



DEMYSTIFYING EQUITATION SCIENCE

How Equitation Science can give you new insights into how to ride and train your horse.

As a vet, a scientist and a competitive rider I was interested in finding out about Equitation Science. The mission statement of ISES (International Society for Equitation Science) is to promote and encourage the application of objective research and advanced practice which will ultimately improve the welfare of horses in their associations with humans. So in simple terms Equitation Science involves using scientific principles to study horse training, as well as to understand the scientific basis of horse training. At the first ISES (International Society for Equitation Science) meeting in Australia I was exposed to the concepts of negative and positive reinforcement, and how these work as training aids. I have found that understanding and thinking about these concepts has given me new insights in how to ride and train horses.

Positive reinforcement is giving the animal a reward when it does the right thing, very easy with a dog; a pat, saying 'good dog' in a warm voice and best of all a treat are all forms of positive reinforcement. In the world of dog training positive reinforcement is well recognized as the best training tool, you can get a dog to do almost anything for a liver treat! For some reason these concepts have not really gone across to the horse training world. Some very good horse trainers understand these concepts. Andrew McLean has based his training program on this theory and has studied how horses learn (www.aebc.com.au). Steve Jeffries (who can seemingly get horses to do anything!) he talks about pressure and release which are the fundamentals of negative reinforcement. Horse training is different to dog training because we have to ride the horse. Food rewards work really well for training horses to do tricks on the ground but are not much use when you are riding, as you have to stop, lean over and feed the horse a treat, not so easy when you are cantering! The main tools for training a ridden horse are the bit, the pressure of the leg or spurs and the whip. All of these tools are forms of negative reinforcement. The reward with negative reinforcement is removing the pressure. So the horse is rewarded when you release or soften the reins and when you stop tapping with the whip or stop using the leg or spurs, this is the reward just like a dog is rewarded with a food reward. To get a horse to go forward you kick and when the horse moves forward you stop kicking. The horse learns to go forward from leg pressure. To get a horse to stop you pull the reins and the horse stops. The horse learns to stop from pressure on the bit. The key is timing the release, if you can stop leg pressure (squeezing or kicking) as soon as the horse starts to move then you can train the horse to move forward to light aids. Similarly if you release as soon as the horse stops you can train the horse to stop to a very light rein aid. You can then use the rein aid as an aid for improving the horses frame to get the horse to go 'on the bit' without pulling on the bit. The horse will then travel happily forward into a light rein contact. This all sounds very basic and obvious but you think, how many horse trainers have explained this basic concept to you? I would think not many! No one explained it to me in the past. Although it seems obvious and we all know how to ride, do you really think about how your aids actually train the horse? Is it the basis for your training?



We must remember that horses are really not that smart. Horses are herbivores, they eat grass, so all they have to learn to do is to put their head down to eat, and their reaction to danger is flight or fright. We all know how good horses are at running away and kicking! So when training a horse it really helps to keep things simple. Humans by contrast are very smart and can think of many things at once, unfortunately we often think the horse should 'understand' what we are asking. When you are riding it is a good idea to keep in mind how the horse might be reacting to your aids. Did you release the aids to reward the horse for doing the movement correctly?

I think it is worthwhile for all riders and trainers to think about how they use their aids and think about whether they are giving the horse mixed signals. If you apply a lot of rein pressure (stop aid) and a lot of leg pressure (go aid) at the same time might this be confusing for the horse? Do you think it might be less confusing if you very carefully time your aids so you apply the rein aid to improve the horses 'roundness' separate from the go aid? Likely this would be a 'half-halt', we all know we do half-halts to slow and steady and prepare the horse, and likely you can do this slowing rein aid in a single stride without any forward driving aid, so take the leg off for this stride. Then the next stride you can move the horse forward with the leg aid and a very light hand. Now doesn't this sound like what you read about how Franz Maringer used to train? Horses going forward lightly, into a light rein contact.

An understanding of the concepts of positive and negative reinforcement, what they are and how they relate to horse training can help anyone improve their horse training ability. If everyone understands these concepts and thinks about how they use their aids as forms of negative reinforcement, this will benefit both the horse, as it will be easier for the horse to understand the aids, and benefit the rider as the horse will respond better. We will all become better horse trainers by thinking about how are aids are interpreted by our horses and question whether we are really being clear in how we ask our horses to learn new things.

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