a team sport, there needs to be more of a climate balance between mastery and performance. If the climate is too far on the mastery side, then the players on the team are too focused on development on the self, which could have negative effects on teamwork and team cohesion. It makes sense that coaches who coach individual sports such as tennis, track and field, swimming, etc. would want to foster a climate where the athletes were trying to perform as best as they possibly could, because that performance would not affect the performance of anyone else. In a team sport, however, there is a delicate balance between getting players to perform at their best while making sure that individuals do not put their own development/performance ahead of what is best for the team. For this reason, in team sports, it would make sense that a mix of climates is important to maximize the development and performance of both the individuals and the team. Potentially, that mix could differ depending on practice or competition, as discussed in the previous paragraph.

### **Changing Goal-Setting Behavior**

Ilies et al. (2010) posit that differences in self-efficacy, both in general and domain specifically, account for the widespread differences we see in persistence and resilience across individuals. In addition, they believe that self-efficacy on a particular task is malleable and

proved that setting goals and receiving feedback on those goals helped improve performance and increase self-efficacy. Locke and Latham (1990) revealed that 90 percent of studies reviewed (N=201) showed a significant increase in performance when goals were set versus when they were not set. Although this analysis encompassed all research at the time, including mostly research in the field of business, the results are overwhelmingly in support of the importance of goal-setting to performance. In a meta-analysis in the sport and physical activity domain, Burton and Weiss (2008) found that at least 80 percent (N=88) of studies on goal-setting found that goal setting had a significant effect on performance. While this sport-specific number is slightly lower than the goal-setting research in general, the results are still consistent with previous goal-setting findings, and demonstrate the importance of goal-setting practices for athletes (Burton et al., 2009).

### **Proposed Framework for Goal-Setting Activity**

A widely used and seemingly unattributed framework for setting appropriate goals is the S.M.A.R.T. goal approach. This method helps ensure that the goals are specific (S), measurable (M), attainable (A), relevant (R), and time-bound (T). These five goal characteristics ensure that the goal-setter is not setting themselves up for failure through the goals themselves. S.M.A.R.T. goals make sure that the goal chosen is not too lofty to achieve nor too general or trivial as a particular goal must be attainable to be considered. Since the goals are specific and measurable, feedback regarding the attainment or non-attainment of the goal is possible. As shown above, feedback is vital for changing behavior and increasing self-efficacy through goal-setting. Finally, it is simple conceptually and not too burdensome or time-consuming for an athlete who is busy with training, competition and in many cases a large school or workload to complete and refer to, as he needs. Appendix III shows the chart to be

filled out by the athlete and an accompanying calendar page so that the plan may be conceptualized in daily life and executed more easily. Once the goals are laid out, a coach or mentor can help the athlete stay away from PAV goals and monitor them so that there is a healthy balance between the other types.

### **Conclusion of Goal Setting**

Goal setting behavior has proven to be very important to athletes. Goal setting, if done correctly, has been linked to increases in well-being and enjoyment (Adie et al., 2010), self-efficacy (e.g. Feltz et al., 2008), and performance (Burton & Weiss, 2009). As an athlete is almost always measured on his performance, this last one is probably the most important aspect of improvement through goal setting. For these many benefits to both the athlete and his development and performance, this paper advocates for the implementation of a goal-setting intervention for both individuals and teams alike.

### **Final Remarks**

As this paper has shown, there is a large body of evidence that supports the notion that athletes should consider learning about and altering if necessary their explanatory style, developing the capability to control their emotions by somatic and cognitive means, and learning to set goals effectively, in order to maximize performance, self-efficacy, and enjoyment. To compliment and round out a full mental skills training program for athletes, the author intends to research and add components for individual athletes on using character strengths (Peterson & Seligman, 2004) both on and off the court, recognizing thinking traps (Reivich & Shatté, 2002), cultivating and harnessing positive emotion (Frederickson, 2009) and aligning first and second order desires (Pawelski, 2010b). Additionally interventions for teams would be proposed including work with character strengths (Peterson & Seligman,

2004) as a group, positive introductions (Pawelski, 2010a), team goal-setting, and group visualization.

## Appendix I

### Positive Explanatory Style

Positive Explanatory Style is a skill of explaining events and experiences in an optimistic way that neither diminishes the negative nor exaggerates the positive. There are three components to the way we explain life's experiences:

*Personalization:* Do we tend to internalize or externalize responsibility for negative events?

*Permanence:* Do we tend to relate one negative event to eminent doom for a lifetime of negative events or do we realize that one event is simply, a single event?

*Pervasiveness:* Do we tend to relate one negative event to all aspects of our life or keep it isolated to the domain in which it occurred?

1. Think about and describe an event that you recently experienced in which you perceived the outcome to be negative.
2. Provide two reasons for each extreme end of the three categories above. For example, if you failed a math quiz, you might write:  

<b>Me</b> – “I am stupid!”	<b>Them</b> – “My teachers didn’t prepare me!”
<b>Always</b> – “I always fail.”	<b>Temporary</b> – “This is just one test.”
<b>Everything</b> – “I am a failure in all subjects.”	<b>Local</b> – “Math is my weak spot.”
3. Review your reasons for each category and then describe a balanced explanation for why the negative event may have occurring ensuring that you neither dismiss the negative nor exaggerate the positive.

\*This exercise based on the findings on explanatory style of Martin Seligman (2002 & 2006).

**Explanatory Style:** Describe an event that you recently experienced in which you perceived the outcome to be especially negative. Fill in the blanks under the 6 types of explanations to explain the cause or reason of the event:

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**Internal (“Me”)**

**External (“Them”)**

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**Permanent (“Always”)**

**Temporary (“Never”)**

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**Pervasive (“Everything”)**

**Local (“Isolated”)**

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**Provide a *balanced* explanation for what happened:**

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## Appendix II

### ABC (Activating event – Beliefs – Consequences)

The **A**ctivating Event is an event that triggers a particular belief (B) and a consequence (C).

The **B**elief is a statement that usually takes one of two forms: a why belief (what caused it) or a what-next belief (future happening as a result of the event).

The **C**onsequence is comprised of both the behavior that results from the adversity and ensuing belief, and the emotion that is felt during the moment of the adversity.

If you can examine the connection between the B and the C, you can find patterns in your behavior and emotions that you can then work to change. In the real world, a belief causes an emotion and that emotion in turn can affect our beliefs, so it isn't always a simple relationship, but this exercise will help to sort out your emotions and reactions and help prepare you for future activating events. You should have some guidance in doing this the first couple of times so you are familiar with the exercise by the time you are asked to try it on your own.

1. Write down the Activating event in the top right box and then fill out the top left hand box with details such as what happened, who caused it, where you were, why it happened, etc.
2. Write down the thoughts exactly as you remember them next to "Thought" in the green boxes on the left side. Ex. "Why is he calling me at 3 AM." Or "She should stop telling everyone secrets that others tell her."
3. Find the Belief on the chart following the exercise that best describes each of your thoughts and write it underneath in the other green box labeled "Type of Belief".
4. Look at Appendix 1 and fill in the C column with both the emotion and behavior that corresponds to the B you labeled. *In some cases, your behavior will not be the same as the B, and that is ok, just pick the best fit from the C column.*
5. Answer the questions that follow. It isn't necessary to fill in every slot for thoughts, or you might want to add more. Fill in as many or as few as makes your analysis of the event complete.

<b>A</b> ctivating Event: <b>B</b>	Situation (who, what, when, where, why) <b>EMOTION</b> <b>C</b> <b>BEHAVIOR</b>
<b>B</b> eliefs (what thoughts you had at the time)	<b>C</b> onsequences ( <b>Emotions</b> and <b>Behaviors</b> )
Thought:	E:
Type of Belief:	B:
Thought:	E:
Type of Belief:	B:
Thought:	E:
Type of Belief:	B:
Thought:	E:
Type of Belief:	B:
Thought:	E:
Type of Belief:	B:

\*This exercise is adapted from The Resilience Factor by Reivich and Shatté, (2002)

<b>Negative Beliefs</b>	<b>Negative Consequences</b>
<p><b>Loss</b>                      ("I have lost something of value or my self worth.")</p>	<p><b>Sadness</b>  <b>Withdrawal</b></p>
<p><b>Tresspass</b>                      ("I have been harmed or wronged.")</p>	<p><b>Anger</b>  <b>Aggression</b></p>
<p><b>Inflicting Harm</b>                      ("I have caused harm.")</p>	<p><b>Guilt</b>  <b>Apologizing</b></p>
<p><b>Negative Comparison</b>                      ("I don't measure up.")</p>	<p><b>Embarrassment</b>  <b>Hiding</b></p>
<p><b>Danger</b>                      ("Something bad will happen and I can't handle it.")</p>	<p><b>Anxiety</b>  <b>Agitation</b></p>
<b>Positive Beliefs</b>	<b>Positive Consequences</b>
<p><b>Appreciating what you have received</b>                      ("I received a gift that I value.")</p>	<p><b>Gratitude</b>  <b>Giving Back, Paying Fwd</b></p>
<p><b>Positive Future</b>                      ("Things can change for the better.")</p>	<p><b>Hope</b>  <b>Energizing, taking action</b></p>
<p><b>Positive Contribution</b>                      ("I added value")</p>	<p><b>Pride</b>  <b>Planning future achievement</b></p>

\*This exercise is adapted from The Resilience Factor by Reivich and Shatté, (2002)

### ABC Thought Questions

1. Were your emotions and behaviors (column C) helpful or harmful?

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2. Where your beliefs/thoughts (column B) more about why the A occurred, or what will happen in the future because it occurred?

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3. Did you notice any patterns in your types of beliefs?

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\*This exercise is adapted from The Resilience Factor by Reivich and Shatté, (2002)

### **Appendix III**

#### **Goal Setting**

1. Choose a goal
2. A suitable goal should meet the following criteria:
  - a. It should be **Specific**
    - a. YES: I want to get at least a B+ in Calculus
    - b. NO: I want to do better in school.
  - b. It should be **Measurable**
    - a. YES: I will exercise 4x per week.
    - b. NO: I will get in better shape.
  - c. It should be **Achievable**
    - a. YES: I will shoot 25 foul shots 3x per week.
    - b. NO: I will shoot 4000 foul shots every day for a year.
  - d. It should be **Relevant and important to YOU**
    - a. YES: I will stop smoking (because **I** want to be healthy for a long time.)
    - b. NO: I will stop smoking (because my friend is nagging me to)
  - e. It should be **Time-based** with a concrete achieve-by date/time (if applicable).
    - a. YES: I want to be in the starting rotation by Christmas of next year.
    - b. NO: I want to be in the starting rotation.

**NOTE: Some goals are very short term, and others longer term. For longer-term goals, one or more intermediate goals might be necessary.**

**Ex. Long term goal: I want to climb Mt. Everest one year from now.**

**Short term goals: I will join the rock-climbing club in my city.**

**I will take a class that teaches me proper safety and preparation.**

**I will climb 2x per week in the winter and then 3x per week in summer.**

<b>Intention</b>	<b>Specific</b>	<b>Measurable</b>	<b>Attainable</b>	<b>Relevant</b>	<b>Time-based</b>
<b>What it is that you want to achieve?</b>	<b>What Where Why When</b>	<b>How Much? How Many? How Often?</b>	<b>Is it Achievable?</b>	<b>Is it important to what I want to achieve ultimately?</b>	<b>By When?</b>
<b>Ex. Shoot 45% From 3 pt. line</b>	Increase to 45% So I can make JV at school in November	Shoot 300 3 pt. shots 4x/week until tryouts	YES	Yes- to make the JV and add Value to the team	By 11/15/12

<b>Intention</b>	<b>Specific</b>	<b>Measurable</b>	<b>Attainable</b>	<b>Relevant</b>	<b>Time-based</b>
<p><b>What it is that you want to achieve?</b></p>	<p><b>What</b> <b>Where</b> <b>Why</b> <b>When</b></p>	<p><b>How Much?</b> <b>How Many?</b> <b>How Often?</b></p>	<p><b>Is it Achievable?</b></p>	<p><b>Is it important to what I want to achieve ultimately?</b></p>	<p><b>By When?</b></p>

\*Fill in the date for each day and the goal-directed activity where applicable

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday



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