Throughout history the use of horses has mirrored changes in human culture. They have been used as food resource, for military, transport and agricultural purposes (Clutton-Brock, 1992). For the general population keeping and training horses for leisure is a relatively new development. Nevertheless, in Europe alone, an industry estimated to be worth tens of billions of euros has developed (Liljenstolpe C., 2009).

As the extent of our interaction with horses has grown so have concerns about welfare during training (Hanggi, E. 2005) and performance. As a consequence of this an evidence-based discipline “Equitation science” is emerging (Mc Greevy, 2006) to address both physical and mental aspects of welfare alongside efficacy of training and performance. Examples include the head/neck position in dressage and the age at which a horse’s “riding career” should begin.

There is an ever-increasing amount of research providing the evidence for a wide range of scientific enquiry causing us to reassess traditional approaches and commonly held beliefs. In respect of our examples critique has included hyperflexion (Rollkür) of the head-neck position in dressage (Kienapfel 2014, von Borstel et al. 2009, van Dierendonck, M. et al. 2012 ) and the fact that horses are often put into training at the age of 2 years – despite the fact that they are not properly developed physically until at least the age of six (Bennett, D., 2008). As a result of the increase in scientific enquiry, progress has been made in evaluating welfare objectively. For example, the ability to measure rein pressure, therefore improving the riders’ awareness of both the subtleties and effectiveness of their communication with their horse and the implications of their behaviour on the horse’s welfare (Warren_Smith et al., 2006, Clayton et al., 2003).

Assessing the mental state of horses is complex. Research aims to find some objective parameters and stress responses are mostly monitored through heart rate, heart rate variation (Rietmann et al., 2004) and cortisol levels. However, studying body language might be a more accurate way of assessing the emotional state of an animal, but without validation it is prone to misinterpretation. A recent advance in this area is the Equine Facial Action Coding System (Wathan et al., 2015).
Although, when assessing training methods, one should consider their efficiency, the animal’s perception and emotional state should also be considered. These are not unrelated subjects and learning should be made as easy and pleasurable as possible. However, much of what is involved in contemporary horse training is based on tradition rather than scientific understanding of the underlying learning process. Furthermore, in vogue methods often fly in the face of the facts, as we know them. For example, training based on “natural horsemanship” emphasises the necessity of the trainer becoming the horse’s leader by asserting the former’s higher rank or dominance status over the horse (Miller and Lamb, 2005). For many trainers following this methodology, round pen training is the principle means by which “leadership” can be achieved (Monty Roberts, 1997). However, studies of equine ethology and specific elements of round pen training do not support natural horsemanship interpretations of the training outcomes (Henshall, C. McGreevy P.D., 2014).

In horse training, especially behavioural therapy, the focus should be on the animals’ emotional state. Emotions are the key motivator for behaviour and all vertebrates appear to have the capacity for primal affective feelings (Panksepp, J, 2011) and seek pleasant emotions and try to avoid unpleasant emotions. The conscious subjective experience of emotions is what we are ultimately concerned with when considering animal welfare (Mendl, M. et al., 2010). Mendl’s conceptual framework outlines how an animal’s general mood can be influenced positively or negatively through environment and experience. In effect this means a horse routinely experiencing unpleasant training methods will develop a more general negative emotional state, which in turn might cause chronic stress. Conversely the use of positive reinforcement/ pleasant training methods can improve the horse’s general capacity for coping.

Even if it is widely accepted that horses should not be trained by causing fear or pain, the use of positive reinforcement, especially the use of food as reward, causes a lot of subjective critical comment. Conversely there is an increasing volume of objective research supporting the value of positive reinforcement in training.

Research has shown that the potential problems of begging and frustration, often cited by detractors of this approach, can be avoided by the informed use of the principles of learning theory. Especially the use of a secondary reinforcer has shown to be beneficial (Huckenhull J. and Creighton, M., 2010).

Several studies have shown that negative and positive reinforcement are equally efficient as means of achieving training objectives, but the main difference lies in the emotional state of the animal undergoing training. Innes and McBride (2008) showed that using positive reinforcement horses were less fearful and more motivated than those trained using negative reinforcement with obvious implications for their welfare and performance potential. The application of positive reinforcement has also been shown to have a long-term positive effect on the horses’ perception of humans (Sankey, C. et al. 2010) and to be an excellent tool for improving a horses learning abilities and cognitive skills.
This article would not be complete without recognising that when working with horses safety is of outmost importance. To this end, owner’s/trainers/riders often focus on “obedience” and correcting unwanted behaviour. But it is beneficial to use a proactive rather than reactive approach. Teaching the horse how we wish it to behave in different circumstances and rewarding the behaviour we want avoids the development of problems and optimises the potential for good training, safety and welfare outcomes.

References


Henshall, C. McGreevy P.D. (2014). The role of ethology in round pen horse training – a review-. http://dx.doi.org/10.1016/j.applanim.2014.03.004.


