

Psychology is a science that involves the study of behaviour and the mind. It involves the complex interaction between the brain, cognition, behaviour and the environment. Sport psychology is a discipline of psychology attempting to explain and reproduce the 'winners mind set'. Sport psychology does not just exist to help elite professionals but can help everyone in sport. This article is a brief attempt to explain how sport psychology can be used in dressage. There is very little academic research on dressage so I will often refer to other sports similar to dressage where research has been done to provide some insight into how dressage can be improved.

***'The trainer trains you. You train your horse. A sport psychologist trains your brain'. Dr Lynn Pal***

I will begin by explaining the 'winners mind set'. Sport psychology research has found that sport and in this case, dressage needs to be important to those involved whether a trainer, judge or rider. Enjoyment is an important part of dressage. Essentially without the love and passion for the sport you would not be involved and certainly not reading this article. The 'winning mind set' accepts you are committed and motivated to be the best you can be within your limitations including time restraints, natural ability, horse and finances. Motivation plays a major part in the 'winners mind set'. There are two types of motivation called 'intrinsic' and 'extrinsic'. Intrinsic is the individual motivation provided by the rider/judge/trainer which includes goals and learning a skill. Extrinsic motivation involves external rewards such as medals, prize money, social recognition and status. To have a 'winners mind set' your goals within dressage need to be realistic taking into account your limitations. A very important aspect of the 'winners mind set' is the balance between pursuing goals and enjoyment. What you give must equal what you get back. This leads on to 'goal setting'. This is a building block for all those involved in dressage. Whether you are a coach, judge or rider you need clear and realistic goals. Ideally you should have weekly, monthly and yearly goals. Some might even have 4 yearly goals for example Olympic riders.

***'If you do not have a dressage plan chances are you will fall into someone else's plan. What is the plan? Very little. Fail to plan, you plan to fail.' Dr Lynn Pal***

Now this is where it starts to get complicated. Everyone is different and we all have different personalities. Sport psychology research has found that goal setting and the level you set the goal is dependent on your personality. Some personality types prefer a more realistic goal that is more manageable whereas other personality types prefer harder goals which are difficult to achieve. Adjusting your goals, depending on your personality type, is important as not achieving those goals or setting goals too low for your personality type may destroy your self-esteem and motivation. In addition it can lead to health complications like low mood which will have a negative impact on the rest of your life and not just dressage. One of the first things a sport psychologist will do is a full personality profile so that goals can be appropriately set.

***'Dressage will not build your character. Dressage will reveal your character'. Dr Lynn Pal***

Obviously a major part of dressage is riding in a competition. There is very little research in this area so we look to other sports to provide some insight. Sport psychology has certainly indicated that with the 'winners mind set' the only competitor you will compete against is yourself. Each time you enter the competition arena you only try to equal or beat your personal best. Sport psychologists are not pushing for you to win a class simply ride in a competition like you would at home with no external pressures. The only role of a sport psychologist is to make you perform to the best of your

ability. We cannot improve your physical riding ability; that is down to your coach. The sport psychologist will improve your focus, concentration and emotions. In some sports such as boxing adrenaline is very important. However, dressage involves delicate precision. Signs of increased arousal include clammy hands, butterflies in the stomach, frequently going to the toilet, headaches and insomnia. Interpretation of these symptoms of increased arousal by the judge/rider/coach can be attributed to either a positive or negative experience including, nerves or excitement. Whether nervous or excited both will have the same outcome on the rider, predominantly an increase in adrenaline resulting in mistakes in the horse. Adrenaline increases muscle tension, decreases attention and coordination. For the rider, too much adrenaline will affect the amount of pressure you apply using your leg, seat or hand resulting in the wrong command to the horse. It is therefore important dressage riders control their feelings and maintain normal levels of adrenaline. A sports psychologist will work alongside the rider to develop techniques to control levels of adrenaline. The next issue is anxiety. Anxiety can develop once pressure is applied to the rider, for example, needing to win a competition. Eventually if the initial pleasurable effects are less than the anxiety felt there will be a decline in performance adding even more anxiety. A role of the sport psychologist will be to identify this anxiety and develop techniques to reduce the anxiety and increase motivation/confidence. Another complication which research has identified is the 'inverted U hypothesis'. This theory suggests that arousal improves performance to an optimum point. Every rider is unique. Every rider has their own level of arousal which is needed in order for the rider to perform to their best ability. It is the role of the sport psychologist to find this level of arousal for each individual and make sure the rider is able to produce this at the correct time in a competition.

***'You cannot tell a novice horse to piaffe. You need to train it. You cannot tell yourself to be motivated or focussed. You need to train your brain.'* Dr Lynn Pal**

Psychology has identified three stages which require different skills sets. Stage 1 is the everyday training of the rider and horse. The skills are called basic skills. It includes having a good team around you. It is very important to remember that dressage is not just a partnership but a team sport including coaches, farriers, vets, grooms, physiotherapists and saddlers to name a few. There needs to be trust and cohesion within your team. If you are not happy with your team, change the team. The other skills required have already been discussed including goal setting, motivation, confidence and attitude. The timeframe for this stage could be years. Stage 2 is the preparatory stage. This is where skills are developed to prepare the rider immediately before they enter the warm up arena. The timeframe for this stage could range from one hour to several hours. Each rider is individual so the skills employed will be unique and dependent on personality and results from the above inverted U hypothesis. Examples can include mental imagery and relaxation/breathing techniques. Stage 3 is the warm up and the actual competition. These skills are known as performance skills and this is where we teach the rider techniques to increase their focus and concentration, manage their emotions and reduce anxiety whilst still maintaining appropriate arousal levels. The timeframe for this stage is usually less than one hour.

***'Most can dream of winning. Few have the dedication to win.'* Dr Lynn Pal**

Breathing seems to receive a lot of attention in the dressage field. In psychology breathing is not a theory. One use for breathing is as a relaxation tool providing the person with 'time out' from their thoughts. As already mentioned it can be used during the preparatory stage. Many coaches during a

lesson will tell a rider to breathe and focus on breathing whilst riding a movement. This in fact may not help the situation. If the rider has increased/decreased their breathing it is simply a symptom of our innate 'flight and fight' response and increased anxiety/arousal. Altered breathing is not causing the 'flight and fight' response, it is a consequence. By asking the rider to relax they will not focus on riding the horse and the experience will become worse. Riders shouldn't ride down the centre line focussing on their breathing, instead they should go down the centre line focussing on riding their horse. Of course, if occasionally the rider/horse is struggling with a movement in a lesson it is a very good idea for the coach to suggest the rider walks around the arena and has sometime out for 5 to 10 minutes. During this time the rider can focus on their breathing. If the rider continues to have breathing issues whilst riding or during lessons, the way to prevent the 'fight and flight' response is to get help from a qualified person as it can easily be treated.

***'The whip can be an effective training tool if used at the correct time and with the correct pressure. This is the same when focussing on your breathing.'* Dr Lynn Pal**

I will now discuss 'riders block' or 'competition nerves' or as I will refer to it psychological anxiety. Symptoms include increased heart rate, sensation of a thumping heart 'palpitations', shaking/tremor, sweating, feeling sick 'nausea', chest pains, headaches, stomach pains, knot in the stomach, shallow fast breathing and blushing easily. You may only experience some of these symptoms. These symptoms may occur before/during competitions, before/during riding, before/during lessons, or even thinking about riding or thinking about your horse, to name a few. Riders can develop these symptoms following an injury to horse/rider, bad performance, or knowing their performance should have been better. This psychological anxiety can easily be treated, however before treatment can commence the cause needs to be identified. It is the role of a trained professional to find the cause and treat. If you continue to ride and ignore the problem it will not go away. Instead it will be stored in the brain subconsciously. This stored information can be triggered by smells, sights and sounds leading to unexpected psychological anxiety occurring at any time and in any situation. If you do not treat this anxiety it may have the same effect as you riding your horse when you have broken your arm. You may be lucky and still win classes but you will start to lose the enjoyment of riding and the anxiety will increase which will affect your motivation and confidence. You will not ride to the best of your ability.

***'One reason dressage is so psychologically demanding is your team mate can turn into a half ton unpredictable monster'. Dr Lynn Pal***

I will now move on to discuss the role of psychology in coaching. The Olympics is always a good event for sport psychology research. One of the main points to be raised from the 2016 Olympics was the lack of access sports psychologists had to witness and engage in coach/athlete sessions. I am not referring to equestrian but other sports. Unfortunately there was no research on the equestrian team. It seems coaches are not willing to have support and advice from sport psychologists. One of the reasons provided for this lack of support is coaches can sometimes use unethical training methods. I think we can learn from this and certainly we should be using psychology in more training sessions within Scotland and UK.

***'In sports 30% is physical skill and 70% mental skill. How much practice do you do off the horse?' Dr Lynn Pal***

As a psychologist I would say if a client approached me and told me they had located a coach, contacted that coach, arranged a suitable time for a lesson, they arrived for the lesson in good time, they tacked up their horse, entered the riding arena and paid for the lesson; I would certainly say there are no motivational issues with the rider. Riders who are riding their horses weekly, mucking out, tacking up, paying for lessons, having lessons and going to competitions do not have motivational issues. I would further add that every coach is required to work with a rider to maintain their motivation. If a rider is less motivated at the end of a lesson than they were at the beginning they need to change their coach. Confidence is a completely different situation. Psychology has demonstrated in order to learn a skill or perform to your best ability you need to be confident. It is the role of the coach to make sure you are confident. Even if you are unable to perform a movement you should still be confident you are working towards that goal. As with motivation all coaches should in still confidence in each rider in every lesson. A sports psychologist can become involved and use techniques to help improve confidence during coaching sessions.

***'Need some confidence? Close your eyes and visualise the best dressage rider you can possibly be. Open your eyes and work towards that goal.'* Dr Lynn Pal**

The interaction between coaches and riders is so important for the rider to progress to their goal. Again the interaction becomes complicated as the coach will have their own personality which is highly likely to be different to the rider. Consequently this will mean the coaches methods will be based on their own personal preferences and abilities. For the rider to achieve their best the coaching needs to be suited to the rider's personality and goals. This means the coach needs to be aware of the rider's goals and personality. Unfortunately in most sports the coaches usually adopt one method. More research is needed investigating this interaction in dressage. A psychologist is able to explain to the coach the personality of the rider.

***'Competitive dressage does not occur in a 20\*40 or 20\*60 arena, it is played in a 5 inch space. This space can be found between your ears.'* Dr Lynn Pal**

Society is certainly moving forwards in accepting the fact positive feedback is required to motivate and negative feedback should be limited. Unfortunately in psychology feedback is more complicated. Research has shown that if someone is a novice and learning a skill, feedback should certainly be positive however if the rider is skilled and has knowledge providing positive feedback can reduce motivation and discourage. With the skilled rider, they need negative feedback but this feedback needs to be constructive. We need to remember the skilled rider is aware of what they did and did not do, so simply telling them they did not do it is not helpful. An example would be rather than saying 'you cannot do x', the feedback needs to be, 'x will happen once y and z improve'. I certainly believe this is exactly what British Dressage is encouraging in judges training. Coaches need to adapt their feedback to the skill of the rider.

***'Dressage judges/trainers need to be careful when using negative language. The impact on the rider can be huge psychologically.'* Dr Lynn Pal**

This now moves me to the next point concerning lessons. Dressage has not moved forwards in this area in comparison to other sports. Psychology has found that feedback is most effective several days after the lesson. Sports like cricket, golf and gymnastics will video the lesson. The feedback session will occur at another scheduled time. During this feedback session, the video will be played

but not just in real time but slow motion as well as from different angles. The coach will explain and show the athlete the issues during this separate feedback session. The athlete is able to accept weaknesses and together with the coach they will come up with a plan to deal with them. At the moment, if you have a riding lesson with a coach it will physically train you and the horse; however it will not train your brain. In the lesson there are too many stimuli and the brain cannot process it all. One way you can train your brain is to video the lesson yourself and watch it back several times whilst taking notes. In addition, it is worth watching that video back just before your next lesson and asking your instructor to clarify any areas you do not understand at the next lesson.

***'The only person you compete against is yourself. Check the scoreboard after you are finished.'* Dr Lynn Pal**

No article on dressage would be complete without mentioning dressage judges. There are presently approximately 1000 registered judges and 300 trainees within the UK. As judging is voluntary we need to take care when suggesting changes to training, or updating training, as this in itself could result in a lack of motivation and a loss of good judges. I have read all of the studies that have been published concerning dressage judges and cognitive bias. Whilst these studies do provide some insight, we must accept that such studies lack scientific rigour and there are several reliability and validity issues including difficulty assessing the accuracy of these results. It may not seem it when riding down the centre line but judges are in fact human. Just like riders make errors, judges will make errors. Some of the mistakes made they will not even be aware of and some errors are more obvious with insight. In fact, psychology has found a total of 27 different types of cognitive error. This means that in a test a judge could make several of these. I will attempt to explain one of these cognitive errors. Watching a dressage test causes information overload to the brain. Therefore the brain will only process as much information as possible. If there are any gaps due to the judge losing focus, the brain will fill it using information from memory. For example a known rider/horse enters the arena. During the test the judge misses a movement. Their brain will locate previous information on that rider/horse subsequently a mark/comment will be based on the rider/horses previous information stored in the judges memory. If an unknown rider/horse comes into the arena the brain will find stored information as close to the rider/horse as possible. The judge will be completely unaware this has happened. There is no doubt a judge will make such errors, I think the more important question is how often and how can we minimise them. Psychology has demonstrated maximum concentration and focus in any one period is between 15-20 minutes. After this period cognitive errors will increase significantly. A possible solution would be that judges have blocks of a maximum of 4 riders at any one time followed by a break. On a much lighter note, there is a very famous study investigating court room judges and lunch. The results of the study revealed that court room judges are harsher and more strict just before lunch and more lenient and forgiving after lunch. Clearly judges need to eat lunch!

***'Dark chocolate or a handful of almonds can provide 20 minutes of glucose to the brain.'* Dr Lynn Pal**

The main issue psychology has with judging and dressage is the subjective nature. Most sports are moving away from basing the entire score on subjective cognitive processes as they cannot be relied upon. This is exactly why eyewitness testimony alone will not convict someone in court of law. Instead similar sports to dressage are using technology and many sports now allow the judge time to

replay a video watching it again in slow motion using different angles. This might someday be the future for dressage. Psychology can help judges to minimise as many of the 27 cognitive biases as possible and provide techniques to improve their focus and concentration as well as exercises for them to become aware of when they make some of these cognitive biases. I will extend this discussion on judges in a follow up article as there are other studies I would like to discuss.

***'It is easy for a dressage judge to make a mistake. Being aware of the mistake is difficult. Having the courage to acknowledge the mistake is harder. Rectifying the mistake is brave'. Dr Lynn Pal***

I will now explain some of the techniques that psychologists will use to help dressage riders/coaches/trainers. The first one is visualisation which trains the right side of the brain. Visualisation is common practice in sports and men find it easier than women, as men prefer to use the right side of the brain. Visualisation is not simply closing your eyes and riding a test. It is certainly more complicated than that to improve your focus and concentration. Closing your eyes and visualising a test will improve your confidence. Studies investigating playing the piano found activity levels in the brain, using a type of brain scan, were the same for those that visually played the piano and for those that physically played the piano. The results suggest visualisation activates similar areas of the brain as physical activity. We certainly need more research on the affects of visualisation in dressage.

***'Professional and amateur dressage riders, trainers, and judges are not crazy seeking sport psychology help they are crazy not to'. Dr Lynn Pal***

Another technique which is popular is called 'positive self talk'. It involves coming up with statements that you can refer to when you are going through a stressful or difficult time. It is sometimes referred to as the optimistic voice in your head that always looks on the bright side. An example would be 'even though I could not do a flying change today, tomorrow is a new day'. Research into positive self talk has found that it has positive effects in the laboratory setting but unfortunately has been unsuccessful in making a difference to results in real life competitive situations. Therefore I would say positive self talk will help with confidence and we need further research in this area.

***'Most would agree that perfection is impossible. Luckily you only need excellent to get a 10. Stay positive in your dressage training'. Dr Lynn Pal***

A more specific therapy psychologist use is cognitive behavioural therapy (CBT). This therapy has been used in the clinical setting for decades. It has been widely used to treat many health related problems. It has been a good therapy to help anxiety related disorders and depression. It is known as a talking therapy that will help you to manage your problems by changing the way you think and behave. The therapist will break down your problems into small parts and provide help to deal with each small part. Unfortunately as with most therapies CBT may not work on everyone. Another form of CBT is called acceptance and commitment therapy (ACT) which is similar but it allows people to open up to unpleasant feelings and learn not to overreact to them. It increases psychological flexibility. The therapy allows you to accept negative thoughts. The therapy does not stop unwanted thoughts instead it encourages healthy contact with thoughts and the reconnection of the 'here and now' theory. ACT adopts the mindfulness therapy. Mindfulness therapy is currently being used in dressage with very well-known riders. It makes you stop and take a look around at your life and the

world. It allows you to connect back to your body, sensations, and how your mind works. You can find a qualified professional in your local NHS or find a local counsellor.

***'Most can dream of winning. Few have the dedication to prepare to win.'* Dr Lynn Pal**

My advice as a psychologist to all of you would be if you are struggling with anxiety it is essential you go and seek help from a professional. Unfortunately most coaches are not qualified to help with anxiety. Equally by asking them to help you, you are putting added stress on them. It is also unethical for a coach to give a lesson to someone that is showing signs of anxiety. If you broke your arm you would not continue riding you would go to a qualified person, well it is the same with anxiety. If you are not getting the most out of your lessons or competitions because of anxiety related issues what is the point in continuing and paying for it. Sport psychology research has shown if you get the correct treatment, you will then be unstoppable.

***'Think of all the time you have spent training yourself. Think of all the time you have spent training your horse. How much time do you think you need to train your brain?'* Dr Lynn Pal**

We now need to acknowledge that the majority of dressage riders/judges/coaches are females. This is very important as most information we have concerning sport psychology is based on men. Psychological research has clearly demonstrated men and women differ cognitively so what works for men may not be the best option for women. Therefore we certainly need more research firstly investigating sport psychology methods for females per se and secondly investigating specific techniques for dressage riders/judges/coaches. At the moment I feel I have questioned far too many aspects of dressage and have very little answers. The field of dressage in psychology is new and research unfortunately takes decades and not years. I have spent over 15 years in psychological research and certainly will continue to learn every day. If we continue with the way things are I fear we will lose many talented judges, trainers and riders due to a lack of confidence, stress and anxiety.

***'Judges, coaches and riders are you aware when you are focussed and performing at your best?'* Dr Lynn Pal**

Now to finish on a positive aspect. Dressage is a popular healthy discipline involving all ages where men compete equally against women. This is something we should be very proud of. It includes a range of skills ranging from amateur up to international level. Whether we are owners, riders, family members, parents, trainers, judges and volunteers we are all passionate about our beloved sport. Yes there are negative aspects to the sport which together we can improve. I genuinely believe our knowledge of psychology will help our sport to be even better and more appealing to the masses if we work together. We need to remember the positive aspects of dressage and work on the negatives. I hope I have helped you to understand that sport psychology is not simply about reading a motivational quote and doing some breathing exercises.

***'Sport psychology in dressage is not black and white.'* Dr Lynn Pal**

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