

Copyright 1998

All rights reserved

No part of this thesis may be reproduced in any form without the written permission from the publisher. For more information contact Lior Doron.

1.877.778.3569

<http://www.flowinsports.com>

How a Coach or Manager can use the Concept of Learned Optimism
to Enhance Athletes' Motivation

by: Lior Doron

Supervised by: Ronald Ferguson

A Research Project in Sports Administration
Submitted in Partial Fulfillment
for the Graduate Diploma in
Sports Administration

at

Concordia University
Faculty of Commerce and Administration

How a Coach or Manager can use the Concept of Learned Optimism

to Enhance Athletes' Motivation

Introduction

There is a parallel between experiencing shocks for animals and aversive real life experiences for humans. No one is immune to the uncontrollable, unpredictable, aversive experiences in life. While one person uses the aversive event as a learning experience and adapt, another person may use the experience as a failure and give up. When someone interprets their responses as futile, independent of outcome, some begin to let down and eventually give up in what is called being learned helpless. Others, on the other hand, are persistent - maintain an optimistic outlook - and eventually succeed quicker and more often. Overall, optimists are more successful than pessimists: optimists achieve more, rebound back from failure quicker and persist longer than pessimists.

Optimism and pessimism are probably most valuable in the athletic field because athletes tend to fail much more than they succeed. Sports can be a medium in which children are taught that a hard work ethic, composing of an uncanny resiliency, belief and determination, translates into success. Unfortunately, the sporting milieu also brings failure, disappointment, and let down; ironically, the latter much more than the former. If success is actually measured by the percentage of times athletes win final events such a Stanley Cup, World Series, or gold medal, athletes spend most of their careers losing! Compare the number of times an athlete wins to that of which he or she fails. For instance, a hall of fame baseball player hits for a career .300 which means in approximately 10,000 at bats, he failed 7,000 times! Similarly, most professional tennis players who only win a few titles spend much of their career losing matches. In the same way, a majority of hockey, football and baseball players etc., from recreational to

professional play, finish their career having never won their prestigious championship trophies. And if they have, this may be numbered in one hand (no pessimism intended!).

Considering the prevalent nature of failure in sports, is it easy to give up and be helpless? In general, athletes, coaches and employees who want to perform must deal effectively with failure and those managing these people must be optimistic; look at what can be done rather than what can't be done. Understanding and using the principles of learned optimism can help bolster athletic motivation if used on an individual or team setting. What differentiates two athletes or people exposed to similar events? How can athletes maintain a positive outlook - remain optimistic - and avoid the feelings of learned helplessness?

Target Reader

The following paper will provide answers to the questions aforementioned and is most useful to anyone who is involved in the sporting context whether it be as a coach, athlete, or manager. In these roles, optimism is designed to get the most out of a leisure, amateur or professional athlete. More specifically, the paper emphasizes the most effective vocabulary one should use to communicate with athletes, the press etc. Moreover, as an athlete, an optimistic self talker (the way you talk to yourself) can be the distinguishing factor between a best performance and an average one. As sports administrators, the paper discusses the power of optimism and suggests the differentiating factor of employing two athletes with equal qualifications should be the one who is more optimistic. Furthermore, this paper can be beneficial to managers outside the sporting milieu who have a particular interest in effective communication with employees.

Purpose of the Paper

The goal of this paper is to provide a synthesis of key research studies conducted on learned helplessness while bringing together other classic research on learned optimism. More precisely, the paper aims to gain a better understanding on how to manage athletic motivation using the concept of learned optimism. Defining what is learned optimism, its relationship with learned helplessness and how to avoid being helpless are also key topics this paper seeks to explain. A descriptive research approach will be utilized while at the same time gaining a deeper conceptualization of learned helplessness and learned optimism.

Outline of the Paper

To realize these goals, Mintzberg's (1994) management roles will be summarized which will then lead to Overmier and Seligman's (1967) original and classic study on learned helplessness. Thereafter, other research topics and relevant research areas will be described leading into the concept of learned optimism. The outline will feature first, an operational definition of key terms such as coach, learned optimism, enhance, athlete and motivation. Second, the field of management will be further explored to gain a better understanding of the exact nature of the roles and responsibilities of a coach within the managerial field. Third, the classic research of Overmier and Seligman on learned helplessness will be discussed. Fourth, to avoid learned helplessness, the concept of immunization, which describes the nature of reversing learned helplessness will be outlined. Fifth, since cognition determines success or failure, the research of goal setting will also be outlined. Finally, these topics will lead to learned optimism as well as the three crucial variables affecting its condition. Overall, as the title suggests, these topics

are included so that a coach can use the concept of learned optimism to enhance athletes' motivation.

Operational Definition of Key Terms

Coach

A coach is the person in charge of an athletic team and is generally is the one who directly influences and decides when, who and how long athletes play. The coach is mainly in charge of developing, training, and monitoring athletes in function of the team plans. Some coaches actively participate in the overall cash flow operations as well as other administrative concerns of the team. The coach is also responsible in motivating athletes while being a leader, teacher and organizer. In sum, the coach is a role model or mentor and is in charge of helping athletes attain their full potential.

Learned Optimism

Learned optimism is the opposite of learned helplessness. Learned helplessness is a condition following a few bad experiences where an individual interprets these negative experiences as being out of his control and responds as being helpless (Chaplin, 1985). Learned optimism is about dealing effectively with setbacks. By conditioning the mental response to adversity, one copes more efficiently - quicker and better - to challenge and failure. For example, after losing an important point in tennis, focus is placed on what can be done to win the next point rather than ponder the reasons why the last point was lost. Simply stated, learned optimism becomes an unconditioned response to view the possibilities rather than the limitations. Is the glass half full or half empty?

Enhance

To enhance refers to improve, optimize, make more effective and efficient.

Athletes

Athletes refer to individuals competing in either recreational, municipal, regional, provincial, national or international forums. The athlete may be involved in a leisure game of squash or a professional game of hockey where agility, stamina, and strength play a much greater importance.

Motivation

Motivation is a term used to account for factors as to why an organism persists and channels energy towards a desired goal. Although motivation can be explained in a much more detailed scope, the definition put forward, provides ample information for the purposes of this paper.

Motivation can be classified as either extrinsic or internal. Extrinsic motivation refers to behavior governed by either a reward, punisher or incentive (Reeve, 1992). A reward is any physical object that acts to increase the probability of a behavior reoccurring. For example, money or trophies are extrinsic rewards. A punisher acts in the opposite direction and when applied correctly decreases the probability of a behavior reoccurring. An example is a coach yelling at a player who arrives late for practice. If the player no longer show ups late, the punisher has served to decrease the athlete's response. An incentive is a physical object that draws an athlete closer to or further away from a desired behavior. While incentives occur before a desired behavior, reward and punishers occur after.

For the purposes of this paper, motivation will refer to the internal rather than extrinsic motivation. Remember, the aim is to determine how a coach or manager can use the concept of learned optimism to enhance an athlete's motivation.

The Role of a Coach: Managing Athletes

Certain psychological characteristics exist to describe a coach or manager. Consider a coach or manager as a tabula rasa - a blank slate - whereupon traits and roles can be filled in. A coach can be considered as a manager and these terms can be used interchangeably. Why? While a coach manages, a manager is also a coach. For example, he or she has employees in which he or she leads, influences and guides. Mintzberg's classic research in the managerial and organizational field (1994) specify more specific roles. He discusses a manager who manages employees to take action through either action, people, or information. These levels are depicted with three circles (getting bigger and bigger). On the outer circle, a manager evokes action at the action level while on the inner most circle, a manager evokes action using the information level. In between lies managing through people. The manager can decide at what level to intervene with employees. For the purposes of this paper, the manager will be discussed at the people level.

Managing through People

In the heart of this level, lies two distinct and separate functions: leading and linking. The manager leads his or her employees on either an 1) individual, 2) group or 3) unit level. Although most managers lead using all three levels, it does vary according to the context and personality. Of importance in this discussion are the first two; how a manager leads at the one on one and group or team level. The second function - linking - functions to look at how a manager regulates or controls outside influences i.e. media, fans etc. with internal influences i.e. star players, problem athletes etc.

Other Managerial Traits

Managers are also generally considered as those who are doers, thinkers and leaders. Managers lead, control, influence and communicate to get the job done. They also are responsible in scheduling and conceiving plans to ameliorate the overall well being of the organization. Managers have multiple and differentiated sets of roles in an organization such as a figurehead, leader, liaison, monitor, disseminator, spokesperson, entrepreneur, disturbance handler, resource allocator and negotiator (Johns, 1996). For instance, at the interpersonal level, managers have acquired skills dealing with establishing and maintaining interpersonal relations. These could be demonstrated by giving a pep talk to the team as a figure head, providing reward (more playing time) and punishment (screaming at a player) as a leadership role and maintaining inter and intra contact within the organization in the liaison role. In the information role, the manager portrays this function in the way the he or she receives and transmits information. For example, a manager must submit starting line ups at the beginning of a hockey game and at the same time receives the starting line up of the opposing manager. In the monitor role, the manager might review statistics of players in a game situation to match the player's strong point with their respective specialty. For example, a baseball player has a very good batting average with 2 outs and a runner in scoring position. He might be preferred to someone who has a very good average but less so in key situations. It is up to the manager to be informed and utilize this information to maximize on the potential results.

Communication in Sports

In sports, nothing seems more vital than a sound communicative team; a coach who understands his players and players who understand their coach. Successful coaches understand the power of sports psychology. They are skillful communicators and

comprehend what drive both individual behavior as well as team building. Active listening, non verbal communication, and paraphrasing are tools that should be mastered. Other principles of reinforcement such as rewards, punishments, and shaping should also be used effectively to understand what can be done to increase or decreases athletic behavior.

Bill Walsh has the systematic ability to mold together a competitive team year in and year out as a coach in the National Football League. Walsh, emulate habits of success which can be rooted by the way the coach speaks to his team. In an interview, Walsh describes some of his thoughts of key issues of what makes a manager successful (Rapaport, 1994). Consider some of the interesting comments by Walsh in an interview and how they relate to communication in sports.

Do you see a link between managing and coaching?

Bill Walsh: I see coaches and executives who have more similar skills today than ever before. When I was with the 49ers, I was both head coach and general manager, so my duties were more business oriented than those of a lot of NFL head coaches. Today's NFL is a very complex world, and great football knowledge alone wont get your team to the Super Bowl.

Historically in sports, there has been one central figure in the organization whose presence dominates everything and whose judgments people identify with. That one person is the dictator, and everyone else simply does whatever he says. In a lot of ways, the old system was much easier for all involved. The dictator gave orders and everyone else just followed them.

Now working successfully with people in the organization demands more from the coach or the executive. In coaching, I think of it as the coach's ability to condition the athletes' minds and to train them to think as a unit, while at the same time, making sure each athlete approaches his own game with total concentration, intensity, and skill. There should never be a moment on the football field when a player doesn't feel challenged both physically and intellectually. That is why the old bludgeon approach is leaving football the way it is leaving business.

What is replacing the old approach?

Bill Walsh: Management today recognizes that to have a winning organization, it has to be more knowledgeable and competent in dealing with and developing people. That is the most fundamental change. The real task in sports is to bring together groups of people to accomplish something. In the old days, the approach was rather crude. The organization would simply discard a player who did not fit a specific, predefined mold. If a player did not conform to the way management wanted him to behave, or if he made the organization uncomfortable, it got rid of him. That was the typical response.

Today, in sports as elsewhere, individualism is the general rule. Some of the most talented people are the ones who are the most independent. That has required from management a fundamental change in the art and skill of communication and in the organization development.

In teaching skills to your players, how do you organize your own thinking about the players you are trying to reach?

Bill Walsh: Take a group of ten players. The top two will be super motivated. Superstars will usually take care of themselves. Anybody can coach them. The next four, with the right motivation and direction, will learn to perform up to their potential. The next two will be marginal. With constant attention, they will be able to accomplish something of value to the team. The last two will waste your time. They won't be with you for long. Our goal is to focus organizational detail and coaching on the middle six. They are the ones who most need and benefit from your direction, monitoring and counsel.

Striving for success sounds motivating for both the optimist and pessimist although pessimists might avoid success because of their fear of failure. Therefore, they might not try as hard in the first place. Understanding what makes people successful is just as important as understanding what contributes to cognitive thoughts of failure. The following theoretical model explains the concept of learned helplessness and the key characteristics associated with being helpless.

Empirical Research in Learned Helplessness

Learned helplessness is a conditioned expectation that no matter how hard one tries, the outcome will still be the same. (Maier & Seligman, 1976). Learned helplessness derives from a history, experimentally induced or naturally occurring, of having received punishment regardless of one's behavior. Such circumstances result in an impaired ability

to learn. According to Seligman (1975), repeated exposure to inescapable events - result in an expectation that one's responses cannot control the occurrence of future events. For example, a baseball player repeatedly hits the ball hard but seems to find the glove of the opposition. His or her behavior (swinging correctly) is punished by the opposing player recording an out. In the following at bats, the player may begin to think that "no matter how I swing, I will be out". As a result, learned helplessness develops.

The original study of learned helplessness was first instructed by Overmier and Seligman. Dogs were strapped into hammocks and divided into three conditions; escapable shock, inescapable shock and a control group (no shock). Thereafter, dogs were tested in a two way shuttle box developed by Solomon and Wynne (1953). The study design involved a simple response of crossing over a barrier in the middle, would terminate shock after being presented with the conditioned stimulus (CS) of a light. Results showed when the CS was present, dogs who had previously experienced inescapable shock failed to avoid or escape the unconditional stimulus (UCS). Moreover, two - thirds of the animals developed a passive acceptance of the aversive UCS; they appeared helpless. However, those dogs who experienced the escapable shock or no shock condition quickly learned to escape shock. Seligman concluded that those who experience repeated failures attribute a perceived lack of control over their environment.

Hiroto (1974) was the first researcher to obtain similar findings of learned helplessness in humans. This study's procedure was similar. Subjects were asked to turn off a series of loud aversive tones by pushing a combination of buttons. Three groups of subjects were used by the experimenter in which one group of subjects were exposed to uncontrollable inescapable tones; a second group of subjects had control over the

aversive stimuli and the third group was the control group. When the experiment actually allowed all groups of subjects to turn off the tone, subjects exposed to inescapable tones - as expected - were unable to respond as well as those subjects who had not been exposed to the aversive stimuli.

Reversing Learned Helplessness: the Concept of Immunization

The early research in learned helplessness demonstrates that prior exposure to inescapable aversive experiences create an impaired ability to learn for future trials. (Brown & Jacobs, 1949; Carlson & Black, 1960; Leaf, 1964). Can learned helplessness be reversed? Subjects who are immunized - receiving early masterful learning show a facilitated effect to respond to future adverse conditions. The design results in, first, an escapable condition and second, the inescapable condition. The organism's first condition, the immunization phase, creates a contingency between response and termination of shock and, therefore, subsequent exposure to inescapable shock may produce a beneficial effect on learning (Seligman and Maier, 1967). Furthermore, the importance of prior control over shock is emphasized, and if the organism first develops a contingency between its behavior and outcome, then subsequent inescapable shock may not result in learned helplessness.

Learned Helplessness in Sports

Learned helplessness in sport occurs when athletes produce maladaptive achievement patterns that are attributed in failed situations (Papavessis & Carron, 1988). Athletes, too, may display learned helplessness in different maladaptive achievement patterns but from a cognitive, motivational and emotional perspective. For instance, from a cognitive perspective the adaptive achievement patterns is characterized by maintaining effective

strategies or creating new and more efficient strategies under adverse situations. In contrast, a maladaptive achievement patterns are characterized by the breakdown of effective strategies or a failure to develop new strategies under adverse conditions.

From a motivational perspective, the adaptive achievement patterns are characterized by challenge seeking and high persistence in the face of obstacles. On the other hand, the maladaptive achievement pattern is characterized by a challenge avoidance and low persistence tolerance in the face of obstacles.

From an emotional perspective, the adaptive achievement pattern is characterized by pride and satisfaction in terms of the degree of effort exerted in both successful and unsuccessful conditions. Conversely, the maladaptive achievement pattern is characterized by pride and satisfaction only from ability exhibited in successful conditions; failure conditions signify low ability and yield little pride and satisfaction.

Another theoretical model that emphasized the social cognitive nature of maladaptive achievement patterns in the development of learned helplessness in attribution theory (Abramson, Seligman and Teasdale, 1978). In this model, four dimensions are emphasized; locus of control, stability, specificity and importance. The locus of control dimension is the generalized expectation that either internal or external factors control behavior inasmuch as the stability dimension refers to the fact that outcomes can be attributed to causes that are either stable or unstable. The specificity dimension reflects the fact that causal attribution may be specific or general in nature. The importance dimension takes into account the relative value a person assigns to an event. The results of this study suggests that attributions to causes that are internal, stable, general and important maximize the severity of the learned helplessness deficits while, on the other

hand, attributions to causes that are external, unstable, specific and unimportant minimize the helplessness deficits.

Going from Learned Helplessness to Learned Optimism

Cognitive maladaptive attributions - although difficult to change - are possible. Being helpless is not a permanent condition. Understanding its dimensions help in reversing this condition. First, though, it is worthwhile measuring your own optimism. Take a few moments and answer the following questions albeit some situations you may not have encountered. There is no right answer but answer each question with the answer that best fits.

Measuring Optimism

Seligman proposes a measure to test his concept of learned optimism. The test is shown in Appendix A and the scores are interpreted in Appendix B. The test is strongly encouraged to complete before proceeding further. Take the test and score your results before reading on!

Three Crucial Dimensions in Learned Optimism

When events occur, we tend to try and explain why they occurred in the first place. Three dimensions of optimism and pessimism exist: time, pervasiveness, and personalization. Explaining these events serves as what is called an explanatory style, attribution or the process through which we seek to understand the causes of our actions. The following dimensions are considered crucial in determining whether someone is optimistic or pessimistic. These dimensions will be compared using events that are both good (positive experiences) or bad (negative experiences). In addition, some comments

are examples of what a coach may tell the press after his or her team won or lost. These comments may also be athletes interpreting their own game's outcome.

Time: Temporary Vs. Permanence:

Some give up easily believe the causes of the bad events are here to stay. They believe these negative experiences will affect them for a long period of time and will persist in what seems to be forever. In contrast, when an optimist encounters bad experiences, they perceive these occurrences as temporary and not lasting a long time or that will go away.

Table 1 demonstrates a comparison of these optimistic and pessimistic beliefs.

Table 1: Comparison of Pessimistic and Optimistic Explanatory Style in a bad occurrence

<u>PERMANENT (Pessimistic)</u>	<u>TEMPORARY (Optimistic)</u>
We can't hit	We couldn't hit today
We don't communicate in this organization	Communication lately has not been a priority
We always find a way to lose	Our team found a way to lose today

On the other hand, the optimistic explanatory style of explaining good events is the opposite of the pessimistic explanatory style. For example, Table 2 shows several examples of what an athlete might say to the press after he or she won in a particular sport.

Table 2: Comparison of Pessimistic and Optimistic Explanatory Style in a good event occurring

<u>TEMPORARY (Pessimistic)</u>	<u>PERMANENT (Optimistic)</u>
We hit well today	We hit well
My serve was on today	My serve is good
My approach shot on the 8 th hole is good	My approach shots are good

--	--

Pervasiveness: Specific vs. Universal

Whether an event is pervasive or specific depends on the extent to which an event affects other areas of your life. For example, suppose a professional tennis player is running a part time business venture. If the business venture fails and, at the same time, his or her performance in tennis also suddenly drops, the athlete may have made a universal explanation. “I’m a failure in business and therefore I’m a failure in tennis”. The opposite of universal is specific. If the same athlete understands that tennis and business are separate entities unaffected by one another, the athlete’s business woes should not affect the on court performance. Table 3 provides other examples that affect the pervasiveness dimension of learned optimism.

Table 3: Comparison of Pessimistic and Optimistic Explanatory Style affecting the pervasiveness dimension occurring in a bad event

<u>Universal (Pessimistic)</u>	<u>Specific (Optimistic)</u>
I’m no good	I played a bad game
I can’t think under pressure	During that key moment, the pressure got to me
I find a way to mess everything up	I made one bad pitch and that cost us the game

Overall, bad events should be explained using specific explanations. There is no use making an existing situation more catastrophic or over generalizing an event that occurred one time as affecting future results.

If a bad event is explained as specific, then a good event should be explained as universal. Thus, good events should have an explanatory style that affects many areas while the pessimist believes these events have specific repercussions. For example, a golf player hits a 20 foot putt which by any standards is difficult. The optimist thinks “I am a good golfer” while the pessimist thinks “my green shots are good”. Table 4 compares other examples of a pessimistic vs. optimistic golfers during a day on the golf course.

Table 4: Comparison of Pessimistic and Optimistic Explanatory Style affecting the pervasiveness dimension occurring in a good event

<u>Universal (Pessimistic)</u>	<u>Specific (Optimistic)</u>
My approach shots are good	My shots are good
My practice swings feel good	My swings feel good
My muscles are loose	I’m feeling loose

The same idea applies in this case. While the pessimistic explanatory style portrays specific causes for good events, the optimist believes good events occur because of the athlete’s overall talent. Good things tend to have a snowball effect according to the optimist while the pessimist’s thinks his or her good fortunes are few, isolated and occur in limited areas.

Personalization: Internal Vs. External

The last crucial dimension in learned optimism is personalization. When people tend to blame themselves for their own misfortunes or take credit for their own success an internal explanatory style is used. However, if people tend to blame others or circumstances to their misfortunes or success, an external explanatory style is used. Obviously, optimism dictates to take credit for success and blaming others or

circumstances for failures. Pessimism deals with blaming oneself for failures and giving credit to others when good fortune occurs to themselves. Table 5 compares an optimist and pessimist personalization when good events occur.

Table 5: Comparison of Pessimistic and Optimistic Explanatory Style affecting the personalization dimension occurring in a good event

<u>Universal (Pessimistic)</u>	<u>Specific (Optimistic)</u>
He got unlucky	I got lucky
He got the bad bounces	I got the good bounces
My teammate's are talented	I am talented

Things that are positive, beneficial or fortunate are a result of some external, out of one's control according to the pessimist. These events should be viewed as having a more controlling effect considering our aim is to enhance motivation. A hockey team who wins games is a result of the contribution of every teammate. The expression "the whole is greater than the sum of its part" applies in this case because without the input of every individual, the team can not win. As the third example above illustrates, "my teammates are talented, imagine the following scenario: The Montreal Canadiens win the Stanley Cup in 1998 and a reporter asks back up goalie Jocelyn Thibeault, who did not play one game during the playoffs, why the team won. He responds by saying my teammates deserve most of the credit. Could the team have won without his contribution? Even though he may not have played that particular game or in the playoffs, his role during the season cannot be forgotten. The athlete should interpret his season effort as having a direct impact on the team's post season success. Consider how in Table 6 the pessimist blames himself / herself as the cause bad events.

Table 6: Comparison of Pessimistic and Optimistic Explanatory Style affecting the personalization dimension occurring in a bad event

<u>Universal (Pessimistic)</u>	<u>Specific (Optimistic)</u>
The pitcher was aiming for me	The pitcher can't control his pitches
I find a way to lose	He found a way to win
I choked	He rose to the occasion

A pessimistic person gives up even before beginning a new task. He or she may also give up faster when trying a new task which has no apparent barriers of success. When he or she does fail they interpret the failure with the self defeating attributions aforementioned.

With much research conducted on pessimism, surprisingly, very little has been done on learned optimism. However, Seligman's (1991) book on Learned Optimism does offer several interesting insights on the topic, which in part follow below, in the case of the National League Study. Seligman suggests optimists do not give up as easy, are resilient in their efforts and enjoy more success on the playing field than pessimists. He goes as far as saying an optimists' quality of life is also more enjoyable and self - fulfilling. The following key research study supports the optimistic approach in thinking. The study corroborates the idea that a more talented team does not necessarily win. Rather, the team that is the more optimistic is the one that has a greater chance of winning.

The National League Study

Seligman grouped together the quotes from all National League Baseball articles during the 1985 baseball season and using a predetermined scale rated whether the team,

including the manager, portrayed an optimistic or pessimistic explanatory style. The data was collected by combining all of the sports pages in the 12 baseball cities following a game. Despite the major criticism of the internal validity of the study (do athletes really report what they think to journalists), the study's overall design, control, and hypothesis were well formulated. The formation of the hypothesis consisted of determining whether optimists - as a team - are more inclined to win games and hit better under pressure than pessimists.

Comparing the 1985 and 1986 New York Mets and St - Louis Cardinals

The 1985 Mets were considered an optimistic team based on their post game comments which were statically analyzed. They won a greater percentage of games the following year (.667 vs. .605) and batted a higher percentage. In addition, during key situations which was defined as in the late innings (7th, 8th or 9th) with the game close, the team did significantly better than a pessimistic team such as the Cardinals. Loaded with talent and superstars such as Willie McGee or Jack Clark, as a team, the Cardinals were pessimists. In 1986 the Cardinals had a terrible year winning only 49 percent of their games while batting .236 and predictably worse under pressure at .231. Table 7 shows optimistic and pessimistic quotes from players or managers. .

Table 7: Comparing an optimistic and pessimistic quotes by two athletes in a post game interviews

<u>Player</u>	<u>Situation</u>	<u>Quote</u>	<u>Dimension</u>
Dwight Gooden	After a loss	He hit well tonight	External, Situational
Whitey Herzog	After a loss	We can't hit. What the hell, let's face it	Permanent, pervasive and personalized

The 1998 Nagano Winter Olympics: Quotes from winning and losing Olympic Athletes

Compiling the quotes of the 1998 winter games is no easy task considering thousands of quotes are available from all types of papers, magazines, television and the internet. One must be selective, cautious and hesitant considering sources can have a low reliability. The Montreal Gazette (1998) was chosen as a source primarily because of its reputable and extensive sports coverage shown not only throughout the Olympics but also throughout its many years of existence. The following quotes, shown in table 8 are extracted from winning and losing Olympic athletes from the 1998 Winter games in Nagano, Japan. Note the optimistic and pessimistic explanatory style and which dimensions they fit into.

Table 8: Quotes from Winning and Losing 1998 Olympic Athletes in Nagano Japan

1) I just didn't have it. I don't know why. (Jeremy Wotherspoon Speed Skating, Feb 16, C6).
2) This is the worst day of my life (Paul Kariya after being told he can not participate in the Olympic Games because of a concussion he suffered in a prior NHL hockey game, Feb. 12, C1).
3) It's hard to say why we didn't score. Our power play was probably our Achilles heel. The ice time was all evenly distributed among all the guys. The system we played was pretty conservative. It wasn't really aggressive. That may have had something to do with it as well. (Theoren Fleury of the Men's Canadian Olympic Hockey Team after losing in the bronze medal game to the Fins, Feb. 22, B2).
4) I've had some big wins and some tough losses, but the Czech game, no question, is one of the toughest losses I've ever experienced. We were in shock. It was one of the those rare feelings we've gotten in our careers where we really didn't know what hit us. (Wayne Gretzky of the Men's Canadian Olympic Hockey Team after losing in the bronze medal game to the fins, Feb 22, B2).
5) We might have sent 20 guys up there and not scored a goal on Hasek (Wayne Gretzky of the Men's Canadian Olympic Hockey team after losing in a shoot-out against the Czech Republic team. Feb 22, B3).

- 6) I was disappointed when I got cut. I really wanted to make that team, but it didn't stop me from coming back. I had a dream, I wanted the Olympic gold medal and I'm not a quitter. (Manon Rheume comments after being cut from the world championship team the year before by her coach, Feb 14, C2).
- 7) I just didn't have that last push (Myrium Bedard after losing in the biathlon Feb 15, B4)

Some athletes, despite setbacks, failures, and injuries persist and as shown have either reaped the benefits of optimism or will in their future competitions. Others, explain their misfortunes using a pessimistic explanatory which will eventually threaten their career. Since there are three dimensions of optimism or pessimism, it was interesting to see which dimension(s) were used in their quotes. Paul Kariya, obviously very optimistic in his quote saying that this day is the worst one in my life (Situational). Look at Wayne Gretzky's comments, arguably the world's greatest hockey player. On the one hand, he uses an optimistic explanatory style saying he has experienced tough losses throughout his career and this one is definitely ranked among one of the hardest (temporary, specific). On the other hand, he used a pessimistic explanatory style when he comments on the shoot out saying that no matter who we send out, no one would have scored on the goal keeper (permanent, pervasive). Obviously, there is the possibility of being optimistic in one or two dimensions but be a pessimist in another dimension. Take a few moments and look at some of the optimistic comments. Notice how, like everyone else, athletes too have devastating incidences that threaten their career. The optimist, like Annie Perreault, is a classic case. Her comments epitomize how athletes can rebound back after failure.

Using Learned Optimism in other areas

Learned optimism can enhance motivation in not only athletes or coaches managing athletes but also improve the overall well being of almost anyone who uses it. Success and optimism are highly correlated and although correlation does necessarily imply causation, one may speculate that viewing the world in an optimistic light will help create, maintain and improve the number of successful events one experiences. Everyone receives setbacks, failures and misfortunes. As the introduction portrays, no one is immune to failure; however, there is a way to control the way we interpret our failure. The concept of learned optimism can be used in centers who help those who are in the midst of failure and are trying to bounce back: alcoholics, abused men or women or drug addicts. In addition, optimism can help those who are in the painful process of divorce see this period of time as surmountable and help restructure their goals as attainable. Other areas exist too. For example, learned optimism can be more effective than treating certain types of clinical depression as Seligman advocates. In an internet search on learned optimism, (Internet, 1998), learned optimism was found to produce health benefits. For instance, people who learn to maintain an optimistic attitude may not only avoid depression, they may actually improve their physical health. High scores for optimism were also predictive of excellence in everything from sports to life - insurance sales. Optimists were also found to be more resistant to infectious illness and are better at fending off chronic diseases of middle ages.

Too Much Learned Optimism? Safeguards

Just as too much of a good thing is bad, learned optimism does have its limits. Using it all the time is not recommended especially in certain situations. As a sports psychologist, if someone is experiencing severe setbacks or failures and whose future seems dim do not

use learned optimism. Other counseling techniques should be used such as active listening, paraphrasing and gaining a deeper understanding of the athlete's viewpoints. Thereafter, when confidence and determination are restored, learned optimism can be useful. Another case in which learned optimism is not appropriate are situations when the cost of failure is high. For example, a coach receives information from a medical doctor that an athlete's status is day to day meaning he may return playing any day. An optimistic coach, prematurely inserting a player in the lineup, can severely threaten a player's career. The cost in this case is very high; do not let the concept of learned optimism affect your decision making.

Optimism, Pessimism and Goal Setting

Considering the evaluation of looking at whether athletes persist and how they attribute their failures or successes, the research of goal setting is also important since the goals one creates serve as a yardstick of whether you actually succeed or fail. The positive effects of goal setting on task performance is one of the most powerful and reliable conclusion in the psychological literature. Ninety percent of these studies have corroborated this finding (Locke & Latham, 1985).

The research on effective goal setting suggests looking at the process rather than result; are you improving on your own performances rather than simply winning? (Orlick, 1990). Success must be seen in terms of the athletes exceeding their own goal setting rather than surpassing the performance of others. Success does not necessarily mean winning. This concept is emphasized by setting performance goals rather than outcome goals i.e. maintaining a 65% or higher first serve percentage vs. winning my

first match). When most performance goals are attained, the outcome goal - winning - is usually achieved.

The work of Lock, Shaw, Saari, and Latham (1981) provides an excellent summary of goal setting research up to the early 80's. They discuss that specific and challenging goals lead to higher performance than easy, do your best, or setting no goals.

More recent guidelines of goal setting include 1) identifying target dates for attaining goals 2) recording these goals once they have been identified and 3) setting positive as opposed to negative goals i.e. increasing the shooting percentage in hockey rather than decreasing the number of times missed. Overall, these strategies will help athletes attain their goals and therefore create a contingency between effort and outcome. As a general rule, try to set SMART goals that are (S)pecific, (M)easurable, (A)ttainable, (R)ealistic and have a (T)ime limit.

Conclusion

Psychology is interested in controlling, explaining, and predicting human behavior. Based on the quotes of the Olympic athletes in 1998 - along with the idea that optimism predicts success - some predictions based on these quotes can be offered. The optimists such as Wayne Gretzky, Paul Kariya, Theoren Fleury, Manon Rheume, Myrium Bedard, Annie Perreault and Andy Capicik will enjoy a successful career while Jeremy Wotherspoon's career will wane since he is a pessimist. Although pessimists may win occasionally, they do not win nearly as often as though they would adopt an optimistic explanatory style.

Many factors determine whether individuals or teams win in sports. One crucial factor is the explanatory style or attribution an athlete or team portrays. Optimism is measurable

and predicts success. On the other hand, pessimism predicts failure. Optimism alone does not equal winning but is a necessary tool that when honed can help attain these outcome goals. Consider the following text which outlines a brief but excellent analysis directed at coaches and athletes in Seligman's book (1991)

What every coach should know

If you are a coach or a serious athlete, you must take these findings seriously. They have several immediate, practical implications for you.

Optimism is not something you know about intuitively. The ASQ (Attributional Style Questionnaire) measures something you can't. It predicts success beyond experienced coaches' judgments and handicappers' expertise.

Optimism tells you when to use certain players rather than others. Consider a crucial relay race. You have a fast athlete, but he's a pessimist who lost his last individual race. Substitute. Use pessimists only after they have done well.

Optimism tells you who to select and recruit. If two prospects are close in raw talent, recruit the optimist. He'll do better in the long run.

You can train your pessimists to become optimists.

The research on immunization producing a positive effect on performance in terms of motivation, cognition, and emotions is well supported. Learned helplessness may explain why some athletes give up during a game, thinking their actions cannot control their outcome. Learned optimism may explain come from behind wins or eye catching 9th inning comebacks. As coaches, sports administrators, and sports psychologists, it is our duty to immunize athletes and employees so that when they do experience difficult times, they are able to learn from past performance the contingency between effort and outcome.

Sports, although usually overlooked, can be one of the best settings to produce an immune effect on developing a pessimistic explanatory style. If one fails, try harder and if upon failing again, try even harder!

Guiding athletes in adequately developing goal setting strategies can avoid feelings of failure and of learned helplessness. One can speculate that when losing in a match, one crucial difference between the pessimist and optimist is while one gives up, the other persists, thinks he can do it, believes in his efforts, and sometimes actually wins. When the match is won, the optimist's efforts pay off but when the match is lost, the optimist maintains his positive outlook while the pessimist thinks he would have lost despite any efforts he would have made. As Wayne Gretzky once said, "you miss 100% of the shots you never take".

Future research, (one in which I am presently involved in), may look more specifically at the link between optimists, pessimists, learned helplessness, and goal setting. Do optimists and pessimists set different goals? After losing in a game, do their goal setting differ? How can one immunize athletes and set what ideally can be an optimal goal setting goal! Consider the idea that pessimists set easier goals so that these goals may be fulfilled much easier while the optimists overestimate their goal setting capabilities. Should sports psychologist adapt goals for pessimists or optimists to adjust for this bias?

Helping children win in sports whether it be in competition or especially in practice sessions (coaches have a higher control of rewards and punishment in practice) can drastically improve a child's cognitive reaction to failure not only as an athlete but also as an adult faced with other problems later on in life. It is therefore crucial to develop programs where children are exposed to as many "success for all" or winning outcomes.

When situations exist and when failure is experienced, it is the duty of the coach or manager to use the concept of learned optimism to enhance motivation.

References

- Abramson, L. Y., Seligman, M.E.P., & Teasdale, J.D. (1978). Learned helplessness in human: Critique and reformulation. Journal of Abnormal Psychology, 87, 49 - 74.
- Brown, J. S., & Jacobs, A. (1991). The role of fear in the motivation and acquisition of responses. Journal of Experimental Psychology, 39, 747-759.
- Carlson, N.J., & Black, A.H. (1960). Traumatic avoidance learning: The effect of preventing escape responses. Canadian Journal of Psychology, 14, 21-28.
- Chaplin, J. P. (1985). Dictionary of Psychology (2nd ed.). New York: Dell Publishing.
- Hiroto, D. S. (1974). Locus of control and learned helplessness. Journal of Experimental Psychology, 102, 187 - 193.
- Internet search (1998). Learned optimism yields health benefits. (February 12, 1998). [Http://helping.apa.org/learned.html](http://helping.apa.org/learned.html).
- Johns, G. (1996). Organizational Behavior: Understanding and Managing Life at Work (4th ed.). New York: Harper Collins College Publishers
- Leaf, R. C. (1964). Avoidance response evocation as a function of prior discriminative fears conditioning under a curve. Journal of Comparative Physiological Psychology, 58, 446 - 449.
- Locke, E. A., Shaw, K.M., Saari, L.M, & Latham, G.P. (1981). Goal setting and task performance: 1969-1980. Psychological Bulletin, 90, 125-152.
- Mair, S. F., & Seligman, M. E. P. (1976). Depression and learned helplessness in man. Journal of Abnormal Psychology, 84, 228 - 238.
- Mintzberg, H. (1994). Rounding out the Manager's Job. Sloan Management Review. Fall, 11 - 26.
- Orlick, T. (1990). In pursuit of excellence (2nd edition.). Champaign, Ill. Human Kinetics.
- Overmier, J. B., & Seligman M. E. P. (1967). Effects of inescapable shock upon subsequent escape and avoidance behavior. Journal of Comparative and Physiological

- Psychology, 63, 23-33.
- Papavessis, H. & Carron A. V. (1988). Learned helplessness in sport. The Sport Psychologist, 2, 189-201.
- Rapaport, R (1994). To Build a Winning Team: An Interview with Head Coach Bill Walsh. Harvard Business Review, Jan / Feb Issue Vol. 1 - 3.
- Reeve, J. M. (1992). Understanding Motivation and Emotion. Montreal: Harcourt Brace College Publishers
- Seligman, M. E. P. (1975). Helplessness: On Depression, Development, and Death. San Francisco: Freedman.
- Seligman, M. E. P. (1991). Learned Optimism. New York. Alfred A. Knopf.
- Seligman, M. E. P., & Mair, S. E. P. (1967). Failure to escape traumatic shock. Journal of Experimental Psychology, 74, 1-9.
- Solomon, R. L., & Wynne, L. C. (1953). Traumatic avoidance learning: Acquisition in normal dogs. Psychological Monographs, 67, (4 Whole No. 354).
- The Montreal Gazette (1998). Olympic Coverage of the 1998 Nagano Olympics, Feb. 12 - 22, discontinuous pages.

Circle only one response for each question. Ignore the letter and number codes for now. The ASQ (Attributional Style Questionnaire) and interpretation of scores is reprinted from Seligman (1991).

1. The project you are in charge of is a great success.

	PSG
A) I kept a close watch over everyone's work	I
B) Everyone devoted a lot of time and energy to it.	O

2. You and your spouse (boyfriend / girlfriend) make up after a fight.

	PMG
A) I forgave him / her	O
B) I'm usually forgiving.	I

3. You get lost driving to a friend's house.

	PsB
A) I missed a turn	I
B) My friend gave me bad directions.	O

- 4) Your spouse (boyfriend / girlfriend) surprises you with a gift.

	PsG
A) He / she just got a raise at work	O
B) I took him / her out to a special dinner the night before	I

- 5) You forget your spouse's (boyfriend / girlfriend's) birthday.

	PmB
A) I'm not good at remembering birthdays	I
B) I was preoccupied with other things	O

- 6) You get a flower from a secret admirer.

	PvG
A) I am attractive to him / her	O
B) I am a popular person	I

- 7) You run for a community office position and you win.

	PvG
A) I devote a lot of time and energy to campaigning	O
B) I work very hard at everything I do	I

- 8) You miss an important engagement

	PvB
A) Sometimes my memory fails me	I
B) I sometimes forget to check my appointment book	O

- 9) You run for a community office position and you lose

- | | | |
|---|-----|---|
| | PsB | |
| A) I didn't campaign hard enough | | I |
| B) The person who won knew more people | | O |
| 10) You host a successful dinner. | | |
| | PmG | |
| A) I was particularly charming that night. | | O |
| B) I am a good host | | I |
| 11) You stop a crime by calling the police. | | |
| | PsG | |
| A) A strange noise caught my attention | | O |
| B) I was alert that day | | I |
| 12) You were extremely healthy all year. | | |
| | PsG | |
| A) Few people around me were sick, so I wasn't exposed | | O |
| B) I made sure I ate well and got enough rest | | I |
| 13) You owe the library ten dollars for an overdue book | | |
| | PmB | |
| A) When I am really involved in what I am reading, I often forget when it's due | | I |
| B) I was so involved in writing the report that I forgot to return the book | | O |
| 14) Your stocks make you a lot of money | | |
| | PmG | |
| A) My broker decided to take on something new | | O |
| B) My broker is a top - notch investor | | I |
| 15) You win an athletic contest | | |
| | PmG | |
| A) I was feeling unbeatable | | O |
| B) I train hard | | I |
| 16) You fail an important examination | | |
| | PvB | |
| A) I wasn't as smart as the other people taking the exam | | I |
| B) I didn't prepare for it well | | O |
| 17) You prepared a special meal for a friend and he / she barely touched the food | | |
| | PvB | |
| A) I wasn't a good cook | | I |
| B) I made the meal in a rush | | O |
| 18) You lose a sporting event for which you have been training a long time | | |
| | PvB | |

- A) I'm not very athletic I
 B) I'm not good at that sport O
- 19) You car runs out of gas on a dark street late at night
 PsB
 A) I didn't check to see how much gas was in the tank I
 B) The gas gauge was broken O
- 20) You lose your temper with a friend
 PmB
 A) He / she is always nagging me I
 B) He / she was in a hostile mood O
- 21) You are penalized for not returning your income - tax forms on time
 PmB
 A) I always put off doing my taxes I
 B) I was lazy about getting my taxes done this year O
- 22) You ask a person out on a date and he / she says no
 PvB
 A) I was a wreck that day I
 B) I got tongue - tied when I asked him / her on the date O
- 23) A game - show host picks you out of the audience to participate in the show
 PsG
 A) I was sitting in he right seat O
 B) I looked the most enthusiastic I
- 24) You are frequently asked to dance at a party
 PmG
 A) I am outgoing at parties I
 B) I was in perfect form that night O
- 25) You buy your spouse (boyfriend / girlfriend) a gift and he / she doesn't like it
 PsB
 A) I don't put enough thought into things like that I
 B) He / she has very picky tastes O
- 26) You do exceptionally well in a job interview
 PmG
 A) I felt extremely confident during the interview O
 B) I interview well I
- 27) You tell a joke and everyone laughs
 PsG
 A) The joke was funny O

- B) My timing was perfect I
- 28) Your boss gives you too little time in which to finish a project, but you get it finished anyway PvG
- A) I am good at my job O
- B) I am an efficient person I
- 29) You've been feeling run - down lately PmB
- A) I never get a chance to relax I
- B) I was exceptionally busy this week O
- 30) You ask someone to dance and he / she says no PsB
- A) I am not a good enough dancer I
- B) He / she doesn't like to dance O
- 31) You save a person from choking to death PvG
- A) I know a technique to stop someone from choking O
- B) I know what to do in crises situations I
- 32) Your romantic partner want to cool things off for a while PvB
- A) I'm too self - centered I
- B) I don't spend enough time with him / her O
- 33) A friend says something that hurts your feelings PmB
- A) She always blurts things out without thinking of others I
- B) My friend was in a bad mood and took it out on me O
- 34) Your employer comes to you for advice PvG
- A) I am an expert in the area about which I was asked O
- B) I am good at giving useful advice I
- 35) A friend thanks you for helping him / her get through a bad time PvG
- A) I enjoy helping him / her through tough times O
- B) I care about people I
- 36) You have a wonderful time at a party PsG
- A) Everyone was friendly O
- B) I was friendly I

- 37) Your doctor tells you that you are in good physical shape
- PvG
- A) I make sure I exercise frequently O
- B) I am very health - conscious I
- 38) Your spouse (boyfriend / girlfriend) takes you away for a romantic weekend
- PmG
- A) He / she needed to get away for a few days O
- B) He / she likes to explore new areas I
- 39) Your doctor tells you that you eat too much sugar
- PsB
- A) I don't pay much attention to my diet I
- B) You can't avoid sugar, it's in everything O
- 40) You are asked to head an important project
- PmG
- A) I just successfully completed a similar project O
- B) I am a good supervisor I
- 41) You and your spouse (boyfriend / girlfriend) have been fighting a great deal
- PsB
- A) I have been feeling cranky and pressured lately I
- B) He / she has been hostile lately O
- 42) You fall down a great deal while skiing
- PmB
- A) Skiing is difficult I
- B) The trails were icy O
- 43) You win a prestigious award
- PvG
- A) I solved an important problem O
- B) I was the best employee I
- 44) Your stocks are at an all - time low
- PvB
- A) I didn't know much about the business climate at the time I
- B) I made a poor choice of stocks O
- 45) You win the lottery
- PsG
- A) It was pure chance O
- B) I picket the right numbers I

46) You gain weight over the holidays and you can't lose it

A) Diets don't work in the long run

B) The diet I tried didn't work

PmB

I

O

47) You are in the hospital and few people come to visit

A) I'm irritable when I am sick

B) My friends are negligent about things like that

PsB

I

O

48) They won't honor your credit card at a store

A) I sometimes overestimate how much money I have

B) I sometimes forget to pay my credit - card bill

PvB

I

O

Scoring Key

PmB _____ PmG _____

PvB _____ PvG _____

HoB _____

PsB _____ PsG _____

Total B _____ Total G _____

G - B _____

Appendix B

Interpreting your Scores:

Permanence

Evaluate the questions marked “PmB” (Permanent Bad). These questions are numbered 5, 13, 20, 21, 29, 33, 42 and 46. These tested how permanent you tend to think the causes of bad events are. In this particular dimension, each one with a O after it is optimistic while each one followed by an I is pessimistic. Please note, that O’s are not necessarily optimistic throughout the test. Read carefully the interpretation to determine whether the O or I is the optimistic score that needs to be added up. So, for example, if you chose “I’m not good at remembering birthdays (question 5) rather than “I was preoccupied with other things” to explain why you forgot your spouse’s birthday, you chose a more permanent, and hence, pessimistic, cause.

Total the numbers of optimistic answers at the right - hand margin of the PmB questions. Write your total on the PmB line in the scoring key above. Do that now before continuing.

If you totaled 0 or 1, you are very optimistic on this dimension;
 2 or 3 is a moderately optimistic score;
 4 is average;
 5 or 6 is quite pessimistic; and
 if you scored 7 or 8, you are very pessimistic.

The optimistic style of explaining good events is just the opposite of the optimistic style of explaining bad events. People who believe good events have permanent causes are more optimistic than people who believe they have temporary causes. Look at questions 2, 10, 14, 15, 24, 26, 38 and 40. The ones with a I following them are the permanent, optimistic answers. Total the numbers on the right - hand side. Write the total on the line in the scoring key marked “PmG”.

If you totaled 0 or 1, you are very optimistic on this dimension;
 2 or 3 is a moderately optimistic score;
 4 is average;
 5 or 6 is quite pessimistic; and
 if you scored 7 or 8, you are very pessimistic.

Pervasiveness: Specific vs. Universal

Evaluate the numbers marked PvB (Pervasiveness Bad): 8, 16, 17, 18, 22, 32, 44, and 48. The pessimistic style of explaining bad events tend to catastrophize making universal explanations. For example, question number 32. Your romantic partner want to cool things off for a while. Answering “I’m too self - centered is a more universal explanation than “I don’t spend enough time with him / her”, hence, a more pessimistic response. Total your optimistic answers “O” and add your score.

If you totaled 0 or 1, you are very optimistic on this dimension;
 2 or 3 is a moderately optimistic score;

4 is average;
5 or 6 is quite pessimistic; and
if you scored 7 or 8, you are very pessimistic.

The optimistic explanatory style for good events (PvG) is the opposite of bad events. Add the optimistic scores the I in questions 6, 7, 28, 31, 34, 35, 37, and 43. Total your score and write it on the line labeled PvG

If you totaled 0 or 1, or 2 you are very pessimistic on this dimension;
3 is a moderately pessimistic;
4 or 5 is average;
6 is a moderately optimistic score; and
if you scored 7 or 8, you are very optimistic

An important dimension is your hope score (HoB). Take your PvB total and add it to your PmB total. This is your hope score for bad events. This means that you find temporary and specific causes for misfortunes which is the art of hope. You are very hopeful. As you may notice hope affects the pervasiveness and permanence dimensions.

If it is 0, 1, or 2 you are extraordinarily hopeful
3, 4, 5 or 6 is a moderately hopeful score
7 or 8 is average
9, 10, or 11 is moderately hopeless; and
12, 13, 14, 15 or 16 is severely hopeless.

Personalization: Internal vs. External

When misfortunes or success occur, we can blame ourselves (internal) or other (external). Those who attribute success internally and failures externally are optimist while those that attribute failures internally and successes externally are pessimists. Look at your PsB (Personalization Bad) scores; the questions are 3, 9, 19, 25, 30, 41, and 47. The items followed by a I are pessimistic (internal or personal) while those followed by an O are optimistic (external or others). Total the I's (pessimistic) answers.

A score of 0 or 1 indicates a very high self - esteem;
2 or 3 indicates moderate self - esteem;
4 is average;
5 or 6 indicates moderately low self - esteem; and
7 or 8 indicates very low self esteem.

The last score PsG (Personalization Good) are indicated by the numbers 1, 4, 11, 12, 23, 27, 36, and 45. The items followed by a O are external and pessimistic while those followed by an I are internal and optimistic. Total the I's (optimistic) answers.

A score of 7 or 8 is very optimistic;

6 is a moderately optimistic score;
4 or 5 is average;
3 is moderately pessimistic; and
0, 1 or 2 is very pessimistic.

To compute your overall scores, first add the three B's ($PmB + PvB + PsB$) This is your total B) bad event score.

Next, add your three G scores ($PmG + PvG + PsG$). This is your total G (good event) score.

Subtract B from G. This is your overall score ($G - B$)

If your B score is from 3 to 6, you are marvelously optimistic
If it's in the range of 6 to 9, you're moderately optimistic
10 or 11 is average
12 to 14 is moderately pessimistic; and
anything over 14 is very pessimistic.