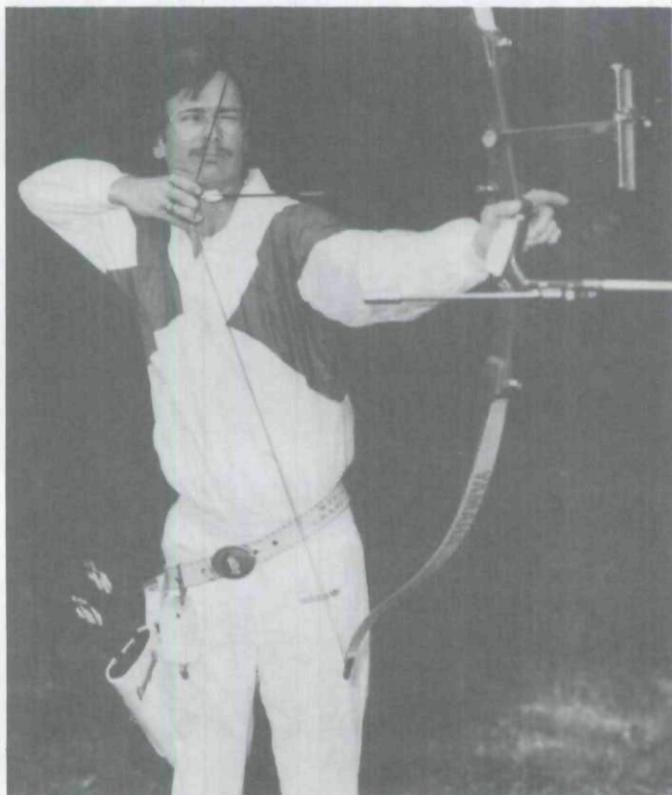


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## Profiles

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### Darrell Pace

**Fact File**

**Age:** 37

**Years Experience in Archery:** 24

**Occupation:** Radio Technician Supervisor for the Ohio Department of Natural Resources

**Residence:** Hamilton, OH

**Archery Achievements:** 1976 and 1984 Olympic gold medalist; 1988 Olympic silver team medal; 1975 and 1979 World Archery Champion; 1978

World Field Champion; 1983 Pan American Games gold medalist; Seven-time titled National Archery Champion; 1986 Championship of the Americas champion; Member of every Olympic team, 1976–1988; Member of eight World Championship teams since 1973; Member of 12 U.S. Olympic Festival teams; Broke all five Olympic records in 1976 and 1984; Held world record for 14 years; 1984 Archery Athlete of the Year; Recipient of the 1984 Olympia Award.

## On Target With Mental Skills: An Interview With Darrell Pace

**Robin S. Vealey**  
Miami University

**Susan M. Walter**  
Michigan State University

In 1970, a 13-year-old boy named Darrell Pace began his personal pursuit of excellence in the sport of archery. Since that time, Pace has won three Olympic medals; has competed on every Olympic team from 1976 to 1988; has broken U.S., Olympic, and world archery records; and has established himself as one of the greatest archers in the world. Pace began his archery involvement before the sport was revolutionized by advanced technology and before the use of sport psychologists became common practice. What has allowed Pace to excel are the exceptional physical and mental abilities he has developed without any formal coaching or sport psychology consultation.

Pace agreed to be interviewed to discuss his development as an archer and his perceptions of the mental aspects of archery. We conducted the 2-hour interview at Pace's home. The interview was tape-recorded and subsequently transcribed verbatim. The profile article was then written by organizing Pace's comments into cohesive sections related to various mental aspects of archery. Pace was asked to read the profile and approve the content for accuracy prior to publication. We wish to publicly express appreciation to Darrell Pace for his valuable time, trust, openness, and hospitality in inviting us into his home. The willingness of elite champion athletes such as Darrell Pace to discuss their competitive experiences with sport psychologists is an extremely important and valuable addition to the knowledge base in our field.

This profile article is divided into five sections. First, Pace's initial involvement in archery and the development of his commitment to competitive archery is overviewed. Second, Pace's perceptions about the mental aspects of archery and the psychological skills needed to be successful are presented. Third, specific mental training methods used by Pace are examined. Fourth, Pace's perspectives on the field and practice of sport psychology are presented. Finally, an analysis and integration of the key points derived from the interview are presented in an attempt to assimilate Pace's comments in relation to current literature and practice in sport psychology.

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## Initial Involvement and Development of Commitment to Archery

*The Sport Psychologist (TSP): How did you get involved in archery?*

**Darrell Pace (DP):** At the age of 11, I was involved in bowling and shooting BB guns, and I noticed that I had excellent accuracy. I also noticed at this young age that I performed better in individual sports as compared to team sports. For example, I played Little League baseball and was frustrated when I would perform well and my team didn't win. It also made no sense to me when I performed poorly and my team won. I just didn't perceive any personal rewards from that type of situation. That's why I gravitated to individual sports.

I started in a Junior Olympic Program in 1970 at the age of 13, and I just seemed to have a knack for the sport. I achieved the first two shooting ranks the first day I shot. By the third week I had put a sight on my bow and immediately my scores went way up. The scores I was achieving were supposed to take time to achieve, but I was achieving ranks one after the other. From the beginning, I was ahead of others at my level. Everyone kept asking me, "Are you sure you've never shot before?" They had never seen anyone progress at this rate.

*TSP: When was your first competitive event, and how did your competitive career evolve?*

**DP:** In December 1970, I competed in my first local competition and won the tournament. In 1971, I won my first junior national title. In 1972, only 2 years since I had started shooting, I participated in the Olympic trials at age 15. I finished fifth at the trials and was 10 points off the Olympic team. I will never forget that experience because my first arrows didn't even hit the target. This was a big trigger point for me because prior to this I did not realize the importance of the Olympics. When I watched the Games on television, I said to myself, "That's it. I will never, ever fail to make the Olympic team again." I was the Olympic gold medalist in 1976 and 1984 and was pretty much guaranteed the gold medal in the 1980 games prior to the U.S. boycott.

*TSP: If you were talking to people who wanted to become world class archers, what kind of commitment do you think it takes?*

**DP:** I think it takes about 5 or 6 years of total dedication.

*TSP: Does that mean most of your free time would be shooting?*

**DP:** Oh yes. When I got off from school at 3:30, I'd have a bow in my hand, and I was down in the woods shooting. And I'd shoot until dark. After dark, I was making and refletching arrows, making strings, prepacking the case, and fiddling on different things. This was every day, day in and day out. Three to 4 hours a day, 7 days per week. Eat dinner, and then right back out again. On the weekends my dad would drop me off to shoot at 8:00 in the morning and wouldn't return until 8:00 at night. I gave up a lot of Friday nights not going out with my school buddies.

*TSP: How did you maintain your motivation as a teenager?*

**DP:** I wanted to progress and was eager. I was very curious about the sport. I always wanted to know how I could shoot better, why I shot bad arrows, why do the arrows go to the right or to the left? The only way I could find out

was to keep shooting. Back then, my whole training was done with regular 8-mm film. That was the other part of my after-dark training. I would sit and watch a 15-minute tape for hours because I was my own coach. My parents finally got me a machine on which I would watch the film frame by frame. Of course, these days we're blessed with video.

In 1976 I had been going steady with my girlfriend. But prior to the Olympic trials, I said, "Look, I'm going to be shooting for the Olympic trials." She said, "That's okay, you go ahead, that's fine." I said, "No. I need to break it off." I had to do that because my ultimate goal was to go to the Olympics, and there was nothing that was going to stop me from achieving that goal.

*TSP: Did you ever go through a phase when you got tired of practicing 6 to 8 hours a day and just wanted to spend time with your friends?*

*DP:* When I turned 16, I got my driver's license and a car. So I went through a phase of wanting to run around in my car. But after a few weeks, the newness of the car wore off. This was similar for me to winning at the Olympics. After about a month, and you've gone through all the dinners, parades, and speeches, it's over and gone.

*TSP: Do all the parades and speeches not really mean anything to you?*

*DP:* No. I was taught to be very patriotic. I never did it for myself. I never competed or tried to become the best for myself. I did it first for my country. I was always taught that you represented the United States, or your state, city, or family. I was always told you have got to want to do this for yourself, but that's not what I really did it for. I don't do it for myself.

*TSP: It seems you engaged in a lot of self-analysis as opposed to working with coaches. Did you read books and talk to people about archery? What about technical coaching?*

*DP:* I never read any books on archery or psychology. I just learned a lot by experimenting on my own and with some help from my parents. I was blessed by the fact that we lived in an area that has some of the best quality amateur and professional archers. Anytime I had a question, I could run over to the range and ask any questions I had. I would ask as many people as I could to get their input.

*TSP: What would you consider your highest professional achievement?*

*DP:* Rather than placing any one tournament as a career high, every individual tournament is an individual high. I don't even look back at my Olympic medals.

*TSP: What fuels you then?*

*DP:* I am always striving for perfection, but you can't ever find it.

## Mental Aspects of Archery

*TSP: How did you develop your mental approach to shooting?*

*DP:* I found that people who shot the best, shot in the subconscious mind the most, and the only way to develop that subconscious mind is through repetition. One thing I've mastered, and coaches are still trying to figure out, is how

I release the string. I have developed a way to release the string with almost no mental control.

*TSP: What does that mean?*

*DP:* The mind and the body are relaxed at the moment of release. I don't ever have to tell my mind and body to relax. They do automatically. That is why my release is so fluid.

*TSP: How were you able to develop that?*

*DP:* I kept asking other archers how they release and they told me to put my fingers where it feels good and let it go. The ways the archers suggested didn't feel good, so I told myself I'd learn a way. The only way to do that is to shoot hundreds and hundreds of arrows. Then, I added a relaxing feeling which allowed me to develop a release that hasn't been mastered by many people.

*TSP: Do you do anything to cue that relaxing feeling or does it just happen?*

*DP:* It's automatic. The only way to develop the subconscious is to do it many times, every day. It's like, when you get into your car, you grab your seatbelt, put the car in drive, and go. You don't think about these things, but suddenly you're driving, and you wonder if you've fastened your seatbelt. You look down, and of course you have, but you did it subconsciously, without conscious thought. It's something you learn to do automatically and don't have to think about.

*TSP: So it sounds like you developed your mental skill really through repetitive physical practice.*

*DP:* That was the physical part of it, yes. There was also a mental training game that I developed when I was learning to shoot. Through the mental training I have developed an intense amount of mental concentration. If I'm watching television, I don't hear my name called, I don't hear the phone ring—my mind is on what I see in front of me.

When I was about 16, I would practice at a park where there was nothing around. I would set out my car speakers and listen to rock and roll music. One day a friend brought electronic music for me to listen to while I was practicing. I noticed that when I had listened to rock music that I had shot well, but when I would listen to the electronic music all of a sudden I couldn't hit the target. I tried this a few times with the same results. I didn't know what was going on, but I said this distracting electronic music is not going to beat me. I will learn to shoot through this. The better I shot when listening to the electronic music, the more I turned up the volume and actually learned to block it out. I shot by railroad tracks, had cars driving by, etc., to practice dealing with distractions. I had to learn to block everything out.

*TSP: Do you attempt to monitor your autonomic responses when shooting; for example, do you attempt to shoot between heartbeats?*

*DP:* It's something that is done automatically. We know that we do it, but it's automatic. The only thing I do consciously when I'm at full draw is aim. Everything else is in the subconscious. If you were to walk in front of me as soon as my mental trigger goes off, you would be dead, because I probably could not control it, and the arrow would be gone.

*TSP: How do you cope with distractions?*

*DP:* Anyone who knows me knows I am an extremely laid-back person, and I don't let anything bother me. I'll play whatever game the organizers, judges, or opponents want to play. I don't ever try to have a bias. I don't ever let anyone know if I do have any preferences. For example, when we shoot at an indoor tournament we have a high and a low target. Almost everyone has a favorite. I always ask the person shooting with me, "Do you want the top or bottom target?" If he says, "Bottom," I say, "Fine," and take the top target. The next day I get there before he does and take the bottom target. And he'll lose 10 points. Why? Because he already told me which target he prefers. You'll never know which one, top or bottom, is my favorite. No one will ever know because I'll never let them know. That's usually an average archer that I'll do that to, and then after the tournament is over I'll say, "Look, next time anyone ever asks which is your favorite . . ." and they'll learn.

*TSP: Did your family help you in developing your mental skill?*

*DP:* I gave my mother a lot of credit for teaching me the mental aspects of competition. She always told me, "You're only the best at that tournament." When you win a competition you're the best, celebrate, have fun, and the next day it's forgotten, because you have to go on to the next tournament. The reason for this is you can win a small tournament and get cocky, and then go to the next tournament and think you've got this one won, but then someone comes out of nowhere to put the pressure on you, and you think this can't be happening because I beat him by 50 points last week. Last week doesn't matter, this week is what matters.

*TSP: What are some other ways your parents influenced you?*

*DP:* My parents always taught me that there's no need to be nervous. They would say, "You know you can perform, and you know what you can do."

*TSP: When you haven't won a competition, what do you attribute that to?*

*DP:* I forget about them.

*TSP: Don't you go back and examine your performance when you don't perform well?*

*DP:* I analyze the faults and errors. There are times I have had equipment problems, and I'll make sure that screw never comes loose again, or I won't use this string material again or this point weight, etc. The equipment problems go into memory. I believe you have to learn to shut everything else out that's in the past. If it's a bad tournament and a good tournament, they're all forgotten.

*TSP: What are some additional techniques you utilize which allow you to be successful?*

*DP:* Archers are taught to shoot one arrow at a time. From one arrow to your bow. You step to the line, you put one arrow to your bow, and that's the arrow you're going to shoot. I, however, don't put any emphasis on any one arrow. I have to perform three arrows in 2-1/2 minutes. I am like a light switch which goes on. I go to the line, I shoot, and the light switch turns off. I think there's an advantage by shooting all three arrows together because I don't put so much emphasis upon one arrow. There are pros and cons to both theories. I put less pressure on myself thinking of all three arrows together. Getting the

score you need is not just done with one arrow. It's the joint effort of all three of those arrows to give the score I need. I think it puts less pressure on me because I am thinking more of a group than of the individual arrow being shot.

*TSP: If you're thinking that you want 30 points from these three arrows, what if the first arrow isn't a 10?*

*DP:* Then I look and see what the other guys have got and see whether I'm still in the match. It depends on the circumstances. You analyze why it went out. Instantly you analyze, and you know why the arrow didn't go where you planned, without really thinking about it. Your mind has already done it for you, and you just shoot another arrow.

*TSP: And you stand at the line with full confidence for the second arrow?*

*DP:* Yes, because I know the next one will be dead center.

*TSP: Prior to a tournament like the Olympic trials, are you thinking about the trials?*

*DP:* No. I just think about shooting and executing good shots. I learned not to worry about what the competition is, only to perform.

*TSP: Did you find more pressure after you won a World Championship or Olympic medal?*

*DP:* It's always easy to win. It's hard to defend. Each year I won the national championships in succession, the pressure was mounting because everyone wants to break that streak. I knew in the back of my mind that the pressure was going to increase, but the more the pressure increased, the better I shot, which made it harder on everyone else. I always use the pressure to my advantage.

*TSP: What mental skills do you think are critical for archery?*

*DP:* Self-confidence is probably the biggest. One of my biggest advantages is when I go to compete or when I shoot an arrow, I don't want it in the middle, I expect it to go in the middle. There is no doubt in my mind it's going in the middle. It may not, but I expect it to.

It's amazing to watch the average person because they are already defeated as soon as they start. If we go out there and shoot for a soda, they are already defeated as soon as we start. They said, "We know we can't beat you." I say, "Then you've already lost." I remember back to a tournament in the early 1970s. I was a 15-year-old kid and was grouped with three of the top archers in the world. One of the men shot three 10s, which you just didn't do back then. I thought, "Wow, this is how these guys shoot." I was totally shattered, but I quickly had to change my mind and said they are beatable too. That was a good turning point because it shocked me into reality that here are people who shoot terrific, and I believe they're beatable.

*TSP: That's interesting because I thought you were going to say, "Wow, when I saw that I flipped out and didn't shoot well at all."*

*DP:* I did flip out.

*TSP: Then how did you turn that around?*

*DP:* If he can do it, I can do it. There's nothing that he did that was better than what I did. In fact, I'd sit back and watch him shoot. I'd say my form was better than his, and I should be shooting better.

*TSP: Have you ever had a time when your self-confidence has wavered?*

**DP:** No, It's something you always have, everytime you do anything. It's just a belief about yourself and your ability.

*TSP: So really, the first thing you're talking about is your perception of your ability and confidence that you can compete and beat people.*

**DP:** I was always wanting to go one step beyond, and I was intent. There was never a limit. I always said, if I'm going to do it in practice, I'm going to do it in the tournament. Most people falter under pressure, I always do better in my competitions than in my practice.

For example, in 1972 the world record was 1,268 points and I was practicing somewhere in the 1,270s and 1,280s. I called the president of the company where I got my bows and said, "I'm going to break the world record." He said, "Yeah, sure your are. Calm down. You've just gotten a new bow." Sure enough, I broke the world record. In 1975, I received another new bow, and I was practicing now well in the 1,300s. Shooting in the 1,300s is like running a 3-minute mile—it had never been done before. I said, "I'm going to break 1,300 at the nationals." All the time people kept telling me that it can't be done. The worst thing you could ever tell me is that it can't be done.

There are a lot of archers out there that can shoot well. I've seen tons of archers who shoot well in practice, but if I could give them 1/10th of the ability to handle the pressure, they'd be unbeatable.

*TSP: Have you ever been in a tournament when you haven't performed as you wanted?*

**DP:** Oh yes, many times. In fact in 1979, I remember a whole year going by, and I said, "I can shoot better than this." My scores were good and I was winning tournaments, but I know that I could have broken another world record in any one of those with some good weather. Weather is a big factor. When you get into 15–20–30 mph winds or even just a 5 mph gusty day, it can throw you right off track.

*TSP: What are some other components that you believe are important for being a successful archer?*

**DP:** I think music and mathematics have a lot to do with being successful, at least in archery. I think a lot of top athletes have had some type of music background, whether it's listening or playing. What music teaches you is timing. Your eighth notes, your quarter notes, your dotted eighth notes, all these things have to happen at a certain time. I played trumpet in the band. I also believe music teaches you discipline. You have to practice, and the more you practice, the better you get.

Math is the other component for being successful because our sport is very technical. There are a lot of measurements and calculations to make. I can look at a scoreboard, watch someone shoot, and in a couple of seconds know exactly how I compare with the competition. It is better for me to know what my competition is doing because I perform better under pressure. Coaches say, "Don't look at the scoreboard. Don't pay attention to what anyone else is doing, because it puts more pressure on you." Well, if I learn to handle that pressure to begin with and use that to promote my shooting, then I will shoot better by looking at the scoreboard.

## Mental Training Methods

**TSP:** At archery tournaments we have observed archers looking at the ground just prior to shooting. Is this a common attentional focus or relaxation strategy, and do you use this strategy?

**DP:** Yes, it is common. I look in two places. I either look straight down at the ground in front of me, or I'll see the center of the target. From the time I'd arrive at a tournament I'd stare not only at the target but I'd only see the center of the center of the target. I was staring at the center of the target. When I look at the target I don't see anything but the gold. In fact, a lot of times I don't see anything but the center of the center of the target. I don't see any of the rest of the colors. For years I did this, but I never knew what I was doing until another top archer who was into sport psychology told me I was doing mental imagery. He explained that my arrows were going into the center of the target because that is where I was totally focused.

**TSP:** Do you think you were doing imagery and did you see your arrow going into the center of the target?

**DP:** Yes, I was doing imagery, but I didn't see my arrow going in into the target. I had trained myself so much that when I looked at a target I never looked at anything else but the exact center.

**TSP:** Have you ever practiced any type of formal imagery program?

**DP:** No. I'd say *daydreaming* would be more of the right term than *mental imagery*. My thoughts of archery would just pop in. I can remember sitting in a classroom at school trying to read German, and I was still on the archery field shooting. After a tournament when I was riding home with my parents, I would be shooting in my sleep.

**TSP:** Have you ever practiced any kind of physical relaxation exercises?

**DP:** No. My basic way to relax after a tournament is to go for a ride on my motorcycle. Granted, I got into a lot of trouble from the coaches going out riding right after the Olympic trials, but that was my way of blowing off all the steam and forgetting about it.

**TSP:** Prior to a tournament or prior to a shot is there anything you do to relax yourself?

**DP:** Breathing. Nowadays, archers are taught a real good thing by breathing the word *relax*. You inhale "re" and exhale "lax."

**TSP:** And does that work for you?

**DP:** Yes, it should work for just about anybody.

**TSP:** Did you ever set goals for yourself?

**DP:** I always set goals, and I set a goal probably starting from the next tournament.

**TSP:** Did you ever write any goals down?

**DP:** No. We used to have to fill out these things for the U.S. Archery Team. It said, "My goal for this month is," "My goal for this year is," and I'd always leave it blank, because I didn't know. The only thing I could put in there was my goal for the next tournament. For example, in early 1992, we were

still in training and shooting tournaments. Anytime I was interviewed, and the interviewers would ask, "Well, this being an Olympic year, what do you think your chances are?" I'd say, "I have to make the Olympic team first." At that point, I had no concept of the Olympic games themselves. I was only thinking of the trials. Coaches and sport psychologist often suggest using mental imagery to see yourself at the Olympic games and standing there competing for an Olympic gold. I could never see doing that. If anything, I'm visualizing myself at the trials, and then after the trials, the trials are shut off and forgotten, then I'm going to be looking at the Olympic games.

*TSP: You mentioned your goal to be in the 1996 Olympics. Would it be correct to say you have long-term goals that you have set for yourself, but also short-term goals that you focus on?*

*DP:* Correct. Goals like the 1996 Olympics are so far out, it's like I'm going to be on a mission to go to Saturn. So far out, but it's a goal.

*TSP: Do you think you can teach people the drive and commitment necessary to be a world-class athlete?*

*DP:* Yes, the drive and commitment can be taught. If you look at what they do when they brainwash individuals in cults, all they are doing is training, totally taking over a person's mind control. And I don't feel my brain is any different than anyone else's. The only thing I have learned is the ability to control my mind. For example, there have been some tournaments where it was pouring down rain and I found I needed three to six good shots. I would literally tell myself it's not raining, and I never felt a drop of rain. That's merely mind control.

*TSP: Does your mental preparation differ for local meets as opposed to big meets such as the Olympic trials?*

*DP:* Yes, the level of my intensity for the concentration and confidence I need to have changes if you compare practice to the Olympic Games. That's why the bigger the tournament, the better I shoot. Even at a point in competition when opponents are shooting better than me, I felt I still had the advantage. I knew I had the advantage because they were going to get nervous, and I wasn't. My parents always taught me that there is no need to get nervous because I *know* that I can perform well. And this is going to sound really weird, but when I say I never get nervous, I do mean that I never get nervous. My heart rate might jump 5 to 10 beats per minute—from 70 to 80. But most people when they get nervous, their heart rate jumps from 70 to 100. I have just told myself over and over throughout my career that I will not get nervous. When we get into a shoot-off, I'm not going to be nervous—you're the one who's going to be nervous. The pressure is on you, not me. I know what I can do, so the pressure is on you to try and beat me.

*TSP: Do you have a prescribed routine that you follow prior to shooting in competition?*

*DP:* I couldn't sit here and say what it is I do. It is automatic—I know I go into a different world. From the time I cross the line, a switch goes on. They blow the whistle, I shoot, and then the switch turns off like a machine. It's like tunnel vision—nothing can interfere with it.

*TSP: So between rounds that you shoot, you go back and talk to other people?*

**DP:** Oh, yes, tell jokes, anything. Back there you're having fun, clowning around, but when you get to the line, you're a different person. I can be talking with a competitor who is a friend, but when they blow that whistle, and I go to the line, I say, "He's not going to beat me. I will not let him beat me."

**TSP:** *Is the timing of your draw and hold the same every time you shoot?*

**DP:** It used to be. It varies now, but the more I train, the more consistent it is.

## Perceptions of the Field of Sport Psychology

**TSP:** *What is your perception about the field of sport psychology? Do you think it is useful to enhance sport performance?*

**DP:** It's definitely useful. I was probably fortunate that I found a way to learn sport psychology on my own. Many athletes have the physical abilities, but the mental obstacles hold them back.

**TSP:** *What mental skills do you think sport psychologists can and should teach to archery athletes?*

**DP:** I think the biggest factor is helping young athletes believe that no one is better than them. Others may have shot longer, trained harder, or maybe shoot better at that point in time, but they have to believe that they can achieve that level, because they can. There's a lot of people who shoot well but literally give up before it's even started. I've seen it on television, before a game, you can look at the players' faces and know which team is going to win before it's even started. The other would be developing the feeling of control, of confidence, of believing anything is possible. There is no limit. Another thing, as far as trying to teach athletes to become better, is the dedication. The dedication factor has to be there. There has to be nothing else in your life.

## Analysis and Integration

Insightful experiential knowledge regarding the mental aspects of peak athletic performance is evident in the interview responses of Darrell Pace. His comments are especially noteworthy in that he has never engaged in any type of formal mental training or work with sport psychologists. Pace is, as Coleman Griffith (1928) describes, "the successful athlete . . . born with a knack of taking advantage of all his mind-body capacities or who has in long periods of training and by trial and error learned many of the secrets that otherwise come only from the experimental laboratory" (p. x). It is clear from Pace's remarks that his success as an archer is based on his exceptional physical and mental skills developed through years of repetitive practice. In this final section, Pace's remarks are summarized and examined in relation to current literature in sport psychology.

Pace's description of his early beginnings in archery are interesting as they suggest a link between personality and choice of sport. The notion that individuals with certain personality characteristics "gravitate" toward participation in certain sports has been discussed in the literature (Bird, 1979; Kane, 1978; Kroll, 1970; Morgan, 1980). For example, Pace talks about his early aptitude for accuracy

sports (bowling and shooting), his interest in technical sports, and his gravitation to individual sports (as opposed to team sports) due to his need to personally control the competitive outcomes. Although this "gravitational" theory has not been tested and cause and effect not supported, Pace's comments clearly indicate an excellent match between the demands of competitive archery and various characteristics of his personality.

The strongest theme that emerged from the interview data was Pace's unshakable commitment to achieving excellence in his sport. Throughout the interview, example after example illustrates his single-mindedness, curiosity, drive, and positive obsession with archery. This is not a surprising finding, as commitment and dedication have been demonstrated to be the most critical and basic ingredients for achieving excellence in elite sport (McCaffrey & Orlick, 1989; Orlick, 1990; Orlick & Partington, 1988). As stated by Pace, to excel at the world class level "there has to be nothing else in your life."

### *Mental Skills*

Pace describes various mental skills that he possesses and how they relate to effective performance in archery. He believes that self-confidence is the most critical mental skill for effective archery performance. Pace speaks knowingly of the power of expectancy or self-fulfilling prophecy (Horn & Lox, 1993) when he comments how amazed he is at competitors who are defeated before they start, due to their negative performance expectancy. He emphasizes the difference between hoping to achieve and expecting to achieve as an important consideration for succeeding in sport. His self-confidence, an unshakable belief in his ability, seems to be derived from his extensive physical practice regimen and social support from his family who helped him develop his mental toughness by focusing on his ability to perform well. As Nideffer (1992) states, self-confidence emanates from both hard work and success. Obviously, Pace experienced success from an early age, yet he realized that there was no substitute for quality and quantity practice, which then served as the basis for his solid self-confidence. The unconditional social support from family also seems to be an important foundation for his confidence as he understood that his self-worth and value to his family was not related to how well he performed in archery.

Another mental skill Pace discusses extensively is attentional control or focusing. Interestingly, he does not engage in a conscious mental focusing plan (Nideffer, 1993; Orlick, 1986), but explains that his focusing happens automatically and subconsciously. He describes his ability to narrow his attention as "tunnel vision" when he steps to the line to shoot, yet between rounds he talks and jokes with competitors. Obviously, this mental skill was developed and refined through years of practice. Pace does offer one example of how, as a teenager, he would create different attentional distractions (loud music, trains, cars) and practice shooting under these conditions until he could effectively block out the distractions and perform efficiently. This exercise is similar to examples of simulation training and distraction control exercises suggested by sport psychologists (Nideffer, 1989; Schmid & Peper, 1993).

A third mental skill discussed by Pace is his ability to optimize precompetitive and competitive arousal. He states that he does not consciously attempt to monitor his autonomic functioning and shoot between heart beats; rather, he

describes it as something that happens automatically from knowing his body. He does use a breathing technique of breathing the word *relax* in tempo with his inhalation and exhalation. This is typical of several breathing exercises used for somatic relaxation (Harris & Williams, 1993). Pace also uses a reframing technique (Gauron, 1984) by accepting the pressure, liking the pressure, and feeling that he shoots better under pressure. However, he states with great certainty that he does not get nervous, and he uses that to his advantage because he knows that as the pressure increases his opponents will experience nervousness.

Other mental skills identified by Pace include (a) his ability to bounce back from less successful performances by quickly assessing performance and technical errors and then forgetting about the loss, and (b) his ability to handle the pressure of defending a championship versus just focusing on winning. As previous research has suggested (Gould, Jackson, & Finch, 1993), Pace states that it is much easier to win than to defend a championship title. However, as previously stated, he reframed the pressure of defending his title to use the pressure to his advantage. Overall, all of the mental skills discussed by Pace have been supported by previous research as critical mental skills for peak performance at an elite level. One big difference is that although other studies have found that successful elite athletes utilize formal mental preparation routines (Gould, Eklund, & Jackson, 1992; Orlick & Partington, 1988), Pace does not consciously practice such a routine. However, from his comments, it is clear that his mental skills in narrowing attention, avoiding distractions, and handling pressure are the result of years of repetitive physical practice that included effective mental practice at the same time.

### *Mental Training Methods*

As just discussed, Pace does not participate in any elaborate conscious mental-training program. However, he realized in retrospect that he has extensively used imagery by constantly staring at the center of the target before and during a tournament. And interestingly, he indicates that he stares at the *center* of the target, and that he only sees the gold (in the center) and no other colors on the target. This is not imagery in the traditional sense, as he admits he does not see the arrow going there, only the target center. However, he clearly is "building a machine" as described by Vealey and Walter (1993) through the use of physical and mental practice. Pace also admits that although he does not practice systematic imagery, he has always daydreamed about archery and even shoots in his sleep.

Pace follows several goal-setting principles advocated by sport psychologists for effective goal setting. He always sets goals, and although he does not write them down, he focuses only on short-term goals. He relies on the "staircase method" of goal setting advocated by Gould (1993) in which long-term goals are acknowledged (e.g., winning at the Olympics), but the focus is on the short-term goals that aid his progress toward achieving the long term goal.

Although Pace does not plan any systematic self-talk or focusing strategy, he indicates that he believes that mind control is essential and that it is trainable. He acknowledges his belief in the utility of sport psychology to help young athletes develop the mental skills that he has been fortunate and reflective enough to develop on his own. In particular, he suggests that sport psychologists should

help young athletes understand the importance and develop the skills of self-confidence and dedication. Pace's views about the importance of basic skills such as these are congruent with Vealey's (1988) model of psychological skills training in which foundation skills such as commitment, self-confidence, and self-esteem are seen as essential building blocks for performance skills such as optimal arousal and attentional focusing.

## Conclusion

Learning from an Olympic and world champion like Darrell Pace can serve as a reminder of the importance that tacit knowledge plays in understanding psychological factors related to peak performance (Martens, 1987). This interview attempted to utilize Pace's tacit knowledge to provide insight for sport psychologists about the mental components of elite archery competition. Pace's impressive mental skills and firm belief in the importance of these skills to achieve peak performance is especially fascinating in that he trained his mind and perfected his performance without any formal coaching or knowledge about sport psychology. However, it is noteworthy that many of the skills and techniques that he describes are congruent with current research and practice in the field of sport psychology. What is important is that we, as practitioners, learn from Pace's examples that our techniques and methods of mental training can and should be expertly tailored to meet the needs of many different types of athletes. Pace's colorful examples and descriptions provide a unique case study of one outstanding athlete's approach to mental training.

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