

Psychological factors

The Brain

The brain is a fantastic creation. Every person has a brain, which is in principal without limits. There are endless fascinating facts about the brain's capacity, everything from how it is comparable to a supercomputer or how today we only use a seventh of its capabilities. Much of the complicated system of impulses and pathways is concentrated on the surface of the brain, which is incredibly large due to its complex twists and folds. If the surface of the brain were flattened out it would cover an area the size of a football pitch.

The body functions as a whole; physical and mental reactions are mixed together. Mind and body work together closely and influence each other in many different ways. Often it is difficult to know or determine if a reaction or behaviour depends on signals from the brain or the body. The brain has however the controlling function in our actions. It is the brain that determines our behaviour and how we react to our experiences. It is this area that psychology is interested in.

Learning

The brain's capability for learning is enormous. We have an amazing ability to learn right from earliest childhood. This ability becomes dulled later in life for many people. However, there is nothing physical, which says that this must be so. The change is mainly psychological. As we grow up we learn not only useful skills, but also things that hinder further learning. In some cases we even learn to shut down our own learning capability. Physiologically speaking, our mental abilities do not begin to decline before they are 60 years old. We become, in other words, worse at learning when we become older, not more forgetful.

Instead of the essential repetition that characterises children's learning we think we are able to do something straight away and so will be able to do it next time we try as well. Look at small children: When they learn something new, they repeat it again and again, and eventually they master the new skill. Children do the same thing with computers, repeating the same process again and again. We adults do something once or possibly twice then believe that we have learnt it. We should not just tell children to practice, we must practice ourselves.

This also applies to map reading, whether sitting at the desk or running at high speed in the forest. We do not become good orienteers just because we learnt the theory once in the classroom. We must repeat the procedure often and learn the right system. Each learning opportunity is about getting feedback that something is right or that we have succeeded. When we are actually competing and working as hard as we can, and at the same time facing stress from both inner expectations and external factors, it is exceptionally important to apply the right behaviour to the job. If our learning has been positive, offensive, and creative it is easier for the brain to choose the right system to quickly solve the task. And it is up to us to decide what information we wanted to programme in during our learning.

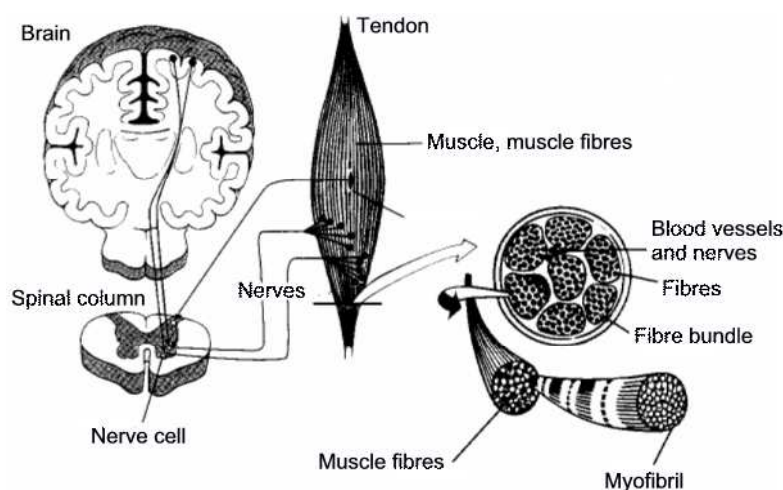
Nervous system

Our actions are either inherited, for example breathing and swallowing, or learned, such as running, cycling and swimming. Learning movements like this involves the nervous system learning to send impulses and make the right connections. The nervous system learns to activate the right muscle fibres and fire the right number of fibres so that movements can be carried out gently and with precision. The more a movement is trained, the more securely impulse traffic is transmitted to the right muscles so that they work in synergy. Fewer and fewer signals go to the wrong receptors or antagonists. We learn to work or run efficiently without opposing muscles working and hindering the intended movement. We learn to work at the right effort, the correct amount of motor units fire straight away. In this way we get to develop a better running economy. We are able to carry out more work for the same energy expenditure.

For this reason training at competition speed, with elements of technique included, is essential to performance.

The task of the nervous system is to accept impulses from the different senses – sight, hearing, feeling, balance and pain, and to transfer these signals to the brain. The brain collects these impressions, evaluates and then sends signals out to the different organs in the body, such as the muscles.

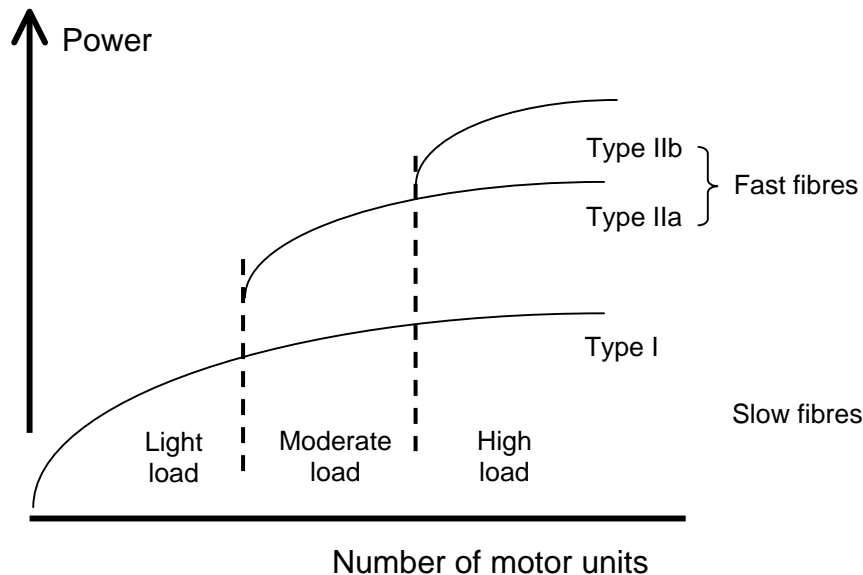
Impulses are sent to the muscles with the help of electrical signals. The speed of impulses can be as high as 100-200 m/sec in the larger nerves. The nerve connects to the muscle via a so-called motor end plate. Transfer of the impulse to the muscle is carried out chemically here via a synapse and with the help of a transmitter substance containing charged part. This nerve and muscle unit is called a motor unit (see figure).



In the eye, where movements are often extremely fine, the number of muscle fibres in a motor unit is only about ten. In the thigh muscle, in contrast, such a unit can consist of hundreds of fibres. Motor units work on an “all or nothing” principle. This means that when a motor unit is reached by an impulse it will either be activated fully or not at all. There is no middle ground. This is why the principle “we become good at what we train” applies. It

means that competition relevant training should be frequently included in whole or parts of training sessions.

Muscle fibres are recruited in a certain, determined and rule governed order, depending on their properties. Low threshold fibres (type I) are recruited first, and in the electrical current required to activate the fibre can be relatively low. Fibres in different work groups are then activated, based on the power that is required (see figure).



This is an extremely important core in all training, both physiologically and psychologically or technically. If all training during the build up period is carried out at low speed only certain groups of fibres, a part of the whole muscle, will be activated. These groups will develop an increased capacity. When we run an orienteering competition, the pace will be considerably higher and the nervous system will also activate high threshold fibres. However, we have not stimulated these during training and they are therefore totally untrained. For this reason, we need to train at a variety of speeds so that different fibre types are forced to work in a way that reflects an orienteering competition.

Thoughts becomes actions

We believe that we think in words and language. Researchers believe on the other hand that we think in images. Words come from these images and we can then use these words to transmit ideas to others. If we are lucky the other person will imagine the same picture from the words we supply and we will be in agreement. If we do not imagine the same picture problems begin. Take a simple word like “run”. For an orienteer this means running in the forest, for a marathon runner it means running on a hard asphalt road surface. Two totally different nerve and muscle recruitment systems are at work. For a sailor the word “run” has a totally different meaning - sailing with the wind behind the boat.

Another issue which thinking in pictures raises is the difficulty of negotiation. It is difficult to get the brain to work in a “not” environment. Try to draw “not fast”, “not fun”, “not strong”, “not fit”, “not miss”, “not push it”, “not twist my ankle”. We would have to draw a picture with a cross over it or something similar. We would start with a picture, but then add a language symbol, a cross, to make the idea negative. There is no such thing as a crossed-out

picture in the brain. We can only create this type of picture by trying to combine two different pictures. The consequence of this is that we end up describing the things we are trying to avoid. The word “not” should be taken away from our language. In English we use “not” far too much, while in Japanese, for example, there is no word for “not”. What are the consequences then if we talk about how we took the “wrong” route choice, or how much time we wasted when we “missed” a control?

The more we use the right picture for the thing we want to achieve, the easier is for the brain to send the right signals to the different organs of the body. If we want to be relaxed we need to create pictures of a calm environment and not pictures of “do not stress now”. When we start with pictures we end up with hormonal neuromuscular actions and effects. Hormones are both affected by and stimulate or feelings, mood and orienteering technique, while the neuromuscular system controls our running technique.

Self-image and self-confidence

Much research, into both our performance at work and in competitive sport, shows that people with a positive image of themselves are able to perform near the roof that is set by their physical and technical capabilities. These individuals have a better capacity to “make the best” of the present situation and perform to the “best of their ability”. People who have a negative image of themselves on the other hand, perform far worse than they are physically and technically capable of doing.

Self-image is really the sum of three parts: the ideal self-images, the real self-image, and reflected self-image. The sign of a mentally strong and stable people is that these three aspects are close to each other, or are the same. If there are significant differences between these different aspects there will be conflict between them and this affects performance negatively.

The ideal self-image contains short and long term goals – in sport, studies, work, love or life. It also contains our ideals concerning appearance, behaviour, relationships, and how good we want to be. The real self-image is harsh reality, that is how good we really are at different things – a strong hill runner, good at fine orienteering, good at man-to-man running and so on. The reflected self-image consists of what the individual believes that others think about him or her.

How internal and external factors affect self-confidence

Children learn a lot about themselves through reactions from their environment and the people around them. These external factors affect a child’s self-awareness. This awareness or self-image is the basis for self-confidence. When the child becomes older and can choose his or her own activities and how they are carried out he or she has the opportunity to influence this internally. By carrying out an individual, self-chosen task the child has the chance to achieve his or own result. This result, from an individual activity, forms the basis of a developing inner self-confidence. Individual activity is the basis of inner self-confidence.

The results that we experience are the inner factors which build inner self-confidence, the real self-confidence. With a true inner self-confidence an individual can act in unknown situations in a creative, dynamic and effective way. The individual has experience – feelings – as reference points, not things that are able to measured in reality. The advantage of having

feelings as reference points is that works every time and everywhere, in all situations. In addition you take your emotions and feelings with you everywhere and it always works.

Motivation

Motivation is the inner fuel that lets us do things. There are of course also external motivations such as reward or avoiding punishment but these are far less powerful than inner motivation. Inner motivation helps us to get from where we are now to where we want to be, be that a vision or a finish line in a race.

Motivation is about inner power, wanting to do something, being inspired, being offensive and seeing possibilities. A performance-focused orienteer who enjoys the sport will act in a different way to an orienteering who also enjoys the sport but is less interested in winning and more interested in socialising with like-minded people. The orienteer who cares about his or her performance will train harder, in a way that is relevant to competition, put more time into pre-race preparation, look for any little “nugget” of information that can help to be the best when it counts.

Motivation comes from inside. It is an expression of the will of the individual. At the same time external factors can help to “pep up” the individual and give a boost to the individual’s training or performance capacity. Coaches and leaders can help to create opportunities in the training environment, so that runners feel that orienteering is a fun sport to be involved in, rich in experiences, is socially rewarding and that competing is exciting and challenging.

If motivation is to work well, we need goals. Goals are visions and visions are pictures: We have motivation when we see ourselves in a situation which is currently unachievable but measurable. By measurable we mean that at least one person, you yourself, can judge if you have achieved your goal or not. Often others can also judge if you have succeeded. There is nothing wrong with others seeing our goals, but remember that there are goals that only we can see – goals that are based on inner feelings!

A goal based on feelings can be a perfect run. By perfect we mean that it has been carried out exactly as we wanted – controls, running, map reading and so on. When we get to the finish we feel satisfied – I did that well, that was right, I have achieved my goal.

Motivation can be created through money, threats, punishment or even war, and these methods will have a certain amount of success. Motivations which comes from inside and which is handled in the right way is always stronger and more effective than outer motivations. That is why my starting point must be individual when I create the images that will motivate me and not based on what others think of me. This can lead to uncertainty in the beginning – how should I do this, what is right? As in many other cases this is a learning process and we have to let ourselves make mistakes.

Will power

Will is really a type of motivation. Often it is a negative form of motivation. Will power is a kind of desire to fight which usually burns up too much of our motivation fuel. Will power is only positive if we have an excess of this fuel or if it is focused on a very limited activity.

When coaches shout “Come on!”, “Stick in there!”, “Push it now!” to athletes, they do so with the best of intentions. The problem is that this enthusiastic encouragement often makes the individuals performance worse when they use their will power to try to fight harder and push themselves to the limit. Nerve impulses are sent to antagonists and the muscles stop working in relaxed synergy.

Will power is usually focused on something external, while motivation comes from inside a person. If the object of our efforts is changed, we must also re-focus our will power on the new goal – we start over again. As motivation comes from inside it continues to work even if the object is changed – our inner goal remains, regardless of external changes, until we decide to change it from within. Will power is more easily influenced by our surroundings in the form of pep talks for example – go, push, fight. Will power is often used to achieve a goal that someone else has created.

Concentration

During an orienteering competition is absolutely essential that you are concentrated. Most mistakes and misses that we make during a competition are due to difficulties with concentration. The course planner tries to force us to vary both our speed and the brainwork we need to navigate efficiently on different parts of the course. When we have several controls which sit close together it is often relatively easy to stay concentrated on the task. But as soon as the orienteering becomes a little easier and our speed increases, our thoughts tend to wander. How many of us for example have begun to hum the last song we heard on the radio as we stand on the start line?

Being concentrated means that our attention is tightly focused on a very narrow field. We live in the present and are so focused on the task that we shut out time and space from our consciousness. Concentration is in other words increased attention on a reduced area. We have all experienced this sensation before, for example when reading a gripping book. We lose ourselves in the content, perhaps we even become the person in the book so that we forget everything and shut our surroundings out of our consciousness. We wake suddenly from this dream after a while and become aware of ourselves and our surroundings again. Often we have no idea how long we have been in this concentrated state.

This feeling of focus can be created because competition is something we long for, something we think is fun, exciting and challenging, and something in which we can succeed. If our feelings about the competition are negative so that it is something we do not enjoy, or we are afraid of making mistakes, or afraid of the unknown, we become defensive and cautious. There is a significant risk that our thoughts will focus on the wrong things. We may catch sight of other runners, think about what we will be doing after the competition, begin to grumble about the map or that the terrain does not suit us. In short we lose focus on the task, and we cease to think in the present.

This is what concentration is - thinking in the present. It is only the present time that we can influence, not the past or the future.

Performance-focused or concentrated?

Being performance-focused could be said to be nearly the same thing as being concentrated. The difference is that being performance-focused is a state before performance while concentration is what we are during competition.

We are performance-focused when we turn our attention to the task and shut out everything else apart from the job we are going to do. We are concentrated during the activity and non-essential things do not disturb our performance. We become very selective and register only things that are interesting for our performance. We hear our coach among 1000 screaming voices, as if he or she stood alone.

Some people become irritable when they are try to concentrate. Studies of the influence of distractions have shown that three distractions in a short period mean that concentration must start again. It is therefore not so remarkable that a person reacts when distractions come frequently. We can develop systems, teach ourselves, so that we become less sensitive to distractions and the time that is required to be concentrated reduces. If this process becomes shorter it is easier to be left in peace long enough.

On the other hand, by showing consideration for a person who is trying to become concentrated we help them both towards better concentration and make it easier for them to get on with the people around them.

Attitude

We think in pictures. It is important to remember this when we analyse different attitudes. Simply speaking, an attitude is the way we feel about something – a person, an event, or a competition. Attitudes arise when we get a picture of something, a situation or a person and begin to live according to that picture. We react in a planned way when way we meet a situation like the picture we have. If we say to ourselves that we are “useless”, “weak”, “a loser”, “can’t run in Scottish terrain” or “that control looks hard, I’d better not miss that one” what will the result be?

As the brain prefers to think in terms of positive pictures, energetic work starts going on behind the scenes. The brain must swim against the current, first drawing up a positive picture, “I hit the control” and then crossing out that picture. What is left afterwards? Our picture of doing it right consists of “not” doing it wrong! The image is based on failure.

Is that what we are trying to achieve – making a mistake and not hitting the control? Why is this then the dominant picture in the process? Our starting point must be positive and offensive. The word “not” does not exist in Japanese, and from now the word is removed from the orienteering dictionary. Try to attack instead, try to do the thing you want to do, the thing you want to achieve. We must dare to succeed.

In “Winnie the Pooh” two extremes are described, the donkey Eor and the tiger Tigger. Eor is a pessimist and only sees problems, while Tigger is offensive, optimistic, positive and only sees opportunities. Choose yourself! Who do you want to be? It is much easier for the brain to think in a positive, realistic way.

Tigger!	Eor...
Tiggers like orienteering!	What a thick forest...
I can!	I can’t be bothered today...
I will!	I might...
I feel bouncy and energetic!	I’ll just plod round like usual...

Yippee!	Home again soon...
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The important issue is getting a positive picture of what we want to happen. We should look for pictures which reflect our attitude and feeling for the situation. When the situation is unknown we must create a picture then test it reality. When we have a picture we can begin to change it by trying to influence it in advance.

- I run *easily*, I run *more easily*
- I've done this before, I *can do* this
- I am *strong* on hills, I am *stronger* than my rivals
- I *enjoy* running in tough terrain, I can run well in this type of terrain
- I am nervous and become calm, I become calmer
- It is cold and pouring with rain, *I have already beaten half of the other runners*

The words in italics are the ones that the brain works with.

The attitude we take is totally decisive in the process of freeing up energy for the job we face now. We cannot change the weather, the length of the course, the start list, the steepness of the terrain, or any other external factor. We can only try to like the situation and change our attitude to the external factors. Let them be my friends during the competition. They are positive and help my result.

Plus and minus psyche

The difference between a plus and minus psyche lies in the pictures we send to the brain from our language. A plus psyche sends clear, realistic pictures and creates a positive, realistic attitude. Minus psyche creates unclear and unrealistic pictures and our attitude reflects this.

Vision and goals

When you were a child you maybe talked about the future, “I want to be a train driver”, “I want to be a professional football player”, “I want to be in the squad”, “I want to own a Porsche”. A vision is a dream or desire about something we want to become, have, or how we would like to be. It could be about possessions or a job that wakes feelings of excitement and experience. It could be about life itself, what I want to do with my life, what I want to leave behind me. A vision can also be a dream within sport. All successful sportsmen and sportswomen have or have had a vision which helped them find the passion and commitment to train to reach the top. Visions or dreams release the power and desire in us to train, and also creates the creativity needed find new solutions to achieve success. In children's games visions are important both to carry out the game and for enthusiasm and enjoyment in the game. As a child we often imagined that we were someone else. Today's children play that they are Michael Owen or Ryan Giggs on the football pitch.

A vision can be said to be about seeing a goal. A goal is therefore when we see ourselves in a situation where we do, carry out, perform in the task which is our goal. By making the picture clear and repeating it time after time we internalise it. If the picture is fully internalised the brain can easily recall it and repetition becomes easier. At this stage we begin to have a type of pre-muscular learning. Practically this means that our muscles learn to carry out a task

which they have not yet actually tried! If we use visions and goals in the right way we can save many hours of running in our training.

Visions create goals, goals create sub goals, sub goals create the content of our training. To find the thread in this process we can make a comparison with golf:

“In golf we have placed the individual and her life as a whole at the centre of the process. Our vision is that “we as players and leaders achieve our potential as individuals through golf”. With this attitude we believe that we can be a leading nation in the golf world and that the things we learn through golf give us joy in other parts of our lives. A great deal of our success is based on heart and head working together. It is through inner motivation that we can perform optimally. One of my most important tasks as leader is to help players get to know themselves and find their own way to the top, so that they can produce a maximal performance on a special occasion and to ensure that players have the tools they need to take full responsibility for their own performance.

It takes time to find your own style so we must allow time for that process. Everything is based on the long-term view. Every player has their own way of doing things, whether we are talking about playing golf or their life as a whole. It is important to find an individual rhythm that suits each player.

We have become better than before at finding different ways of achieving our goals. We want each golfer to find her own way to a winning performance. Success is about being prepared for new situations and requirements, listening to signals from players and creating different levels of performance peaking. Each competition, regardless of its importance has its own level of performance peaking.”

Pia Nilsson, head coach of the Swedish golf team

Within golf players have worked with a very concrete vision for a long time – “the 54” – to show how important the philosophy above is. If a player completes each hole on stroke under par, with a so-called birdie, at each hole, on an 18-hole course, then he or she has turned this vision into a reality. The par for most courses is 72 strokes. If a player birdies every hole they will go round in 54 strokes, 72 minus 18. The vision of “the 54” creates motivation, concentration, creativity, energy and not least joy in being able to slowly but surely achieve the impossible. As a coach the vision of “the 54” can be used to create a starting point to make the impossible possible.

Visions or dreams are important for everyone within all areas of work. Visions make people think in new ways and find different solutions. The Fosbury flop and Bjorn Borg’s double-handed grip in tennis were invented thanks to the desire to jump higher in the high jump and hit harder in tennis. Visions and goals share a lot in common. The difference is that a vision deals with the future in general, whereas a goal is something that will be achieved at a chosen point in time.

“23-0”

This can be a vision for orienteers. “23-0” means that the orienteer won the match, won the orienteering competition against herself. 23-0 means in other words that the orienteer spiked all the controls in the competition. 23-0 also creates a focus on the task: go clean, flow, all the controls are just sitting there, spike each one. One can also break a race up into different phases. We know that at soon as we lose concentration a mistake is just around the corner. The beginning of a course, points where the temp or terrain changes, and the last few controls are several areas particularly prone to mistakes. One could theoretically split the match into the following periods: “3-0”, “5-0”, “8-0”, “4-0” and “3-0”. This is just playing with numbers of course, but nevertheless it is a way to try and create a vision of the perfect run. When our technique is so good that this is a realistic goal, we can begin to carry it out faster and more securely in stressful conditions.

Harmony, enjoyment and security

If self-confidence is built on inner factors then we also have an inner security. If we feel secure we are able to enjoy things more. When we feel secure and enjoy what we do we experience harmony. Concentration is natural, we work in a systematic way, and our ability to take responsibility, for ourselves and together with others, increases so that our results become optimal. An optimal result is when we have had the opportunity to perform to our absolute best, regardless of whether we actually came first or last in the race.

Feedback

Is knowledge of how we learn important for orienteers? What do we talk about after a competition? Of course, we talk about which controls we missed and how we made our mistakes! We can sit for hours comparing notes on our favourite mistakes. What we are actually doing here is programming in the mistake over and over again. If we consider the principles of learning we have discussed it is a wonder that any orienteer ever finds a single control in competition.

Of course we must analyse what went wrong and try to correct it. But is going through a mistake many times really the right way to make something better next time? Would it not be better to go through the things that were good? Should we train to stumble through the forest or should be train to bound lightly over rocks and brashings? Do we practise taking the wrong route choice, or do we train ourselves to find the smartest way between controls? Do we rush into the circle carelessly or do we train so that we spike every control safely and confidently? We should perhaps think a bit more about how we analyse and evaluate our performance from the point of view of feedback and learning.

What we learn during orienteering training will be used fully during a competition later. The brain works to store everything that it has learnt, right or wrong, and then applies it later at the right moment. The brain always tries to find a system to solve the task in the best way it can. When we have plenty of time and we are in calm surroundings, then brain has plenty of time to work out the right solution logically. When time is limited and the situation is becoming more and more stressful, the brain must work more and more quickly until we begin to react instinctively. In this stressful situation it is easy for the brain to choose from the store of “right and wrong” behaviours we have programmed in through our training. If we have stored

many mistakes or strengthened incorrect behaviours there is a very great risk that the brain will make an incorrect decision.

This is why learning must be strengthened with the correct behaviour and feelings. Give praise to yourself! Emphasise what you have done well and remember the successful things. Note mistakes and turn them into concrete and positive events. The competition analysis form at the end of the chapter can be a useful tool for offensive and positive but critical evaluation of performance in competitions.

Mental training

By studying the results from the Mental Profile and Competition Analysis we can get a good picture of where we are at the moment mentally and in our performance level. From this analysis we can get a performance profile for ourselves. This picture looks backwards in time and describes how our performance was. This can now be a basis for a future performance profile.

The main task should be to find those things which we believe are good at. We build our ability to perform around these things. The things that you think you are good at give you the framework to develop further. The things you think you are not so good at are the things you will work with. You will later tie these two aspects together as you increase the number of things you believe you are good at.

Mental training models

There are many different models and systems which are referred to as mental training. The better and more effective mental training models build on visualisation. The means that we create pictures of the thing we want to do and what we want to achieve! By repeatedly seeing ourselves carry out that thing we want to do we are eventually able to do the same in reality. This requires that the new picture is realistic.

There are many different ways to create the pictures we want to visualise. The simplest way is to make use of a model or example that exists in reality of the things we want to learn. We look at someone who is good at the thing we want to do. We copy his or her way of doing things in our own picture, but adapted to our own level. If we watch a basketball player who is good at getting the ball into the basket, we can copy her in our picture but adapt her style to a level that is achievable for us. We should preferably not copy someone totally, but try to capture the essence of how they act and recreate that feeling. In that way we can do the thing she is good at but in our own way – an excellent solution. A person who tries to copy someone else 100 percent must be exactly like the original or else they will not succeed – and no person is exactly the same as any other.

Through letters or personal conversations coaches can also strengthen the athlete's feelings and visions. Here is an example of a letter that gets runners to imagine the right pictures before an important competition, in this case the big Swedish relay competition Tiomila.

Imagine if everyone is fit and healthy...
Imagine if everyone is well prepared...

Imagine if everyone longs for the race to start...
Imagine if everyone is fired up...
Imagine if everyone is motivated...
Imagine if everyone is in harmony...
Imagine if everyone fights...
Imagine if everyone tries to do his best...
Imagine if everyone gives 100 percent...
Imagine if everyone is thinking, "I'm going to perform well..."
Imagine if everyone takes responsibility for his job...
Imagine if everyone is focused on the job...
Imagine if everyone is thinking in the present...
Imagine if everyone sees the opportunities his capabilities give him...
Imagine if everyone runs as well as they usually do...
Imagine if everyone makes the right route choices...
Imagine if everyone "spikes" every control...
Imagine if everyone enjoys "shoulder-to-shoulder" running...
Imagine if everyone runs for each other...
Imagine if everyone supports each other...
Imagine if everyone believes that we can do it...
Imagine if everyone thinks that Tiomila is really cool...
Imagine if everyone thinks that this party is the best ever...
and Imagine if everyone was thinking...

- we want to
- we can
- we dare

...then the first weekend in May could be a really good one!
Turn these thoughts over in your head as the days pass and we get closer to Tio-Mila!

Performance psychology questions to work with

The questions below with example answers can be used to find your own model for mental training. Try to solve each question with yourself as the starting point, or together with your coach, and then transfer these ideas into reality.

1. *What is inner motivation?*

Answer: When the sport and competing are sufficient reward in themselves and when the enthusiasm and desire to have a perfect run mean more than money or other forms of material reward.

2. *What is outer motivation?*

Answer: Money is a good example of outer motivation. When we need other reasons to compete than enjoyment of the sport itself.

Discuss the difference in the power to perform that comes from inner compared to outer motivation. Which gives most power?

3. *How can we go about trying to influence unwanted behaviours?*

Answer: One way of working to influence our behaviour during competition is to work with a model such as “inform-accept-change”. The idea is to first inform yourself on where you stand at the moment, accept that and then try to change your behaviour in the desired direction.

4. *How can you as an athlete optimise the present moment?*

Answer: It is important to remember that you cannot change history. What you have done is done. Do not spend too much time pondering on the future either. You can only very slightly affect what will happen in the future. Your task is to concentrate on what is happening now. It is the present time that you can influence most.

5. *Give some examples of the form psychological training can take.*

Answer: Monthly Letter: Every month the athlete gets a letter from her coach or leader. The letter contains a theoretical and practical section on performance psychology. The athlete reads the letter and tries the practical exercises, and can then evaluate the contents and her experience with the methods. The idea with this monthly letter is to help bring psychological training continually into focus. Meetings: It can be useful to have regular contact with someone outside the club or team who can give everyone in the training group the same basic education or further education in the area of performance psychology. Personal discussions: A chance to discuss psychological problems and opportunities for development with someone who is not involved in selecting the team.

6. *Why can visualisation be effective?*

Answer: The human brain has difficulty in distinguishing between real and imagined events. By visualising a picture of the desired action internally the neuromuscular system is programmed in advance for different actions and movements. This is the most intense and effective type of technique training, at home on your most comfortable sofa!

7. *What can you do during a competition to positively influence your performance?*

Answer: Mental time-outs: The brain must be allowed to relax a little during long, demanding performances. Work in the present: You are always best now. Never show negative body language: Björn Borg won many matches thanks to his calm and secure outward appearance

while he fought with everything he had under the surface. Never reveal your thoughts to your rivals. Physical activity reduces tension: When you feel nervous, get up and move about a bit. Rituals and routine: Many athletes use rituals and routine to help them feel secure. Secure through a habit that when it is carried out or repeated, lets them know “now I am ready to perform.” Focus your concentration on the right things: Never on the actual parts of your body that take you round the course, never of the automatic details of your technique, but rather on the task which is to be carried out, such as spiking the next control. Always use the same routine in training and competition. Quick reminder: Imagine a picture of yourself when you are performing at you absolute best.

8. What is a thought stop and when can we use it?

Answer: When an athlete realises that he or she is thinking a lot of negative thoughts, a “thought stop” can be a good strategy to try. The idea with a thought stop is to put a stop to all these negative thoughts and replace them with positive ones instead. Each time a negative thought crops up it is replaced with a positive one. So that a thought stop is as effective as possible the athlete should follow these six steps:

1. Learn to identify the things that bring on negative thoughts.
2. Realise that these thoughts prevent you from performing at your best.
3. Choose a clear signal that it going to mark your thought stop. It could be you saying “STOP” to yourself, clench your hand or that you imagine a red light or flag.
4. Replace the negative thoughts with constructive thoughts that you have practised in advance.
5. Practice your thought stop during training.
6. Use the technique during competition.

9. How can positive self-talk and encouragement strengthen performance?

Answer: Positive encouragement builds a good feeling in the team: “Nobody can touch us. We are unbeatable!” It also sends a message to other teams: “They are so good – we are going to have a hard time to beat them.” By using positive encouragement or self-talk we can create an ideal psychological environment for performance, an environment where we are continually reminded that our team can compete with the best. This influences performance, as an idea thought in a secure environment many times, tends to become reality.

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10. Why can an imagined headline about a future success increase our chances of winning when it matters?

Answer: A thought, turned over in the mind again and again in a secure environment, has a tendency to become reality. An authentic looking headline which athletes see often helps to remind them of opportunities for success: “We can win! We can perform well!”