

Identifying and Developing World-Class Performers

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The role of assessment in helping to identify and develop world-class performers has never been more important. The fact that the International Society of Sport Psychology (ISSP) has commissioned a book on the psychological preparation of elite-level athletes indicates two things:

1. That the challenges and pressures faced by elite-level performers are different or more intense than those faced by other performers;
2. That the role of the sport psychology consultant changes as the level of performance of the athlete changes.

This chapter will take a look at those assumptions, not just as they relate to elite-level performance in sport. We will begin by pulling together 25 years of experience and data that have been collected on elite-level athletes from around the world. Those data will show that even at an early age, elite-level athletes have more effective concentration and intra- and interpersonal characteristics than other athletes do. In fact, data collected at the Australian Institute for Sport

over the past 17 years indicate that over time (and with experience) these differences increase. It is a comparison of an individual athlete's scores on these performance-relevant psychological characteristics with normative data from world champions that provides the information needed to develop psychological skills training and intervention programs.

In addition to issues associated with the development of an individual's psychological skills, we will describe how the concentration skills of successful coaches differ from those of elite-level athletes. We will discuss some of the implications these differences have for the coach-athlete relationship.

Finally, the chapter describes some of the conflicts and breakdowns in communication that are becoming increasingly common in other high-pressure, high-performance environments. Helping coaches and athletes is not very different from helping managers and production personnel in today's highly competitive, fast-paced, global business environments maintain effective communication and teamwork. In fact, helping individuals

perform under highly competitive conditions or in high-stress environments other than sport (e.g., business, and the military) is a logical extension of the services sport psychologists offer.

Elite-level Performers

In the early 1980s, the United States Olympic Sports Medicine Committee began funding an Elite Athlete Development Project. This project was designed to bring the sport sciences of biomechanics, exercise physiology, and sport psychology together so that athletes with a good chance of making an Olympic team could be provided with a comprehensive training program (Nideffer, 1987).

The Elite Athlete Development Project was initiated largely because the United States was losing its competitive edge. Countries like the U.S.S.R and East Germany had begun spending more money on talent identification and on the development of athletes. As a result, the technical and tactical skills of athletes began improving dramatically around the world. As the level of competition began to increase, so did training loads. To be successful, elite-level athletes were having to perform at higher levels, were having to increase the consistency of their performance, and were having to perform much closer to the upper limits of their potential.

Today, elite-level sport is big business. What matters is the bottom line. The rewards for winning and the negative consequences for losing are formidable. As the pressures to perform increase and as the technical and tactical skill levels of the competitors even out, psychological variables begin to play a greater role in distinguishing winners from losers. An individual cannot become a world-class athlete in today's highly competitive environment without having both physical *and* psychological talent.

When it comes to training athletes in psychological techniques to control emotional

arousal, distractibility, and focus of concentration, there is relatively little difference between work with elite-level performers and work with athletes performing at lower levels. As the data that follow indicate, however, the particular stimuli that interfere with an athlete's ability to concentrate and control arousal differ as a function of age and experience. Thus, the focus of performance-enhancement interventions is different at an elite level.

There are other, larger differences one encounters when working with elite-level athletes. For example, because the bottom line is so important and because psychological factors are so critical to success, psychological consultants are often asked to provide information that can be used in the selection process:

1. Will the athlete be able to fit into the existing team?
2. Does the athlete have the psychological skills required to play at the highest level?
3. Will the athlete be able to cope with the pressure of moving away from home to train?
4. Does the athlete have the level of motivation and self-discipline required to fully develop his or her talents?
5. How quickly can the athlete learn our system (how flexible is he or she)?

Elite-level performance requires intense training loads and personal sacrifices on the part of the athlete (e.g., the willingness to put sport above everything else including family and friends). Thus, consultants often asked to help athletes deal with the emotional and physical consequences of these sacrifices *without* interfering with their performance. Finally, because there is very little balance in the life of an elite athlete, there is an increasing need for services designed to help athletes in transition make adjustments to new living conditions and performance challenges.

Assessing Performance-Relevant Psychological Variables

What are the psychological characteristics we need to assess in order to respond to the needs of coaches and athletes? Experience indicates a thorough assessment of an athlete's potential includes an evaluation of the following:

- The athlete's existing physical skills and tactical knowledge
- The athlete's cognitive and perceptual skills; that is,
 1. The athlete's information-processing capacity (ability to cope with complex and changing environments)
 2. The athlete's ability to be environmentally aware without becoming distracted
 3. The athlete's ability to analyze and problem solve without becoming overloaded and confused, and
 4. The athlete's ability to focus concentration appropriately (but not to the point that he or she fails to attend to critical task-relevant information).
- The athlete's *intrapersonal* characteristics, like drive, self-confidence, motivation, and competitiveness.
- The athlete's *interpersonal* characteristics, which include attitudes and behaviors that define how the individual relates to, and communicates with, others.
- The athlete's emotional stability, which involves assessing the individual's ability to control emotions that, if left unchecked, would lower performance.

Typically, the athlete's existing physical skills and tactical knowledge are assessed by the coach, not the sport psychologist. It is the psychologist's responsibility to assess cognitive skills, intra- and interpersonal characteristics, and emotional stability. How these areas are assessed varies from psychologist to psychologist. Many rely almost exclusively on interviews and performance obser-

vation. Although these are important parts of the assessment process, quite often, they are not enough.

At Enhanced Performance Systems, we use The Attentional and Interpersonal Style (TAIS) inventory to get athletes to provide information about performance-relevant cognitive and intra- and interpersonal skills and abilities. TAIS was designed specifically for this purpose. When TAIS is administered early in the consulting or training process, the inventory provides information that helps the consultant address performance-relevant issues more quickly and more reliably. (Nideffer, 1976, 1993)

Defining Elite-level Performance

What constitutes elite-level performance in sport? The answer seems to depend on whom one asks, but how one chooses to define elite-level performance is not really what is important. The key is to define and describe the specific *level* of performance one is talking about. In this chapter, we will discuss several different levels of "elite" performance.

The TAIS data that follow have been collected from two different groups of elite-level athletes. The first group consisted of 4,541 individuals tested at the Australian Institute for Sport (AIS). Approximately 32% of the athletes were female. These AIS athletes ranged in age from 11 to 60, with a mean age of 22.9 years. The athletes were competing at a state, national, and/or international level in 44 different sports.

The second group consisted of 142 different athletes. At a minimum, each of these athletes had won an Olympic medal or a world championship in his or her sport or had been ranked in the top three in the world. In fact, over half of the athletes tested were multiple medal winners who had won several world championships. These athletes were from seven different countries and competed in 21 different sports. There were

119 males and 23 females. It is important to point out that the psychological characteristics of this group were remarkably consistent, independent of the athlete's gender, native country, or type of sport (closed skill, individual open skill, or team sport).

The Development of Performance-relevant Psychological Characteristics

Do the concentration skills, cognitive abilities, or intra- and interpersonal characteristics of elite-level athletes differ from those of nonathletes? If differences do exist, to what extent are they due to learning or training as opposed to innate/biogenetic predispositions? Although we cannot provide final and definitive answers to these questions, we are able to show that when data from The Attentional and Interpersonal Style Inventory are examined cross-sectionally, there are significant differences in subject scores as a function of age. Not only that, but when the same subjects, in this case 776 AIS athletes, were retested 18 months later, the same pattern of changes occurred longitudinally that were seen in the cross-sectional data. This means that athletes' skills were continuing to develop over time.

In the data that follow, the 4,541 AIS athletes were divided into four groups based on their age (<17, 17–18, 19–24, >24). We began by contrasting TAIS scores of the youngest group of AIS athletes (N=907) with the scores of a group of normal adolescents from the United States (N=302).

AIS Athletes vs. Normal Adolescents

With respect to cognitive skills, scores on TAIS indicated that the AIS athletes under the age of 17 were significantly more focused and significantly less likely to become distracted and/or overloaded than were members of the normal adolescent group.

Intrapersonally, the athletes were more in control of situations, more willing to take responsibility, more self-confident, and more competitive than were adolescents in general. Interpersonally, athletes were more extroverted and more positive and supportive. With respect to emotional control, the athlete group was less behaviorally impulsive and less expressive of anger and criticism.

Changes in TAIS Scores of AIS Athletes As a Function of Age Level and Time Between Tests

This next series of analyses attempts to answer three questions. First, were there differences in the cognitive skills and the intra- and interpersonal characteristics of athletes as a function of age? In other words, were older athletes more or less skilled than younger ones? This question was examined by using a series of analyses of variance to compare the scores of the four AIS groups (<17, 17–18, 19–24, >24).

Next, when differences existed as a function of age, were they due to changes in individuals' scores as they aged, or were they due to some type of self-selection process? This question can partially be examined by looking at test-retest data. Fortunately, there was a group of 776 AIS athletes who had been tested on two or more occasions. The average time interval between testing was 18 months. If the same changes seen in the cross-sectional data were found in athletes who had been retested, that provides evidence suggesting learning was taking place. Thus, the concentration skills required for elite-level performance were at least partially learned. This question was examined by using a series of analyses of variance looking at various concentration and interpersonal skills as a function of age (4 levels) and test (2 test administrations).

Finally, it is important to look at particu-

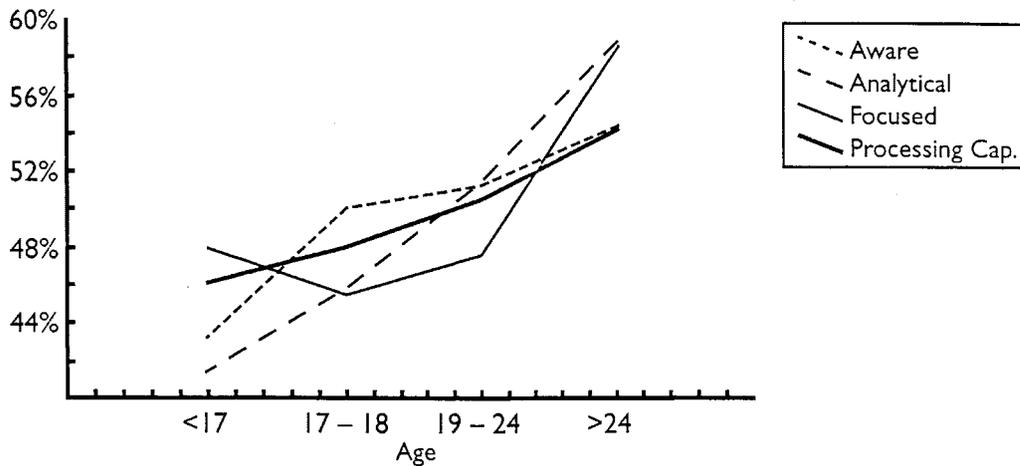


Figure 1.
Cognitive skills as a function of age.

lar TAIS scores in relationship to other scores. For example, when looking at cognitive skills, it is important to know if one skill is more highly developed or dominant than another (e.g., were athletes more focused than analytical?). To make comparisons between subjects' scores on different scales, it was necessary to transform the raw scores of all 4,541 athletes based on the entire groups means and standard deviations, converting them to z-scores. It is these z-scores that were used in the statistical analyses.

Figure 1 shows the differences that existed in TAIS scores as a function of age. These data are based on scores from all 4,541 AIS athletes. As you can see, scores in the cognitive skills were different as a function of age. The slope of the lines representing the different concentration skills does vary, however.

To make it easier to understand the data and to get a sense for the magnitude of differences that exists between scores, we have converted standard scores to percentile scores. Thus, the percentiles shown on the left side of each graph indicate where the individual groups scored relative to the entire sample.

As Figure 1 illustrates, external awareness increased fairly constantly with age; the only difference in the figure that was not statistically significant was the increase that occurred between the ages of 17 and 18 and 19 and 24. Thus, analytical scores were significantly higher at each age level. With respect to the ability to focus, there is a decrease between the ages of 16, and 17 to 18 that approaches statistical significance ($p=.06$). It is conceivable that this drop in focus is associated with sexual development. In fact, scores on the scale measuring focused concentration did not increase significantly until sometime after the age of 24. Finally, as with analytical skills, athletes' scores on the information-processing scale increased consistently and significantly across all age levels.

Figure 2 shows the changes in the same four cognitive areas for the 776 athletes who were tested twice. As with the data for the entire AIS population, the scores for this group of athletes have also been converted to standard scores, then plotted as percentiles. The standard scores were calculated by using the means and standard deviations for the 776 subjects on the first test administration.

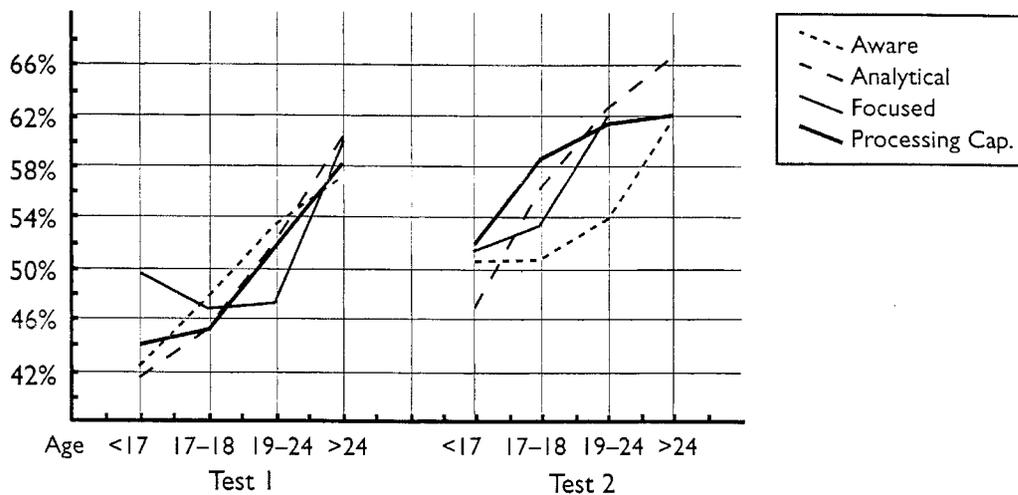


Figure 2.
Cognitive skills as a function of age and testing.

As Figure 2 demonstrates, the pattern of changes as a function of the age of the athletes was the same as it was for the entire AIS population. By looking at the two graphs, first test on the left and second test on the right, you can see the within-subject changes taking place.

The similarity of the data shown in Figure 2 to the data shown in Figure 1 strongly suggests that the differences we saw as a function of the age of the athlete were more likely to be the result of developmental changes than they were to some type of selection process.

The within-subject changes for these 776 athletes were highly significant. The absolute amount of change in subjects' scores over the 18-month interest interval averaged 6% on the scales measuring information processing, external awareness, and analytical skill. There was a 3% change in scores on the scale measuring focused concentration.

Figure 3 shows the relationship between the three different types of cognitive or attentional errors measured by TAIS and an athlete's age for the entire AIS sample. As you can see, young athletes were significantly

more likely to make mistakes because they were externally distracted than they were because they became too narrowly focused and underinclusive or because they became internally distracted. The reverse was true for older athletes. Past the age of 24, athletes were significantly more likely to make mistakes because they became overloaded, thinking too much, or because they became too narrowly focused and underinclusive.

Although athletes improved significantly in all three-error categories, the amount of change that took place and the timing of that change varied with the type of error. External distractibility decreased the most, and the changes that occurred were consistent and statistically significant across the four age ranges. Internal overload increased slightly, then began to drop. Not until the athlete was over the age of 24, however, did the drop become statistically significant. Finally, the tendency to narrow one's focus too much, becoming underinclusive and failing to attend to all of the task-relevant cues, began to drop significantly once the athlete passed the age of 18.

The same error patterns exist when we

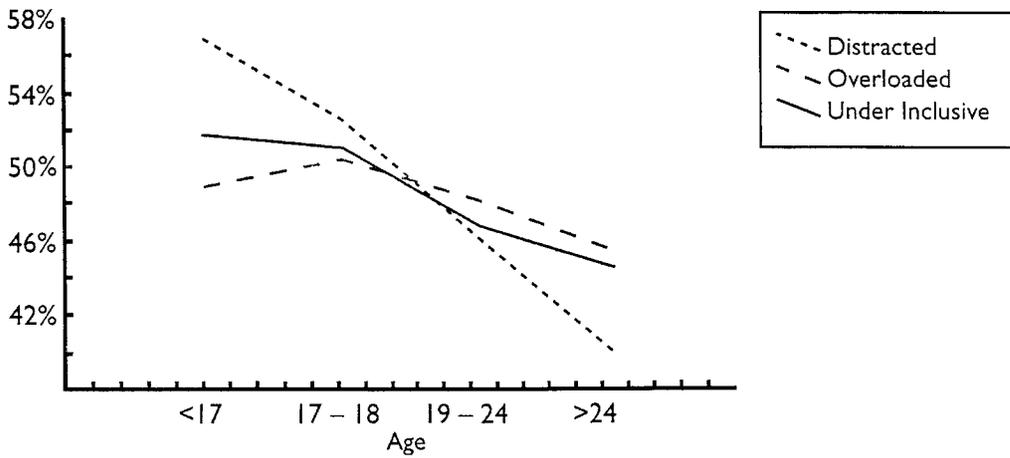


Figure 3.
Type of error as a function of age.

look at the test-retest data (see Figure 4). On average, there was an 8 percentage point drop in subject scores on the scales measuring external distractibility, internal distractibility, and underinclusiveness over the 18-month interest interval.

Figure 5 shows the relationship between age and the entire 4,541 subjects' scores on four TAIS scales measuring intrapersonal characteristics. These include the athlete's need for control, level of self-confidence, competitiveness, and decisiveness.

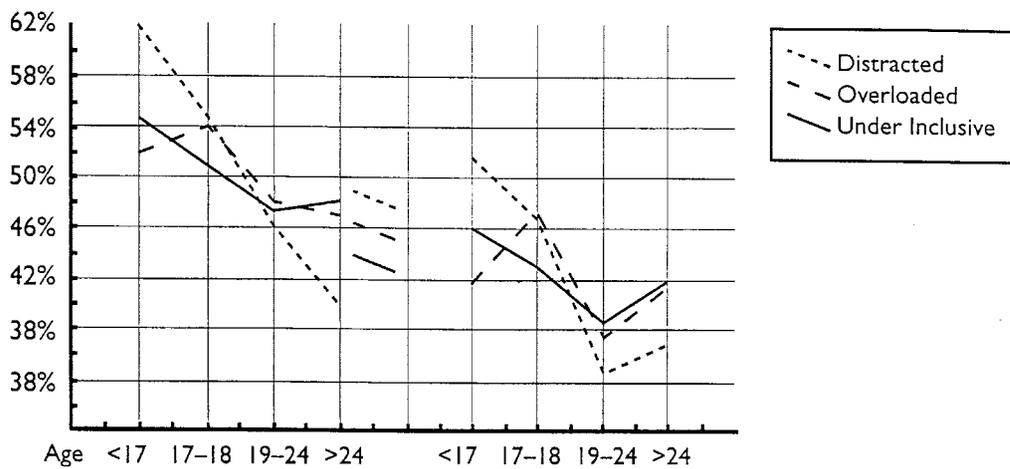


Figure 4.
Concentration errors as a function of age and experience.

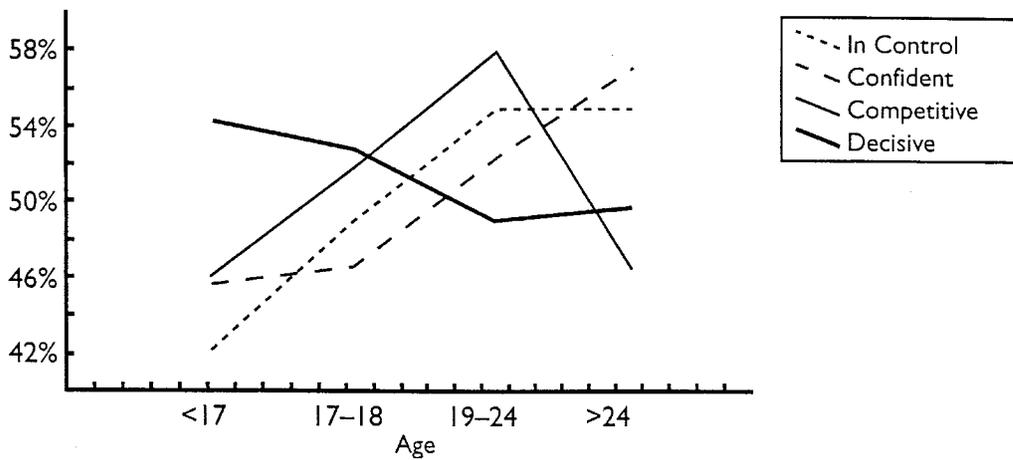


Figure 5.
TAIS Intrapersonal scores as a function of age.

As Figure 5 indicates, the pattern of change in intrapersonal characteristics as a function of age varied. The TAIS scale measuring an athlete's willingness to take control of situations, as well as his or her feelings of being in control, increased up to the age of 24 and then leveled off. Confidence appeared to rise steadily, but this was due largely to the fact that 68% of the subjects were males. When we look at self-confidence as a function of sex, we find that for females, self-esteem increased slightly, but not significantly, up to the age of 24 and then began to drop.

With respect to competitiveness, there was a rise in competitiveness until the age of 24, followed by a precipitous and statistically significant drop. The fact that physical skills begin to diminish as athletes age may partially explain the rather dramatic increase that occurred in their ability to focus concentration once they passed the age of 24. Learning to focus may help to offset, at least temporarily, declining physical ability.

Finally, Figure 5 suggests that the scale measuring decisiveness dropped until the age of 24 and then began to rise again. The change from under 17 to the 19- to 24-year level is

significant. Because this scale is scored in reverse, a decreasing score means increased decisiveness and an increased willingness on the part of athletes to take risks.

As with cognitive skills, an analysis of the test-retest data revealed the same basic patterns described above. In addition, there was significant intrapersonal growth over the 18-month intertest interval. On the re-test, athletes described themselves as more willing to take control and responsibility, more self-confident, more competitive, and more decisive and willing to take risks. The absolute amount of change in subjects' scores averaged around 6% on the scales measuring control, confidence, and competitiveness, and 3% on the scale measuring decisiveness.

Figure 6 shows the relationship between age level and the TAIS scales measuring extroversion (enjoyment of others) and introversion (enjoyment of personal space and privacy) for the entire AIS sample. As you can see from Figure 4, younger athletes were significantly more extroverted than introverted. As the athletes grew older, however, this trend reversed itself. With age, athletes became more introverted (enjoyed personal

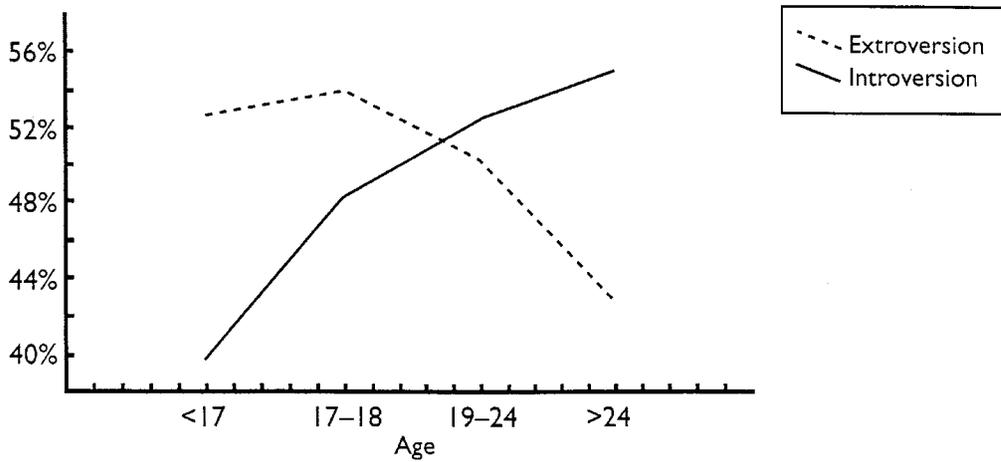


Figure 6.
Extroversion and introversion as a function of age.

space and privacy) and less extroverted. This change in scores was quite large (with introversion increasing by about 18 percentage points and extroversion decreasing by 12 percentage points). We believe this reflects some of the social sacrifices that individuals must make to fully develop their athletic talents. This same pattern appeared with the test-retest data.

Figure 7 shows the relationship between age and TAIS scales measuring expression of ideas, expression of anger and criticism, and expression of support. As athletes aged, there was a significant decrease in their expression of feelings. It did not matter if the feelings were positive and supportive or critical and angry. Interestingly, the significant drop in supportive feelings occurred several years

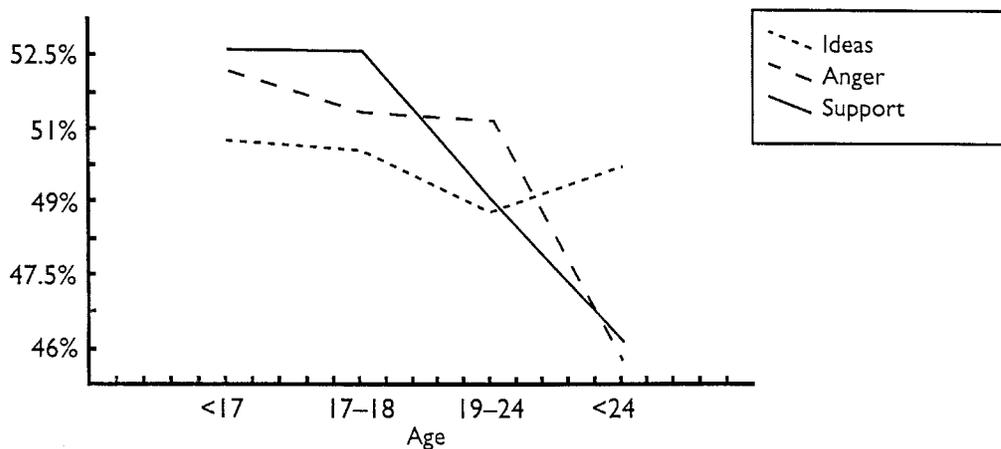


Figure 7.
Expressiveness as a function of age.

earlier than the drop in critical or angry feelings. With respect to the expression of ideas, there were no significant changes over time.

It is in the expressiveness area that scores for the 776 athletes who were tested twice differed significantly from the scores for the entire AIS population. Upon retesting, there were significant increases in the athletes' willingness to express thoughts and ideas, and support for others. The expression of anger dropped slightly, but not significantly.

Comparing AIS Athletes to World Champions

The data available show that elite-level athletes under the age of 17 tended to be more focused and less distractible than were their nonelite adolescent counterparts. They were also more willing to take responsibility, more confident, more competitive, more extroverted, and more supportive. As these athletes matured, significant changes occurred in their cognitive skills and intra- and interpersonal characteristics. These facts lead to two additional questions. First, given the changes, how do the scores of older AIS athletes compare with the scores of world

champions? Then, how do the scores of both groups compare with those of the general adult population?

In this section, we used analyses of variance to compare the scores of older athletes at the AIS (1,946 athletes between the ages of 21 and 45) with those of the 142 world champions described earlier. For the purposes of these analyses, athlete scores have been converted to z-scores using the means and standard deviations for the adult population TAIS was standardized on. Thus, when percentile scores were reported, they told how the athlete groups scored in comparison with the standard norm group.

Figure 8 shows the scores for world champions and AIS athletes between the ages of 21 and 45 on TAIS scales measuring external awareness, analytical skill, ability to focus concentration, and amount of information a subject processes.

As you can see, it is the ability to focus concentration that distinguishes world champions (85th percentile) and AIS athletes (80th percentile) from the general population. Indeed, both groups were significantly more focused than they were aware, or analytical,

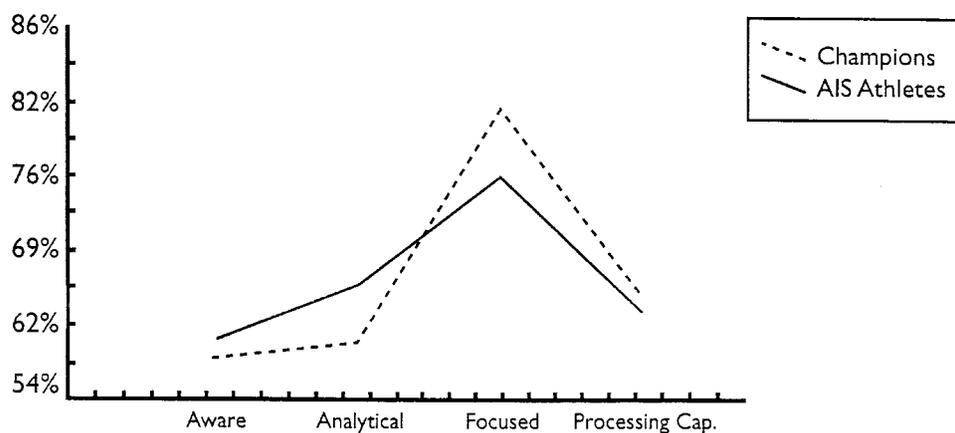


Figure 8.
Cognitive skills of world champions as AIS athletes.

or than they processed information. The five-percentage point difference that existed between world champions and AIS athletes with respect to focused concentration was also highly significant.

The only other difference between world champions and AIS athletes that is significant in Figure 8 was the difference in terms of their analytical skills. AIS athletes scored higher on the scale measuring analytical skills than did the world champions ($p=.009$).

When the two athlete groups were compared with the general population, the only difference that was not statistically significant was the world champions' score on the TAIS scale measuring external awareness. Thus, athletes in both groups had significantly better concentration skills than the average person did.

In terms of mistakes, both athlete groups were much more likely to make errors of underinclusion, because they narrowed their focus too much, than they were to make mistakes because they became externally distracted or overloaded and confused. This fits with the fact that both groups were dominated by a narrow focus of concentration.

World champions made significantly fewer mistakes in all three-error categories than AIS athletes did. When compared with the general population, both athlete groups made significantly fewer mistakes due to external distractions. Indeed, the extent to which the two athlete groups controlled external distractibility relative to the extent of control exercised by the general population was remarkable. World champions scored in the bottom 2% of the population on this scale, and AIS athletes scored in the bottom 3%.

When it came to thinking too much, becoming overloaded and confused by thoughts and feelings, world champions scored around the 25th percentile, significantly lower than the general population. AIS athletes, on the other hand, scored around the 50th per-

centile. The AIS athletes scored significantly higher than the world champion group on the TAIS scale measuring analytical skill. It may be that higher analytical scores increase the likelihood of thinking too much.

Both athlete groups scored higher than the general population on the scale measuring errors of underinclusion. World champions scored around the 54th percentile, and AIS athletes scored around the 60th percentile. This finding is consistent with the fact that both athlete groups were significantly more narrowly focused than were individuals in the general population. That focus and dedication obviously have some negative consequences (e.g., becoming too focused from time to time).

Intrapersonally, both world champions and AIS athletes had a significantly higher need for control and were more self-confident, more competitive, and less decisive than was the general population. The only surprise here is with respect to the decisiveness scale. This particular scale measures the extent to which individuals allow their concerns about avoiding mistakes to slow down their decision-making processes. It would appear that elite athletes were perfectionists, attending to details, practicing, and training until things were perfect. Under these conditions, performances were so well rehearsed and practiced that decision-making became automatic. Athletes were more cautious and slower to make decisions during training and when developing skills, not during the performance.

World champions had a higher (but not significant) need to be in control than did AIS athletes. In addition, world champions were significantly more confident, more competitive (85% vs. 80%), and slightly but not significantly more perfectionistic/less decisive (67% vs. 64%).

Interpersonally, both world champions and AIS athletes were significantly more extroverted than the average person, but not

significantly different from each other (62% vs. 64%). AIS athletes were less introverted than either the standard norm group or the world champions (42% vs. 52%).

With respect to the expression of thoughts and feelings, world champions were much more likely to express support than they were to express either their ideas or their criticism and anger. When compared with AIS athletes, they were more expressive of both thoughts and ideas (50% vs. 38%) and positive feelings and support (78% vs. 58%). In comparison to the general population, both world champions and AIS athletes were more expressive of positive feelings and support, and AIS athletes were significantly less intellectually expressive.

A Service Provision Template

The cognitive and intra- and interpersonal characteristics that define world champions were consistent across gender, across sport, and across cultures. As you can see from AIS data, those characteristics were apparent at younger ages and continued to develop through the athlete's career. Using those characteristics, we can paint a picture or create a template that defines what a world champion should look like. That picture then helps define the services that are provided both programmatically and individually.

Athletes with world championship potential are not just more physically talented than other athletes. They begin their competitive lives more focused, less impulsive, and less easily distracted than their peers do. They do not become as easily bored by routine. They don't just want to do something well, they want to be perfect. They are more confident, competitive, and willing to take responsibility than their peers are. Further, they maintain a more positive attitude about things and tend to be more outgoing.

As they develop, they face special challenges. To continue to be successful, they must

remain focused and dedicated to their sport. Their ability to focus is challenged by two things, and it becomes clear that a little bit of extroversion and willingness to be supportive of others goes a long way. At younger ages, the enjoyment of others undoubtedly helps to get world champions interested in and involved in sport. As the competition increases, however, the need to socialize and worry about the feelings of others, if too strong, can get in the way of the athlete's development.

Elite-level athletes have a period of adjustment during late adolescence and early adulthood, needing to work through relationship issues. Those who stay focused on their sport become less externally distracted, less extroverted, more introverted, and less concerned about supporting others. We are not implying these athletes are not outgoing or supportive. We are saying that there was a significant drop in scores in these areas for a very good reason.

The second thing that happens as athletes develop is that they become more skilled analytically. Here, too, a little analysis goes a long way. Most athletes have to polish and perfect their physical skills until they can perform them automatically, without conscious thought. This requires focus, dedication, and repetition. Athletes who are too analytical have a greater tendency to think too much and to overcomplicate things. Their constant analyzing and strategizing cause them to make too many changes and, this interferes with the repetition required for world-class performance.

The need to focus, polish, and perfect things, combined with a strong need for control, a high level of self-confidence, and extreme competitiveness can lead to management issues. As pressure increases, these characteristics begin to control the athlete and can interfere with his or her ability to communicate effectively or to listen to and trust the advice of others. What might be de-

scribed as focused, when things are going well for an athlete, becomes stubbornness and inflexibility when things are going poorly. This focus leads to the errors of underinclusion we see elite athletes making. Often, these errors occur because athletes are making a conscious choice to ignore certain responsibilities (e.g., refusing to respond to the feelings of family, friends, or a spouse in order to remain focused on training). As pressure increases, however, the errors of underinclusion are much more directly tied to performance. Recall the last winter Olympics when a number of top speed skaters failed to realize just how much the clap skate would affect their sport. They focused so much on their own training and preparation that they failed to recognize a technical revolution that was changing their sport.

When we work with teams, organizations, or individuals, we assess them to see how well they match the template just described. Do the athletes have the characteristics required for elite-level performance? Does the coaching staff and the training and competitive environment support the development of those characteristics? We then design interventions to compensate for any weaknesses and to fill in the gaps. Even when things appear to be running smoothly, our experience and our assessment of the current situation allow us to anticipate and prepare for issues that will arise.

We work to minimize the conflicts and distractions that occur as athletes mature and as issues around dating become more important. We develop strategies to make sure that extroverted athletes stay focused by helping them select their friends and by making sure that teammates socialize with each other and remind each other to focus on the long-term goals. We anticipate problems due to overanalyzing and work to help athletes develop enough trust in coaches and other support personnel to turn many of the problem-solv-

ing responsibilities over to them, so they (the athletes) can stay focused on skill development and repetition. We help others understand the needs of the athlete and work with coaches to help them see how their cognitive styles and intra- and interpersonal characteristics can either facilitate or impede the development of the athlete.

Our research shows us that most college-level and Olympic-level coaches share many of the characteristics of world champions. Coaches and world champions share the same level of focus, need for control, self-confidence, and competitiveness. Thus, under pressure, they can both be extremely stubborn. It is the coach, however, who has the responsibility for managing that conflict in a way that maintains the trust of the athlete. Often, the coach needs the help of a psychological consultant to do that.

Coaches differ from athletes in that they tend to be more environmentally aware, more analytical, and better able to process information. These skills are critical because the coach has to be able to compensate for the extreme focus of the athlete. The coach has to be aware and politically sensitive. The coach has to see new developments coming, and the coach has to recognize when it is time to change. Athletes can afford to make errors of underinclusion; coaches cannot.

Performance vs. Management

The coaches we tested had the kind of cognitive skills found with entrepreneurs in business and with officers in the military. They were analytical enough in their thinking to be the leader and strategizer and focused enough to be “hands on” (worry about and attending to all of the details as well as to the bigger picture). It is becoming increasingly difficult, however, for coaches to fill both roles. Entrepreneurs in business can take a company only so far, and then their management style and their need to be involved in all

of the details get in the way. The same thing is beginning to happen to many coaches.

The cognitive skills required to be a world-class manager are quite different from those required to be superstar as a performer. Managers have to be able to “see the big picture”; they have to be strategic in their thinking, flexible, and able to problem solve; and they have to know when to compromise. As the competitive environment the manager works in becomes more diverse, challenging, and technically complex, it becomes increasingly difficult for him or her to be both strategic and highly focused. Given this fact, it is not surprising to find that the dominant concentration style for CEOs in corporations consists of their ability to strategize and plan. Indeed, the least-used concentration skill for CEOs is focus. CEOs cannot afford to focus; they will lose sight of the future if they do. Instead, they have to be able to delegate, and they have to be able to rely on others in the organization to provide the focus

and follow-through, the attention to detail.

In sport, we are seeing this trend develop. It is already taking a team to provide all of the support services required to produce an elite athlete. Each member needs to be highly technically skilled in his or her respective areas (e.g., exercise physiology, nutrition, sport psychology, biomechanics, sports medicine). Within the sport itself, particularly in more complex team sports, we are seeing increased specialization within coaching staffs. Someone has to act as the coordinator, the chief tactician, etc. It is becoming much more difficult for one individual to be hands-on in all of the areas that are critical to help the athlete succeed. As those pressures increase, the head coach or manager begins to look more like the CEO.

What Business and the Military Can Learn From Elite Sport

We do a lot of work in many of today’s rapidly growing, high technology companies.

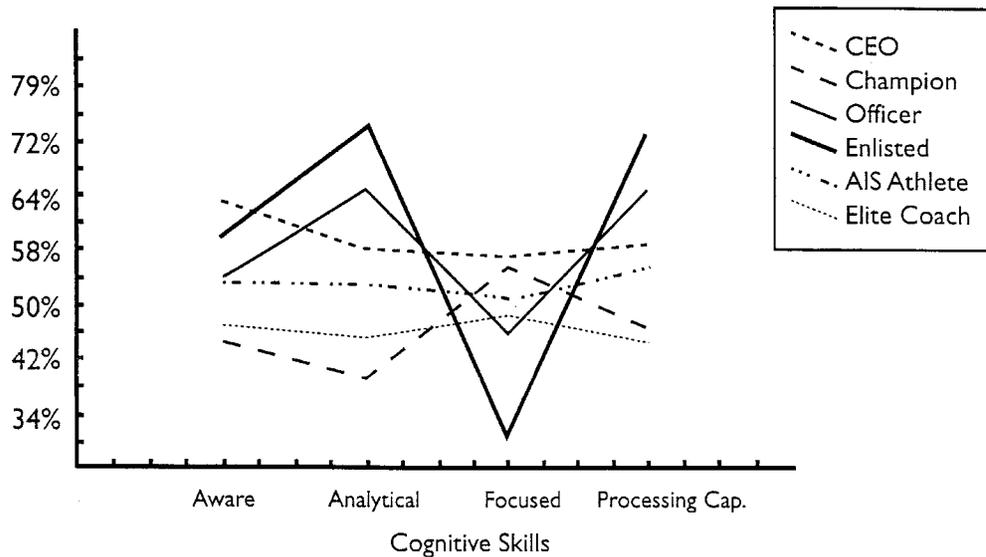


Figure 9.
Cognitive skills as a function of job.

We also do a lot of work for the military. Both in the military and in high-technology companies, those individuals who are responsible for the execution of a mission in the military (e.g., enlisted personnel) and/or for the production of a product in a company (e.g., engineering personnel and program managers) have to be highly focused and extremely dedicated. These individuals have to be attentive to details; they have to have in-depth knowledge and expertise that requires focused concentration.

Because those individuals who are responsible for the execution of a plan have to be highly focused and technically skilled, they need to be supported by managers (business) and officers (military) who, like today's coaches, have a broader focus of concentration, the kind of focus that leads to greater awareness of the competition and to an increased ability to strategize and plan.

Because success in business and on the battlefield requires the willingness to assume responsibility and leadership, a high level of self-confidence, and tremendous dedication, whether one is involved as a performer or a manager, conflicts between members of the team, in business, sport, and military can develop very quickly. It does not take much in the way of pressure and/or in terms of a difference of opinion to cause a breakdown in the communication and willingness to listen of two highly confident individuals.

Success in sport, business, and the military in today's highly competitive, global environment requires elite performers (athletes, engineers, enlisted personnel) to be more focused and dedicated than ever. In contrast, managers, officers, and coaches need to be more open and sensitive to change and more strategic in their thinking. The gap between the two groups in terms of their dominant cognitive styles increases the likelihood of a breakdown in trust and communication in high-pressure situations.

Sport psychologists help coaches and athletes maintain effective communication in high-pressure situations by helping them gain greater control over the emotions generated when everything is on the line and their ability to maintain control over the situation is threatened. It is greater control over emotional arousal that will allow an athlete, an engineer, or enlisted personnel to broaden his or her focus of attention, improving the ability to problem solve, to listen to others, and to compromise. It is greater control over emotional arousal that will allow a coach, manager, or officer to control impatience and to temporarily stop the analysis and problem solving, thereby becoming a better listener. It is control over emotional arousal that will help all of the members of the team increase their trust for each other and avoid taking things personally.

Implications for Psychological Consultants

The level of competition in sport, business, and the military is making it increasingly difficult to achieve world-class status. The performer and the manager will continue to see their respective bars raised, and though the cognitive skills required for world-class performance in these two areas are dramatically different, the psychological consultant will be called upon to help identify individuals from both camps who have the "right stuff."

The psychological consultant also becomes important from a developmental perspective by helping individuals create the types of training and work environments that will facilitate and support the development of the different individuals' skills and talents. Psychological consultants also have an important role to play when it comes to teaching the psychological skills that both groups need to gain even greater control over their ability to control concentration and emotional arousal.

Perhaps the most critical role that psychological consultants have to play involves finding ways to facilitate teamwork, cooperation, and trust. How does a general manager balance the need to win today's game with the need to develop next year's title contender? How do planners in the military balance concerns about the future against the lives that are being laid on the line today? How does the CEO of a company balance the need to move the company in a new direction because of changes in the competitive environment against the immediate operational issues that corporate producers are dealing with? The player on the field, the individual on the mission, and the engineer on the production floor are focused on today. The general managers, CEOs, and officers are focused on the future. Who's bridging the gap? What structures exist to insure that the two groups understand, respect, and trust each other?

Organizations are already experiencing the issues we have described, and most of them do not have solutions. World-class performance *requires* the identification of exceptional talent and then good management and teamwork. There is a growing need for program managers and communications specialists—individuals who coordinate services (e.g., of sports sciences) and maintain the lines of communication between members of the team and levels within the organization. Depending on the size of the group you are working with, and the number of clients you have, you may be able to be that person. More than likely, however, you are going to need to be the one who identifies, trains, and supervises the person who can lead and manage others. These are individuals who work full time within the organization and can carry your torch.

This is the role we find ourselves in at Enhanced Performance Systems. We are working less and less at the “end user” level in our

efforts to help develop elite-level performers. We are increasingly system oriented and work to develop resources within the team, organization, sports-governing body, or military unit. We help in the identification and selection process to make sure the organization does not try to put square pegs in round holes or to turn production superstars into managers or coaches. We assist in the team-building process by helping organizations structure and train internal resources so they can maintain communication and trust and balance the needs they face today with the needs they will surely face tomorrow.

References

- Nideffer, R.M. (1976). Test of attentional and interpersonal style. *Journal of Personality Social Psychology*, *34*, 394–404.
- Nideffer, R.M. (1987). Applied sport psychology. In J. R. May & M. J. Asken (Eds.), *Sport psychology: The psychological health of the athlete* (pp. 1–18). New York: PMA Publishing.
- Nideffer, R.M. (1993). *Predicting human behavior: A theory and test of attentional and interpersonal style*. New Berlin, WI: Assessment Systems International.

Recommended Readings

- Bond, J.W., & Nideffer, R.M. (1992). Attentional and interpersonal characteristics of elite Australian Athletes. *Excel* [Australian Sports Commission], *8* (2), 101–111.
- Nideffer, R.M. (1989). Theoretical and practical relationships between attention, anxiety, and performance in sport. In D. Hackfort & C.D., Spielberger (Eds.), *Anxiety in sport: An international perspective* (pp. 117–136). New York: Hemisphere Publishing.
- Nideffer, R.M. (1989). Psychological services for the U.S. Olympic Track and Field Team. *The Sport Psychologist*, *3*, 350–357.
- Nideffer, R.M. (1990). Use of the Test of Attentional and Interpersonal Style in Sport. *The Sport Psychologist*, *4*, 285–300.
- Nideffer, R.M. (1990). Using the Test of Attentional and Interpersonal Style with Athletes. In J. Bond & J. Gross (Eds.), *Australian sport psychology: The eighties* (pp. 149–160). Canberra: Australian Institute for Sport.
- Nideffer, R.M., & Rembisz, R. (1996). Competing Against the World: What Business can learn from sport. Available at: www.enhanced-performance.com/nideffer/articles/article10.html