

PSYCHOLOGICAL PRINCIPLES

Every year I am struck more and more by the huge role psychological considerations play in the pursuit of success in slalom. At major races, I find myself thinking that psychological matters transcend everything else, that few people paddle up to their ability on race day, and that a person of mediocre talents who could do so would actually do quite well.

Paddling up to your level of ability: That's the prime concern after a certain point in your development. Obtaining a high level of ability is one thing. The work you need to do to achieve it is relatively straight-forward but hard and time consuming. It is discussed elsewhere in this book and in my previous book, "To Win the Worlds." Once you reach a high level of ability, however, paddling right up to that level on race day is an entirely different matter. You don't need to exceed that level of ability, only reach it.

Many people do not really understand this, and think that in a major race, they need to do better than ever before. Thus, they hope that they will "get lucky" and paddle better than they usually do. I don't think it works that way. Most races are a matter of the winner simply making fewer mistakes than the others. Even the winner makes mistakes, but he paddles closer to his potential than the others.

Very subtle things happen on race day, things that often do not occur in training sessions and therefore the athlete may not have experienced them before. Paddlers often psych themselves out by seeing a hard move on the course and saying to themselves or even out loud, "Boy, that's a dumb move; it's impossible to do that well," or "Gee, so-and-so looks really good -- what happens if I lose to him?" Often experiences like these raise the paddler's anxiety level too high which blocks his normal thought processes and he starts to think a bit irrationally. A high anxiety level also saps his energy and leaves him feeling weaker than in practice.

Such things cause the paddler to become defensive instead of offensive in his mental outlook. Instead of rationally seeking ways to enhance his performance, he loses confidence, lowers his goals, thinks only about surviving and rationalizes a prospective bad performance with words like "I'm just not ready this time, maybe next time." Little things distract him and keep him from concentrating on his original goal which was to win the race.

The inevitable result is that the racer doesn't do as well as he had hoped, and he goes away not really understanding why. He tends to focus on more technical matters such as lack of skill on reverse gates. In reality it may have been his inability to concentrate

properly on running the reverse gate, rather than not understanding how they should be run in general. This inability may have been brought about by high anxiety, but instead of practicing ways to control his anxiety, the racer goes home and practices reverse gates harder. Thus, he never addresses the root problem.

Another example might be the athlete feeling tired during the race. He incorrectly attributes this to being out of shape and so he goes home and works more on endurance. In reality, he may simply have been so anxious so long before the race that he experienced excess muscle tension and wore himself out.

Finding the proper balance between the physical and mental side of slalom is something that few athletes do extremely well. This is why even the World Champion's winning run usually contains some major flaws. Most athletes usually are just not aware of the disruptive influence psychological matters can have on their training and racing and thus they never address them in a methodical way.

Psychological considerations have implications that go beyond just the race day experience. They help to get more out of practice sessions. For example, having a clear objective for each workout is important. So is keeping the workout short, but intense. This is because it is much easier to concentrate over several short workouts in a day rather than during one long one. Psychological matters also aid in the recovery from workouts. Instead of simply trying to learn to ignore pain, studies have shown that the best athletes are able to "listen to their bodies" and discern when they need to go easy and when it is o.k. to go hard. This helps them set an optimal training level. Psychological matters help in learning gate skills. Learning to break a move into component parts, analyze them, and then put them back together correctly is one example.

The key to developing a successful slalom racer is creating a confident but relaxed attitude towards slalom training and racing, and teaching him how to concentrate. A number of important variables have to be dealt with in order to achieve this end, including understanding how the self-image works; how man's goal-striving apparatus functions; how attentional styles work; how to improve concentration; and how to control anxiety. This chapter describes some of the workings of the mind -- often the subconscious mind -- in terms of athletic competition, and discusses techniques that exist for improving them.

SELF IMAGE: "They don't believe they can win so they don't train hard enough to win." How often have I found myself saying this about paddlers! An interesting example of this is Jean-Yves Prigent of France, Bronze Medalist in K1 at Bala. I assume he won't mind my citing him as an example, because, in my view, he was able to overcome an initially negative self-image and go on to do the type of training necessary to win a medal.

When Jean-Yves came to the United States in the spring of 1981, I asked him how he thought he would do at the upcoming World Championships. "There are a half dozen people who could win at Bala and I am not one of them," he said. He told me that he had already satisfied his chief ambition in slalom which was to win a major international race (Seo, the last of the Europa Cup races in 1980), and that now he was planning to be in his last World Championships and then take up a career in coaching.

"A half dozen who could win, and I am not one of them." But when I saw him paddle, I thought to myself that he was much better than that and, in fact, if he could train harder he might be able to win. I told him this. Jean-Yves trained with us that spring, harder, he says, than he had trained back home in France. Later he went home and trained hard there, too. At the World Championships, he won his first medal ever in the individuals, at age 27. (He had been World Champion in team in 1977). A year or so afterwards I asked him how this had happened and he answered, "You told me that I could win."

Self-image is a crucial factor in human behavior. If you want to change behavior, you must often first change the self-image. To a great extent, self-perception limits what an individual can and cannot do. All a person's actions are consistent with what he thinks of himself. For this reason, positive thinking, about which so much is made in athletics, can work only if it is consistent with an individual's self-image. It won't work if the two are inconsistent. Thus, to properly apply positive thinking, one must first apply it to changing one's self-perception.

The self-image is controlled largely by the subconscious mind. What an athlete believes motivates him is not the only thing that motivates him -- and it may not even be the most important thing. His subconscious is full of active feelings, desires, aspirations and anxieties which make up his self-image and thus subtly circumscribe his behavior. The aim of mental training is, in part, to bring these subconscious motivations into the conscious mind where they can be analyzed critically to see whether they are helping or hindering an athlete's performance.

The ability to link the subconscious mind to the conscious has far-reaching implications for success in slalom, not only for improving self-image, but also for learning gate technique, as we shall see later on in this chapter. The better the athlete can do this, the greater his chances for success.

Changing the Self-Image

The aim of self-image training is not to create a "superman" who is superior to everyone else. This sort of false self-image gives rise to problems because our capabilities often do not match the exaggerated self-image we are trying to create, and the whole experience is, therefore, extremely unrealistic. The aim of self-image training, rather, is simply to help the athlete discover the "real me" and then to make his aspirations consistent with that realistic self-image.

In my experience, however, most people have an unrealistically low self-perception -- even ones who exhibit extreme confidence. They are often merely attempting to mask feelings of insecurity. Feelings of insecurity bother most athletes. It isn't the act of failure to make the team or win the World Championships that bothers them, but their thoughts about things like "What will other people think?" In this connection, I always remember a saying by the Greek Philosopher of the first century, Epictetus:

"Man is not disturbed by events, but by his opinion of the events.

I see this happen from time to time when someone fails to make the U.S. National Team. In 1979, this happened to Kent Ford in the C1 class. He lost out in the team trials by .3 seconds -- after two races combined. He subsequently made the Europa Cup team in 1980 and placed third in the Cup (as he did in 1982), and made the slalom team in 1981 for the World Championships.

You miss the team and, boy, suddenly you're on the outside, out of the group of friends you've built up. Instead of worrying about buying a plane ticket, you're worrying about what on earth to do next.

Having missed it, it's much harder to build up your self-confidence. After Jonquiere, I had all sorts of nagging self-doubts and defeatist attitudes.

When you come back, you need a super strong self-image, a bomb-proof self-image. In my case, after Jonquiere, I was lost for a goal. I had to struggle for an identity almost. In my heart, I didn't believe that I could be World Champion. Now my goal is not to be World Champion but to race well, and do as well as I can. After missing the team, you have to piece together a realistic self-image of what you are and what you can do racing-wise. I'm much more at ease with myself than I was after Jonquiere.

There are a number of other top slalomists who have failed at one time or another to make their national team. Among them are Jon Luggbill, David Hearn, and Richard Fox.

How Man Achieves Goals

So far we have dealt only superficially with the theme of self-image. To understand the intricacies of self-image psychology, however, it is necessary to learn something about the mechanism man uses to achieve goals. Essentially the nervous system acts as a sort of "computer," automatically setting out to accomplish whatever goal you program into it. The computer is neutral, it doesn't question the program you give it. Thus, if you program it with negative images, it will produce negative results for you. Conversely, if you program it with successful images, it will produce successful results.

People often don't understand how they unwittingly program their computer with negative images. Negative or self-deprecating comments can have an important effect upon the subconscious mind, because the subconscious, unlike the conscious mind, is not skeptical. It accepts every suggestion that comes to it, and acts on it even if it is a negative one. Talk like "I always do badly on first runs," or "I never do well on stupid courses," is likely to be self-fulfilling.

The process of programming the computer with images works the same way for changing your self-image as it does for helping you change technical behavior, such as learning how to do a proper upstream gate. To change either one, the athlete must know how man's goal-striving mechanism works.

Man as a Goal-Striver

I personally believe that man's purpose in life is simply to strive after positive goals. He isn't content unless he is striving. I don't think that the nature of the goal is the important thing; it is important only that the individual be emotionally involved in pursuing it. This explains why different people have so many different goals and can pursue them so hard.

People who are striving after a goal are usually happy people who find life interesting. People who do not have goals often just drift through life, finding it dull -- even not worth living.

For these reasons, man's mind is constantly engaged in pursuing goals and is merely waiting for a program to determine which goal is to be sought.

Programming the Computer

The instructions to your goal-striving computer come in the form of mental images, the idea of a successful completion of a task, for example. The images must be very clear, however. You must decide exactly what you want to do, not just what you don't want to do. Examples in whitewater that immediately come to my mind are Jon Lugbill saying:

I was in my first World Championship at 14. When I saw the awards ceremony, I went nuts. I wanted to be up there.

Or Cathy Hearn saying:

All of us had dreams about having the ultimate run... of being World Champion.

The goal must be more than just a pipe dream, however. It must be something that challenges the athlete, yet is within the realm of the possible. Is the athlete physically and mentally capable of attaining the goal, or can he make himself capable? Will he have sufficient practice time and adequate facilities to pursue the goal, not just for one summer, but year round for many years? Finally, the athlete should be able to set many intermediate goals to reach on the way to achieving the ultimate one. Such intermediate goals might be:

- * Getting within a certain percentage of a well-known top paddler in your class.
- * Winning a local race.
- * Winning the junior nationals.
- * Finishing in the top ten in a major international race.
- * Winning the senior nationals.
- * Winning a major international race.
- * Placing in the World Championships.

"No Other Large Emotional Commitments"

Not only is it critical to obtain a vivid mental picture of your goal, and thus a strong program for your computer, it is necessary to develop a deep emotional desire to achieve the goal -- provide sufficient "electricity" to drive the computer. The athlete must picture in his mind that it is indeed possible to achieve the goal. He must become very enthusiastic about the prospects of achieving it. He keeps going over them in his mind and generates a large degree of emotional energy to drive the computer. This is sometimes called affirmation of the goal and two specific ways of doing it are as follows:

- * Write down on a piece of paper the goal that is associated with your mental image.
- * Try to verbalize the feeling that completion of the goal triggers and write that down, too, in as vivid detail as you possibly can. Imagine the sounds and smells as well as just the sight of completion of the goal. Then say it out loud. Doing this engages all of your senses.

One good time to make the statement of affirmation is before going to bed. Say it over 2-3 times, close your eyes... go to sleep.

I believe that during the time an athlete is trying to achieve a major goal, such as making the national team, or winning the World Championships, he needs to pump all his emotional energy into achieving that goal. Hence, years ago I found myself saying that during periods of serious training, the athlete can afford "no other large emotional commitments." If one cannot make an exclusive commitment to serious training, then one must set goals commensurate with the commitment possible.

"Let It Happen, Don't Make It Happen"

Once you have a vivid mental picture of your goal, and sufficient emotional attachment to achieving it, you have already programmed your computer and it begins automatically to pursue the goal you have chosen. You should not become too concerned about whether the process will work for you -- whether the goal-striving computer will function. In fact, excessive worry will jam it and keep it from functioning properly. You must "let" it function properly, not "make" it function.

With your conscious mind you can gather information and make conclusions and use them to modify the program for the computer. You

should be quite cold and realistic in gathering and evaluating the information, and then write a new program and begin again. But the conscious mind is not the one which produces the final results; it is the subconscious. Anxiety about whether the subconscious will perform properly is counterproductive because these fears interfere with the working of the computer.

The athlete should not fear making errors as he moves towards his goal -- whether that goal be changing his self-image or learning new gate techniques or new training techniques. The computer moves towards its goal like a guided missile, reacting to negative input as well as to positive input. If the computer produces an action which is "off course" it simply makes a correction and tries again.

This is particularly true of skill learning. It is accomplished by trial and error; taking a shot, readjusting the aim and trying again until you hit the bull's eye. Then, the proper technique is rehearsed over and over until only the correct version is remembered. All the erroneous ones are forgotten.

Experiencing Success

It is not enough just to select a new self-image and pursue it emotionally. There must also be positive feedback along the way or else "constantly bumping into reality" will undercut your efforts. Positive feedback is experiencing success, starting with little successes and leading to bigger ones.

The first achievement of success can come through mental rehearsal. Because the subconscious cannot tell the difference between a real experience and one that is vividly imagined, it reacts the same way in either case. This is the foundation of mental rehearsal. Vividly imagining experiences is as good as, or sometimes better than, actually going through them.

There was a famous study done some time ago on learning to do free shots with a basketball. One group practiced free shots every day, while another did nothing but mentally rehearse them every day. The latter group ultimately outshot the former group in a final test. The probable explanation: The group that practiced mental rehearsal never practiced free shooting incorrectly! The more often you imagine an event with a successful conclusion, the more often you undergo the experience of success and the more self-confidence you build up.

At first glance, mental rehearsal would appear useful only for actions that are known ahead of time or that can be pre-planned. But it can also help an athlete react spontaneously to sudden changes -- as long as he mentally rehearses these situations, too.

Later on, success can come in isolated parts of slalom training, such as being the fastest in flatwater sprints, being very good on one type of gate combination, or being very competent at big water playing. Finally, success builds upon success -- winning little races leads to winning big ones -- until the athlete can take on all new tasks in an atmosphere of confidence and success.

ATTENTIONAL STYLES:

Human beings have, broadly speaking, four different attentional styles: narrow or broad, internal or external. Different aspects of slalom demand different attentional styles, and for this reason, flexibility in going from one to the other is an important ingredient to success. So is the ability to sustain one style long enough when the situation demands it.

Often athletes enter a situation with the wrong attentional style because they have difficulty using one or more of them. Just as an individual is born with a propensity towards strength or endurance, so are individuals born with a propensity towards certain attentional styles and they need to practice those in which they are weak.

The rest of this section describes the different attentional styles and discusses their application to slalom.

Width of Attention

Attention may be described as being either narrow or broad. In slalom, doing a tricky gate combination requires a very narrow attentional focus. Choosing the right pace for the course, on the other hand, requires a broad one, because the athlete has to factor in a number of variables, such as length of the course, number and nature of the upstreams, and difficulty of the water.

An athlete with a broad attentional style is sensitive to many things that are going on around him, and for many purposes, such as initially gathering information upon which to base a race strategy, this is very important. But sometimes this athlete will attempt to process too much information. For example, in his training, he may try to prepare for too many gate combinations, with the result that he never allocates enough time to the contingencies which are most likely to occur, such as the ideal upstream. This kind of athlete may consider too many possibilities and thus make the situation even more confusing rather than more clear. Sometimes this athlete has trouble sticking to one plan or strategy, not because he fails to develop plans, but because he develops too many and keeps switching from one to the other.

An athlete with a narrow attentional style is quite different. He is good at focusing on one particular object and ignoring distractions. But this athlete may fail to identify enough alternatives and thus not prepare in enough areas. In this category, I think, is the slalom paddler who practices all his reverse gates in a certain way, or all his upstream gates in a certain way. He may ignore other approaches entirely, with the result that if the race stresses those things he has practiced, he does very well, but if it

stresses those things not practiced, he does poorly. In unanticipated situations, this type of athlete may be incapable of coming up with a new, more appropriate strategy once the original one is found to be inadequate.

Direction of Attention

Attention may be described as internal or external. An athlete exhibiting an internal style focuses on his own thoughts or feelings. An athlete with an external style focuses on things that are going on outside his body. The ability to "listen to your body" in order to be able to evaluate how tired you really are after training, and thus allow for proper recovery, would require an internal attentional style. Instinctively sneaking a slalom pole without thinking about it would require an external attentional style.

An athlete with an external focus is likely to rely on reflexes and instinct in competitive situations. He may not be good at sticking to prearranged plans, and may act more or less as though he were encountering the situation for the first time. In other words, he may have difficulty learning from mistakes. This is the slalom athlete who continues to try to sneak all upstreams even though he usually hits them.

On the other hand, an athlete with an internal focus sometimes spends so much time analyzing his own thoughts and feelings that he doesn't notice what is going on around him. He may even start with an external focus, in that he identifies a problem to be solved, but then spends so much time planning how to deal with it that the situation has changed by the time he tries to implement the plan and it is no longer relevant. An example of this is the athlete who meticulously plans how he will do all the moves on a slalom course, but fails to notice that the water has risen slightly during the night before the race, thus rendering his particular strategy inappropriate.

There are 4 obvious combinations of attentional styles: broad-internal; broad-external; narrow-internal; and narrow-external.

Broad-Internal

An athlete with a broad-internal style is capable of formulating race strategies and seasonal strategies. He is analytical, good at gathering information and benefiting from it. He is often able mentally to rehearse a race in his head before the actual event. On the water, he does not commit the same mistake twice, and he is able to rebound from an error by being flexible enough to turn to a new strategy once it is apparent that the initial one is wrong. This sort of attentional style is particularly good for a coach, but since there are so few coaches in our sport, the successful athlete inevitably has to do a lot of the planning and thinking a coach would ordinarily do.

On the other hand, an athlete with a broad-internal focus sometimes tries to process too much information and becomes so involved in his analysis that he fails to notice that the situation has changed, making his plan inappropriate.

Broad-External

An athlete needs a broad-external focus when dealing with complex and rapidly changing situations that cover a wide area, so that awareness of everything occurring is important. A good example would be a team race, when each boater has to have some idea of what his teammates are doing, not just what he himself is doing. However, there is the danger that an athlete with a broad-external attentional style might try to process too much information and thus confuse himself.

Narrow-External

An athlete with a narrow-external focus is good at addressing situations where physical activity, once started, continues without change and total concentration on an objective is needed. Producing a maximum performance in a slalom race or practice session is one example. Athletes with a narrow-external focus are best at disregarding irrelevant cues and distractions, such as crowd noise. Their external focus keeps them from being distracted by their own thoughts and fears, too.

The danger of this attentional style is that the athlete may fail to include enough information in his strategy and reacts only to part of the problem.

Narrow-Internal

This attentional style is more appropriate to downriver paddlers than slalom paddlers, or to endurance or distance workouts done by slalomists rather than to slalom races. An athlete with a narrow-internal focus functions well when he does not have to deal with sudden changes. He uses this attentional style to withstand pain. He works at developing a certain thought or rhythm and once "in the groove" is able to distract himself from feelings of fatigue. Because the attention is narrow, the athlete avoids thinking negative thoughts that might suggest failure. He often focuses on things like the swinging of his arms, or the rhythm of his breathing, instead.

The danger of this attentional style comes if it is coupled with a negative self-image. If the athlete has a basically negative self-image, once he becomes tense during a workout, he notices it more, and thus becomes even more tense. He tightens up, with a consequent drop in technique and therefore in performance. While this

is more likely, in my experience, to happen during practice, it can also happen during a race. A slalomist feels tired half way down the course, or even after the first few gates, and allows this to trigger feelings of self-doubt and fear.

Practice Attentional Styles

As an athlete becomes more mature, he inevitably learns something about which attentional styles are required for different aspects of slalom training and racing. Basically, he learns to respond to selective cues, that is, he realizes which things are important to concentrate on and which things are really irrelevant. However, I feel it is possible to speed up this natural process, so that it won't take years for the athlete to learn it himself. Racers should consciously decide for themselves where their weaknesses lie in attentional styles and then practice those styles in which they are weak, the same way they would practice gate techniques.

Some drills might be:

- * For broad-internal focus: evaluate practice sessions after they are over. Ask yourself "what is at least one thing I have learned from this session?" Write that down in your training log. Evaluate race performances by studying your sleep habits, training frequency and quality, warm up procedure, race strategy and course analysis habits.
- * Broad-external focus: practice gates in imperfect condition once in a while, such as on a windy day, when things are changing all the time.
- * Narrow-external focus: create very precise targets in gate practice. Aim to hit each upstream exactly 6 inches inside the outside pole, and do it time after time. Focus on a tiny spot on the pole rather than vaguely on the gate in general.
- * Narrow-Internal: do distance paddles with a change of tempo either in gates (as loops) or on a straightaway. Keep the courses simple so you can concentrate on your feelings on the different paces, rather than on the water or the gates.

TECHNIQUES FOR IMPROVING CONCENTRATION:

Mental Rehearsal

Mental rehearsal is a technique that has widespread application to slalom, not just in controlling anxiety, but for improving concentration. It is especially useful in helping a boater learn new techniques and to learn a race course. Essentially, the boater tries to imagine in as much detail as possible every aspect of the situation he is about to encounter. As discussed previously, mental rehearsal is based upon the principle that the subconscious mind cannot tell the difference between a real experience and one that is vividly imagined. Thus, by imagining things accurately ahead of time, the boater achieves the equivalent of many "practice runs" down the course and "experiences" the situation he is preparing for many times before actually being in it. In this way he increases his awareness of what is going on.

Mental rehearsal can be used not only before a race takes place --the most common application -- but after it is over. In this latter case, it is used to review what has happened in as much detail as possible so that the boater can better profit from the experience.

Before going further, we need to distinguish between two different concepts, mental imagery and mental rehearsal. Imagery is simply the ability to develop images without trying to study or analyze them. Mental rehearsal, on the other hand, involves studying the image, or more likely, a series of images. It is akin to the difference between looking at snapshots (imagery) and acting in a motion picture (mental rehearsal). Indeed, the objective of mental rehearsal is for the boater to be able to imagine things as though he had a video camera in his eye, a tape recorder in his ears, a smell detector in his nose and a tactile sense recorder in his hands. In this way he captures as much detail as possible. Few athletes achieve this state, being able instead to see only fragments of the motion picture, or even more likely, just visions of themselves as third persons performing parts of the action rather than being able to imagine the action as they would actually experience it in a real race.

Discriminative Cues

Understanding the concept of discriminative cues is necessary for properly applying mental rehearsal. Good athletes think in terms of pictures instead of words. They remember mental pictures of race situations, and gate sequences, since they have been in these situations many times before. When determining ahead of time how to

run a gate sequence, they need attend consciously only to those things that are out of place and subconsciously fill out the rest of the picture based on past experiences. In other words, they pick out discriminative cues and focus on those, not really bothering to deal with the rest of the picture.

The best example I can give of this is boaters learning new courses quickly on our practice course, the Feeder Canal. Boaters for whom the Feeder is their home course, can memorize a 30 gate course in a few minutes. Some of the best athletes can learn it as fast as I can say it, running along the bank and thinking it up as I go. But visitors to the Feeder Canal take much longer to memorize the course. This is because they have to memorize where all the gates are, not just the ones that are in a new configuration ("out of place") for this particular course.

The ability to pick up discriminative cues is crucial to success in slalom because it facilitates the learning of technique. But it is a fact that some of the cues which are important for learning technique in the early stages may become relatively unimportant in later stages when the technique becomes automatic. At that stage, new cues become more important and the boater must keep searching for them.

Let me give an example. Take learning proper upstream gate technique. At an early stage, the boater's discriminative cue might be getting the proper approach angle and going into the "pocket" of the eddy in order to set himself up for a good exit. At the next stage in his development, the discriminative cue might become going into the eddy with his entry draw extended way out in front of him so he will be able to convert it into a pull stroke once the boat begins to lose the upstream momentum generated by the eddy turn, and thus maintain glide up through the gate. At the final stage of his development, after all of the foregoing has become automatic, the discriminative cue might simply be remembering to hit the gate just a shade low so the boater can maintain great speed and power around the turn without fear of having to slow up to avoid hitting the poles.

Really great slalomists like Jon Luginbill and Richard Fox have extremely keen kinesthetic senses and can detect very small differences in weight, feel, and shape that other boaters cannot. They subconsciously use these senses to aid them in picking up discriminative cues in running gates on whitewater. But since the whole process is subconscious, they may have difficulty explaining exactly what they are doing. Their first reaction is "I don't know why I do that, it just feels right." However, once they take the time to reflect on what they are doing, it is amazing how much detail they can tell you. I tried to capture some of this in the technique sections of this book.

Natural Rhythm

Part of identifying discriminative cues and thus identifying what will later be practiced in mental rehearsal, is noting the natural rhythm with which the action is performed. For example, I see repeated instances of boaters who can run gates well at one speed, but if they slow down, they cannot do well. This is because they have learned all the moves at only one speed, while they really should learn them at all sorts of speeds.

As a boater's anxiety increases, he is tempted to speed up his paddling and this gets him into unnatural rhythms which can cause errors in timing and penalties. The boater must be aware of all of this as he searches for discriminative cues. The way to do this is for him to focus his attention on his feelings and behavior when he is maintaining his natural rhythm and contrast that to the times when he is out of rhythm.

One of the keys in picking out discriminative cues is to be able to recognize muscle tension in your neck, wrists, forearms, and back. The slalomist must be able to discriminate between feelings in these and other muscles when he does a reverse gate properly, when he does an upstream gate properly and so on. This is how he learns what "feels" right.

The following steps are undertaken when picking out discriminative cues and using them in mental rehearsal:

- * Pick an activity that you wish to work on, such as a particular gate combination or sequence. The sequence should have a definite start and finish so natural rhythms can be practiced, too. Finally, the sequence should be short enough so it is easy to concentrate on.
- * Determine whether the objective is to learn new technique or simply improve your consistency using techniques you already know.
- * If the objective is to learn new technique, you must first have a clear idea of what you are trying to copy. Unfortunately, this is not always possible in slalom because it is not easy to find someone who can teach you the "arcane art". Most top boaters have to "re-invent the wheel" and figure out the right technique through years of trial and error. Hopefully, this book will help to remedy that situation. Still, the best way to learn is to watch top boaters in action,

or better still, get videos of them so you can study them. But to get most out of watching, you have to be attuned to what to watch for, and that is where I think this book can be most helpful.

Assuming that you understand the correct technique, the first step of mentally rehearsing it is to go through the activity in your mind as vividly as possible in the same manner that you had been doing it previously. Then, carefully compare the old way with what you perceive to be the new way. Go through the new way in your mind until you develop a very clear picture of yourself doing it successfully and imagine what that feels like. The discrepancies between the old way and new way are the discriminative cues which you should employ to correct errors as you mentally rehearse the correct technique.

In going from mental rehearsal to actual physical practice, be aware of the fact that there may be flaws in your mental picture. Therefore, don't try overly hard to duplicate that picture on the water, but allow your body to make any appropriate adjustments to correct for flaws in your imagined version.

Right after running a sequence well, it is useful for you to stop and rehearse it mentally a few times to help reinforce the proper way. Then, you can try it again.

Another technique is to alternate technical training with mental practice. In this instance, you look at video tapes, mentally rehearse what you see, and then try the activity before going back to the video. I have used a variation of this technique with good results. I take a video camera to the river, take shots of the boater performing the move, show them to him without his even having to get out of the boat, and have him go right back out and do the whole thing over again to perfect the picture. It is important that there is no delay between the boater's performance, seeing himself on the video, and trying it again. Because of this, the mental picture is fresh and easily associated with feelings and sensations.

- * If the objective is to gain consistency with new techniques -- or even old ones -- the key is practicing the technique over and over again with a passive attention-al style. The first few times you practice the move, pay

attention to the sensations your muscles are experiencing during each phase of the sequence or move. Then, do the same move more times with a natural rhythm, going through the entire sequence without trying to focus narrowly on one component, but on the whole action. Make sure to do this at various speeds, too. After the practice session, try to consciously remember all the feelings, sounds, smells -- everything -- that was associated with the successful completion of the act. This can be rehearsed outside the boat to obtain even more "practice time."

Controlling Anxiety

Anxiety produces different effects in different athletic events. It creates tension and while tension is actually good for preparing to unleash purely muscular force or endurance (weight lifting; running), it is disruptive in sports like slalom where a high degree of technique is involved. Tension effects coordination and concentration. Anxiety may cause tension in the neck muscles, for example, which affects the athlete's "feel" in the gates, by actually interfering physically with his forward stroke, thus making him more likely to hit gates, lose time, and tire faster. Also, as the athlete becomes overly excited, he loses the ability to control his attentional style. As anxiety increases, attentional focus narrows. Thus, anxiety can not only lower capacity to perform optimally, but it can actually distort the athlete's perception of what is going on around him.

All athletes have anxieties but some are better able than others to control them. While there actually are methods (Biofeedback) for objectively measuring the physical effects of anxiety upon athletes, they are generally too expensive or unavailable for slalomists to use. Nevertheless, it is perfectly possible through observing an athlete in competitive situations and comparing him with other athletes, to gauge his typical emotional reactions. After this, he can better search for ways to improve them. He can write out a list of stressful feelings and methodically arrange a plan for dealing with each of them.

Some athletes subconsciously try to control anxiety by exhausting themselves in practice, knowing intuitively that if they get really tired it relaxes them enough so that they can't get anxious. The problem with this approach, however, is that such athletes tend to burn themselves out and do not have sufficient energy on the day of the big race.

Two final points should be added here:

- * The more automatic a boater's skill level, the more tension he can tolerate. I believe this is one reason why it is useful for boaters to compete a lot in

practice (but only after necessary skill level has been achieved). It helps make the athlete's skill automatic.

- * A boater can tolerate more tension if it is caused by motivation rather than by anxiety. In fact, a certain amount of tension in a slalomist is a good thing because it arouses him to peak performance. It used to be thought that some relaxed athletes needed to be "psyched up" before a race, while other, more nervous athletes needed to be calmed down. Recent studies have shown, however, that the critical objective is simply helping each athlete reach his customary level of arousal, the level he usually reaches in practice when he has a good session, nothing more, nothing less.

TECHNIQUES FOR CONTROLLING ANXIETY:

While there are several techniques for controlling anxiety that are being used today in sports, they all seem to have a common theme: creating a more passive attentional style. In other words, the concept of "trying hard" is replaced with the concept of developing a "fascination for" the task at hand. "Trying" is a conscious effort when what is needed is a subconscious one. While many athletes have their own techniques for controlling anxiety, some of the more well-known ones now being used in sport are discussed below:

Hypnosis

Many people are scared by the word hypnosis because it has connotations of surrendering one's will to a manipulator. Other people think that hypnosis gives the subject superhuman powers. Neither of these beliefs is true. In essence, the hypnotist simply frees the athlete to perform up to his level of ability. Of course, since most people do not perform up to their level of ability, it may seem that someone who does is a superman!

To understand hypnosis, it is important to realize that the brain has a conscious, dominant side (left side in right-handed people), and a subconscious, non-dominant side (right side in right-handed people). The dominant side deals with logical thinking, language, and building small details into a larger picture. The non-dominant side deals with the perception of whole movements or whole ideas. It is given to images rather than words, to music rather than ideas.

It is believed that hypnosis momentarily curtails the functions of the dominant side of the brain, thus releasing the non-dominant

side to imagine more vividly and thus "rehearse" more effectively situations that the athlete deals with in competition or practice.

It is also thought that hypnosis aids in the reduction of tension by helping the athlete rehearse relaxed attitudes, starting first with muscular relaxation and going next to mental relaxation.

Hypnosis can be used for the following things in sport:

- * Motivation to practice.
- * Mental rehearsal under hypnosis.
- * Facilitation of relaxation during competition to improve concentration or to improve sleep at night.
- * Reviewing a competition performance or practice performance afterwards to see what happened.
- * Exorcizing fear through examination of feelings associated with past traumatic experiences.
- * Enhancing the memory and images of past successes in order to improve confidence.
- * Inducing amnesia to block pain caused by injuries or to block the memory of bad experiences.
- * Helping the athlete to concentrate and narrow his attentional focus in key circumstances.

Hypnosis is administered in the following way: A hypnotist makes a series of suggestions aimed at relaxing the subject and encouraging him to enter into a passive and reflective state of mind. This is accompanied by techniques of getting the athlete to strain his eyes so that he wants to close them and relax. Once the passive state is reached, the hypnotist makes specific suggestions aimed at improving the athlete's performance. These are reinforced by post-hypnotic suggestions after the athlete wakes up.

Problems With Hypnosis

- * Many athletes are not good subjects because they are strong-willed individuals who feel the hypnotist is manipulating them.
- * You need a competent hypnotist, and they are costly.

- * Unless the coach is present to oversee the hypnotist, the hypnotist may inadvertently give the athlete inappropriate suggestions.
- * The hypnotist's suggestions may be misinterpreted by the athlete. The same words may have different meanings and connotations to the athlete and the hypnotist.
- * The athlete might become dependent upon the hypnotist, especially if the athlete lacks self-confidence. The hypnotist should make sure to transfer the confidence the athlete builds up in him, back to the athlete himself.

AUTOGENIC TRAINING

This and several of the following techniques differ from hypnosis in that they are self-administered. The effects, however, are similar to those of hypnosis.

Autogenic training is a self-induced relaxation procedure. Its aim is to lower anxiety and thus improve the ability to concentrate. Over several months, the athlete is taught to develop in different stages:

- * The ability to relax different parts of his body independently of the others. He alternates between tension and de-tension.
- * Feelings of warmth and coolness in different parts of the body independently.
- * Feelings of warmth in one part of the body simultaneous with feelings of coolness in another part.
- * Control of breathing.
- * Control of heart rate.

Ultimately, the aim is to be able to do all of these things under stressful conditions, in just a few seconds, in the time it takes to take a deep breath, inhaling and exhaling slowly. Autogenic training, like gate skills, needs constant practice, over many months before the athlete can relax under stress.

Autogenic Training should begin in non-stressful circumstances, eventually being undertaken in more stressful conditions as the athlete begins to master the techniques. Normally, the training is done at home with the athlete listening to cassettes. I know of at least two World Champions who use these cassettes.

It is important that the athlete has a passive concentration during exercises. He should not try to develop the desired relaxed feeling through will power, but through the subconscious mind. He may find his thoughts wandering from the exercises, especially when he first starts them, but he should realize that this is normal and nothing to worry about. He should just realize that his attention has wandered and return to the exercise. He should not do the exercises for more than about 10-15 minutes at a time because consciously trying to relax when it isn't working often increases tension, rather than lowering it.

The advantages of autogenic training:

- * More people respond to it than to hypnosis.
- * There is no dependency upon someone else.
- * The athlete does it when he wants.
- * It doesn't cost anything.

The disadvantages:

- * It is often hard for an active athlete to sit still and relax.
- * The athlete may not have faith in his ability to use the procedures or benefit from them and thus drops out of the training early on.

TRANSCENDENTAL MEDITATION

Transcendental meditation (TM) is associated with a number of Eastern religious beliefs, which for some people is a negative. But if those beliefs are stripped away, there remain many principles that are valuable for athletes.

The purpose of TM is to eliminate anxiety and to help clear thinking by teaching the subject to concentrate on a "mantra". The mantra is simply a neutral word or sound which the subject says over and over again to himself with his eyes closed. He does this twice a day for 15-20 minutes at a sitting.

During the exercise, the subject attempts to concentrate passively on the mantra, to "experience" it. Thus, he doesn't force his attention to stay on the mantra, but merely lets it stay there. If he feels his attention wandering, he simply thinks about what is happening and then returns to the mantra. The passive reflective style is the important part of TM. The subject does not try to

control his attention. He allows it to wander and does not consciously force it to concentrate on the mantra.

Other Eastern meditation procedures have the same principle. In Buddhist walking meditation, the subject focuses his attention on the sensations that arise from walking, the movement of his legs, for example. Other procedures center around concentrating on a single spot, on light or sound. Oriental martial arts use body movements as a mantra. All of the meditation procedures stimulate a steady and clear concentration style that is extremely valuable in athletics.

The Advantages of Meditational Practice Are:

- * Lowers blood pressure, heart rate and respiration rate.
- * Decreases blood lactate levels, thus potentially aiding in recovery from workouts.

Disadvantages:

- * TM emphasizes a non-competitive, passive attitudinal focus which is not appropriate to certain aspects of slalom training. If you are trying to learn new gate techniques, for example, you need an active attention style. But if your skill level is adequate and you know the sport well, a passive type of concentration is best.
- * TM is associated with bizarre religious practices.
- * Concentrating on a sound is dull.

SIMULATION

Simulation is a technique based on a simple principle: determine what produces anxiety on race day and try to simulate those same conditions in training sessions so they can be practiced, too. I have done this for years by having sessions which consist of only 3 timed and scored runs on a full length course (one practice and 2 official" runs) against competition. The courses often begin with count-downs as they might in a real race.

DESENSITIZATION

Another technique for controlling anxiety, especially when you can't use the simulation techniques described above, is to practice a technique which essentially aims at replacing each anxious feeling with a relaxed and confident feeling. By examining photographs, video tapes and listening to verbal descriptions of the race course and surroundings, the paddler gets used to it, simply by using his imagination. He can also discuss the feelings associated with sitting in the start gate, seeing scores after first runs, and watching the opposition, and try to associate them with positive feelings, in the following way:

ANXIETY PRODUCING FEELING

All the things that
could, go wrong.

I'm so worried I want
to give up.

RELAXED FEELING

All the things that
could, go right.

I'd rather be in my
shoes than in my
opponent's.

ANTI-SYMBOLS

The aim of this technique is to learn how to subconsciously associate a negative image with a positive one. First, the athlete lists his fears. Then, he looks for an appropriate anti-symbol that can replace each fear in his subconscious. The anti-symbol is the exact opposite of the negative symbol. For example, if an athlete imagines that he is nervous, he replaces that with a positive image of himself being confident. This process takes time to practice and perfect. Another example: view a race as an opportunity, not a crisis, an opportunity you have waited a long time for so that you can finally show how good you have become.

COMPETE AGAINST YOURSELF

This is not so much a technique as an attitude about competition. One of the major attractions of participation in amateur athletics is the potential for improving self-image. Yet inexperienced athletes depend upon the reactions of others to give them the self-esteem they seek. This is because the inexperienced athlete cannot predict his performance and therefore has little way to evaluate it except by whether he wins or loses or by how others feel about his performance.

But if he relies on others to boost his self-image, he accepts their standards, and anxieties arise when he tries to meet them. Those standards may not be realistic ones for the athlete, which exacerbates his feelings of insecurity as he tries vainly to live up to them.

As the athlete gets more experience, however, he is more able to predict how well he will do in races. At that stage, he can develop his own standards for success instead of having to accept someone else's. In other words, he learns to compete against himself and thinks about having a good run (for him) rather than just winning or losing. In this way, his anxiety is lowered.

ENERGY REGULATION

It is important that the slalomist have enough psychological energy on the day of the big race. Often, however, he has not built up his psychological energy reserves during practice sessions, uses up too much energy right before the competition, and wastes his energy during the competition.

To build up psychological energy, the boater should plan certain workouts so he has to use 100% of his psychological energy to complete them successfully. In a typical workout, a boater might use 70-80% of his maximum psychological energy. But in races, he needs 100% of it. For this reason, I believe it is necessary to build up his maximum psychological energy by using it in many, but by no means all, training sessions. This means that the slalomist should take the session extremely seriously: he gets to the workout a half-hour ahead of the scheduled time and gets a thorough warm-up; he has a very specific objective to accomplish in the workout, based on a well thought-out analysis of his weaknesses; he wastes no time by talking to others or sitting in the eddies resting, because he is attempting to make the workout as efficient as possible; before each run, he mentally rehearses his plan of attack; after each run he thinks about it again to discern what went wrong -- or right; he selectively watches other boaters when there is something to learn from it; he tries to make each run a top performance; after the workout he carefully reflects upon how it went, even writing his feelings into a training log, both to reinforce them and also to have a record of them to consult later. If boaters approached most of their workouts this way, they would be able to cut down on the total volume of training because they would be replacing it with quality work,

Energy can be built up before a race by getting enough sleep, and employing relaxation techniques, such as are outlined in this chapter.

Psychological energy can be saved on race day by controlling nervousness and anxiety by using the techniques described here. Another technique is to learn how to concentrate intensely only for a relatively short period before the race. Intense concentration for too long wears the athlete out. Thus, for most people it is probably advisable to get really aroused for the race only a couple of hours before it, and not many hours before it.

Conclusion

The field of sports psychology has tremendous potential for slalom, where techniques for controlling anxiety and improving the ability to concentrate will yield great dividends. Unfortunately, however, not enough is known about sports psychology in the United States at the present time because until recently, most of the work in the field has been theoretical research with very little practical application. This contrasts sharply with the Soviet Union, where most of the work is of the practical application variety and anything discovered is put to use immediately. But under the direction of the U.S. Olympic Committee, things are changing. The Olympic Committee is attempting to organize sports psychologists in the U.S. and generally make it possible for athletes to use the large body of theoretical knowledge that has been built up.

Even after the field has been made more relevant for athletes, however, it will have to be tailored specifically for slalom. As has happened with the physiological aspects of training, information is first developed for other sports, usually running, and then has to be adapted to slalom. This chapter has given the reader an introduction to some of the techniques and areas in which sports psychology is moving in the hope that it will stimulate him to think more about the mental side of his training and racing, so that as the field of sports psychology develops, he will be able quickly to adapt the findings to slalom.