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# Time to Remove the Blinkers of Behaviourist Training?

by

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(A preliminary draft designed to elicit debate for further refinement in the future. Feedback welcome!)

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Here is a question that might cause you to pause: If you consider your interaction with your horse outside of everyday care, how much of that time involves some type of training or the use of the results of that training? Try and express it as a percentage of the total time that you spend interacting with your horse when you are not caring for them. Is the figure that you come up with quite or very high? The chances are that the type of training involved is habituation and negative reinforcement (e.g. yielding to pressure as in dressage, jumping, cross-country, “natural horsemanship”, etc.), positive reinforcement (e.g. rewarding desirable behaviour as in clicker training, for instance) or a combination of both. In other words, your training would be behaviourist by nature but you probably already know this. What may surprise you is the amount of time you engage in behaviourist training with your horse. And what may surprise you even more to know is that behaviourist training is just one of the many avenues through which horses and humans are able to interact with each other. But how many of us are aware that behaviourist training is not only exceedingly limited but also even destructive?

## RECENT EXPERIENCES

This is a question that I asked myself following two very recent experiences. The first was a debate in various Facebook horse groups after I posted an excerpt from my book, *When Horses Speak and Humans Listen* (see [www.horsesandhumans.com/mainsite/whsahl.htm](http://www.horsesandhumans.com/mainsite/whsahl.htm) for more information), in which I asked whether the use of negative reinforcement was not essentially a confession of impotence before the horse. I was astounded by the number of humans who are agonising about whether they are using positive or negative reinforcement with their horse. Part of me wanted to ask, “But shouldn’t you be more concerned that you may be interacting with your horse solely or largely through behaviourist training, denying you access to the other numerous avenues open to both of you?”

The second experience was a particularly sad one. I found myself blocking someone on Facebook Messenger (the very first time that I have ever done this) because they had begun to send me offensive messages. This was a particularly painful thing to do, because the human concerned is someone I admire for their commitment to the well-being of the horse in terms of the latter’s care and tuition, and their insistence that any training be based on positive reinforcement (which is arguably a form of operant conditioning that is infinitely preferable to negative reinforcement and verifiably more effective). My “crime” was to question what seemed to me to be their insistence on channelling the bulk if not all of the interaction between horse and human through behaviourist training, their almost fanatical belief in the infallibility of science and their utter intolerance of any other approach.

## HABITUATION

A form of non-associative behaviourist learning (no association of a stimulus and a response is involved), habituation is the simplest form of learning in the horse. As you are probably aware, a horse usually prefers to avoid any unfamiliar object. However, once they are satisfied that it is safer than what they had originally surmised, their curiosity gets the better of them and they are likely to start investigating it.

In fact, horses are such curious creatures, that I am constantly amazed why humans fail to engage their horse's curiosity in the process of learning or do so far less than they could. Once a horse has investigated an unfamiliar object, it ceases to become a stimulus in the sense that the horse becomes used to its presence and ceases to respond to it. This process is referred to as habituation or so the theory goes.

Instead of utilising this form of learning creatively, we humans prefer to apply the process of habituation to desensitise our horses. The aim is to create a "bombproof" horse and the process involved entails the destruction of much of the essence of what makes a horse the supremely sensitive creature that they are. If we are looking for bombproof, why not settle for a bicycle? After all, is a bicycle not much cheaper to purchase, maintain and store, and is it not more predictable and much less dangerous?

One commentator that I came across cites a study which suggests that habituation can also have the effect of heightening a horse's sensitivity and another which concluded that it is the means to achieving lightness while riding and responsiveness to the aids. Of course, the notion of habituation being responsible for sensitisation is a contradiction in terms. After all, it is in the nature of habituation to enable the horse to grow accustomed to a phenomenon and this by definition implies that they become less sensitive to it. What we see in lightness and responsiveness is not sensitisation but is quite probably avoidance (however, see the caveat in the section entitled "The human factor" below). The horse may respond with growing promptness (even to the point of anticipation) for no other reason than that they wish to avoid the unpleasant experience which negative reinforcement creates when used as a training method and which the horse knows (through reinforcement and repetition) will occur with greater intensity if they do not respond promptly.

## OPERANT CONDITIONING

Essentially, operant conditioning is a form of associative learning (a stimulus is associated with a response) and, as such, also constitutes part of behaviourist learning theory. According to this theory, horses may learn new behaviour if they are rewarded for desired behaviour or punished for unacceptable behaviour.

A reward may take the form of a pleasant experience on its own to encourage the replication of the behaviour rewarded, such as a treat, or one which involves relief from an unpleasant experience, for example, the application of pressure followed by relief from that pressure when the desired behaviour is exhibited. In the former case we refer to positive reinforcement and in the latter negative reinforcement. The theory is that the horse learns the new behaviour through reinforcement and replication, arguably to the point of avoidance in the case of negative reinforcement and anticipation in the case of positive reinforcement.

Studies have shown that, when used as an approach to training, positive reinforcement is generally not only more effective but also does not pose as much an obstacle to the

development of a close relationship between horse and human in the way that negative reinforcement does. After all, how many horses do you know that relish spending time with a human who constantly subjects them to unpleasant experiences (e.g. the pressure of negative reinforcement in yielding to pressure)?

Punishment involves forcing the horse to undergo an unpleasant experience. Such an experience may take the form of the application of an unpleasant stimulus, such as a shock (referred to as “positive punishment”, an oxymoron to many) or the withdrawal of a pleasant stimulus, such as food (“negative punishment”), in order to punish unwanted behaviour. Even the behaviourists in the scientific community acknowledge that, when used as a form of training, punishment is the least effective form. And yet, driving horses away from their feed features in at least two relatively well-known “horse-friendly” training programmes that I am aware of.

### **“SCIENCE-BASED” OR “NATURAL”**

There are those who claim that, when used as an approach to training, behaviourist learning is science-based. They tend to be humans who have their roots firmly in a behaviourist interpretation of the ways in which horses learn but who approach it from the perspective of the human (training) rather than that of the horse (learning). They employ habituation and negative or positive reinforcement or a combination of both.

Then there are those who only use habituation and the negative reinforcement variant of operant conditioning for training purposes, arguing that such behaviourist training is a natural phenomenon based on a presumed hierarchy of dominance in herds of horses in the wild. This is the approach adopted by “natural horsemanship” trainers.

### **THE MYTH OF “NATURAL”**

The overriding conclusion drawn in the course of a growing number of rigorous equine ethology studies reveals that:

1. the existence of a hierarchy of dominance in horses in the wild is an elaborate myth and has no basis in fact; and
2. while horses in the wild may learn through habituation, positive or negative enforcement or a combination of both, there are relatively few instances, if any, where they employ it as a training method.

Of course, sceptics may want to draw attention to a stallion’s use of what would appear to be aggressive herding tactics when protecting his band from a predator or competitor. What they may not be aware of is that by and large the horses that the stallion rounds up have chosen to be with that stallion’s band and also share the stallion’s desire not to end up in the clutches of a predator or competitor. As such, they are ready partners to the stallion’s endeavours. However, if a mare chooses to leave the band, there is little that the stallion can do about this and, according to research conducted by the equine ethologist, Lucy Rees, as many as 30% actually do.

Then again sceptics may wish to point out that a mare also employs agonistic (“aggressive”) behaviour when correcting her foal. While this is true, we may also wish to bear in mind that studies of horses in the wild suggests that the ratio of aggressive to affiliative (“friendly”) behaviour on the part of those horses is approximately 20% to 80%, indicating that feral horses are by far more friendly in their relations with one another than domestic horses. In

addition, Lucy Rees cites a study conducted over a fortnight, which revealed that 52% of agonistic behaviour on the part of any of the horses comprising a feral band towards another member of that band involved a mare rejecting the advances of a stallion when not in season and the next highest category (13%) involved a mare responding to a bachelor or a colt in her own band. The next highest category (5%) involved a mare discouraging a weaned youngster from trying to suckle simultaneously with a sibling. The remaining categories (only one of 4%, the rest less) featured mares displaying agonistic behaviour towards foals of varying ages, their own and others, and other mares. Overall though, the members of a band are highly sociable and friendly towards each other, the main reason being that they do not have to compete for resources.

### **THE PRETENSIONS OF “SCIENCE-BASED”**

There is a tendency amongst humans, especially in the West, to claim that a particular approach has its basis in science and then to assume that such a statement is conclusive enough in itself to demonstrate that it is entirely appropriate and correct without feeling compelled to submit evidence in support of this assertion. Usually such humans are not members of the scientific community or, if they are, do not hold any senior position within it.

Senior members of the scientific community, on the other hand, are well aware of the limitations of science and for this reason avoid adopting such a haughty, ill-considered attitude. The reason for their humility is because they are also fully aware of the limitations of science. Such limitations include the following in the context of this discussion:

1. it is perhaps educational to consider that much of what we know about behaviourist learning is drawn from experiments conducted in highly controlled conditions which do not correspond to real life situations or perhaps merely in a rudimentary way. The people who conduct such experiments isolate just those aspects which they wish to assess on an experimental basis and as far as possible exclude everything else. There is just one little problem with this approach. By doing so, one removes factors which could actually play an important role (on their own or in conjunction with others) in the process of learning in a real life situation similar to but obviously different from that of the experiment. We ignore such limitations at the expense of the horse;
2. science is unable to explain everything, indeed by far. There is a broad and growing range of phenomena for which science as yet has no explanation and, if it does, it very often takes the form of a theory that is susceptible of being disproved;
3. what is science-based one day may no longer be the next. I remember my mother taking me into a shoe shop when I was a boy. Trying on what might be my new shoes, I was often given the opportunity to view an x-ray of my feet in them using a special machine that had been installed in shoe shops around the country. At the time science deemed it safe for me to do so. Nowadays, science considers it dangerous for me to be exposed to x-rays and, if I am called upon to assist with having any of our dogs or horses x-rayed, I am required to wear a very heavy protective apron even though it is not me who is to be exposed to the x-rays directly.

In addition, there is an inherent danger of a layperson taking a scientific concept and applying it, not as an expert in the field might do, but as someone who has a limited knowledge of the concept and, possibly more importantly, the context in which it is to be used. I would argue that the use of behaviourist learning theory as an approach to training is an example of this for the reasons set out below.

## LEARNING THEORY

It is important to bear in mind, firstly, that behaviourist learning theory is not a training method. It is part of *learning* theory. It seeks to explain how behavioural learning occurs and it approaches changes in behaviour from the perspective of the creature undergoing a change in behaviour, in this case the horse. In this context, it seeks to explain how horses learn in behaviourist terms. Ultimately, it is the horse that is the author of their learning and not the human trainer and this is what *learning* theory acknowledges.

Secondly, behaviourist learning theory is part of a *theory* about learning and not an incontestable fact. As such, it is ultimately hypothetical by nature and, because it is, is capable of being disproved.

Yet, although habituation and operant conditioning are merely parts of a theory, namely, one which seeks to explain learning, many, if not most humans who train their horses using habituation and negative or positive reinforcement, or a combination of both, do so almost as though it is a training method rather than a learning theory. Consequently, there is no guarantee that what we train the horse to do is actually what the horse learns. The training of “lightness” and the achievement of avoidance instead is a classic case of this, is it not?

## CONDITIONED BEHAVIOUR

It is in the nature of behaviourist learning to produce conditioned behaviour. Studies suggest rather persuasively that positive reinforcement is significantly more capable of doing this through training than negative reinforcement. But just what is conditioned behaviour?

Behaviour is said to be conditioned if it is repeated whenever the stimulus with which it is associated is applied, the process of conditioning being facilitated with reinforcement and repetition in the case of operant conditioning. As such, a horse will produce conditioned behaviour whenever the appropriate stimulus is applied. In the case of positive reinforcement it is possible to initiate fairly complex behaviour simply by triggering it with the appropriate stimulus. In acute cases the horse has virtually no choice but to reproduce the desired behaviour whenever the stimulus is applied. We have a mare that even started to produce the desired behaviour of her own accord in order to obtain the positive reinforcement (“reward”).

What this actually means is that, when a horse produces conditioned behaviour, they may not be acting with the spontaneity one might expect of a fellow sentient being. The question then arises as to whether it is actually possible to interact spontaneously with a horse while they are producing conditioned behaviour. This in turn begs the question as to whether it is possible to enjoy a relationship and interaction with a horse which is truly authentic if the horse is incapable of being spontaneous, because they are producing conditioned behaviour at the time. After all, is spontaneity not an essential precondition for authenticity?

I find that I am also left with the following question. If learning is a cognitive process whereby a creature gains or acquires knowledge or a skill, as it is commonly understood to mean, is behaviour modification through conditioning actually a form of learning or is it not simply the mechanistic acquisition of new behaviour over which the horse has little or no control? As such, is “learning” really an appropriate description of the process of acquiring modified behaviour?

## Limited

When incorporated into a training regime on its own, behaviourist learning theory also becomes very limited in itself. It is an approach which is premised on the assumption that any learning on the part of the horse is confined to behaviour. While it is true that horses may acquire new behaviour through habituation and operant conditioning, they are not the only ways in which horses learn.

As learning theory acknowledges, horses also learn through classical conditioning (associating a secondary stimulus with the primary one, e.g. the sound of the feed room door becomes associated with the stimulus of actually feeding). In addition, horses can learn how to discriminate between stimuli and are also capable of categorisation, conceptualisation and learning to learn. Moreover, there is ample anecdotal evidence to suggest that they can also learn by observing each other.

Of course, this immediately begs a very pertinent question. If horses' learning capabilities are so extensive, why are we not utilising them? Why instead do we insist on only or predominantly employing behaviourist learning theory as an approach to training?

## DESTRUCTIVE

Not only is the use of habituation and the negative reinforcement variant of operant conditioning as an approach to training very limited, it is also destructive. How can it be destructive you might ask? After all, does it not help to calm the horse and build up their strength and constitution, helping them become a "happy athlete"?

Perhaps we should allow experts to pronounce on the matter. The equine ethologist, Lucy Rees, is not only internationally renowned in her field of study and practice but also has extensive experience of training horses in captivity. In her latest book, *Horses in Company*, she states the following based on numerous leading equine ethology studies and her own extensive work in the field with horses in the wild in a number of different countries on various continents:

Horses are naturally inquisitive and exploratory. Most domestic horses, though, have little opportunity to investigate, explore, or reach their own conclusions and decisions, for they are too restricted and controlled. Like other animals, horses learn to learn; if they are brought up in dull, unvarying environments, repeating the same mindless exercises, they have little chance to learn and do not strike us as being bright. As the Italian ethologist Francisco de Giorgio insists, limiting our training to behaviourist control techniques annihilates their cognitive abilities and their satisfaction in using them.

In addition, although not the subject of sufficiently extensive research, some anecdotal research is available to suggest that the use of habituation and/or negative reinforcement as an approach to training may also produce induced or "learned helplessness" in horses in certain circumstances. This may occur in the case of fairly extreme forms of habituation and negative reinforcement straddling conventional equestrianism and "natural horsemanship". The situations in which this may occur include "join up", "rollkur" and any system of training which forces a horse to choose one of multiple courses of action, none of which appeal to the horse, by rendering the other or all other options worse to the horse than the one which the human trainer prefers.

It might also be pertinent to direct the following question to practitioners of positive reinforcement training. While a horse produces any successfully conditioned behaviour that is

triggered, they may effectively do so involuntarily and essentially remain helpless (in the term's classic sense of unable to act without help) during that time. Is this not a form of human induced helplessness?

## **NO TRUE COMMUNICATION**

When all is said and done though, perhaps the most alarming limitation of behaviourist learning theory when used as an approach to training lies in what it has in common with all forms of behaviourist training and it is this. When training and the product of such training occurs, there is no real spontaneous communication between the sentient beings that are the horse and the human. Is not such communication replaced with human control?

Horses have acute senses. With the exception of gauging depth, their sight is far superior to that of a human. Not only can they see far better at night than we can and have a far wider range of vision, they are also capable of detecting minute movements at a distance. Their range of hearing is also more than 50% greater than that of humans, they are capable of hearing over a longer distance and they can turn their ears separately in the direction of a sound. Horses also have a highly developed sense of smell comparable to that of dogs. In addition, their sense of touch is legendary, allowing them to feel something so light that humans are incapable of detecting it. When you add all of this up, it does not take much imagination to realise that horses are capable of sensing a rider far better than the latter can sense the former and are able to discern something as subtle as a human relaxing their upper body from quite a distance away.

Yet there is more to horses' potential for communication. Just as it is possible for us to distinguish between the intent expressed in one human's gesture – of invitation, for example – from that of another because of the nature of the energy that accompanies it, so too are horses able to do this. In their case though, they can do this from a greater distance and even in the relative dark. And like us, they are able discern which gesture is genuine and which one is not, only more so because they have less ambient “noise” to contend with and because the ability to do so may be a question of life or death from their perspective.

Now add to this mix the ethologically based observation that horses are highly sociable creatures who take great pleasure in affiliative interaction with each other. Add to this their ability to form strong friendships not only with other horses but also members of other species, including cats, dogs and, yes, even humans. Then consider for a moment how much communication and interaction would be involved in such relationships in the absence of behaviourist training and imagine the possibilities.

All this potential for communication between horses and humans begs the question as to why humans on the whole seem to be more focused on the type of behavioural control which behaviourist learning theory inevitably applies when used for training purposes. Put another way, why do humans largely avoid communication with horses in favour of behaviourist training and, as such, control? Could it be that communication would demand more of us rather than of the horse as behaviourist training does? Would we not need to experience a profound transformation rather than try and impose one on the horse?

## **THE HUMAN FACTOR**

There is almost always an inherent shortcoming in a discussion involving methods and approaches in that such a debate is inevitably confined to outcomes based on the theoretical

(and hence logical) application of those methods and approaches. Of course, it is in the nature of life, with its sometimes haphazard, random and coincidental occurrences, not to be so accommodatingly logical. This is because there are so many factors at play over and above the method or approach itself, that there are usually influences at work which may exaggerate or, at the other end of the spectrum, minimise such a logical application. One of those factors and a major one at that is the human who is interacting with the horse when such a method or approach is applied.

Whether classical equestrianism, “natural horsemanship” or some other approach to training is involved, it may be observed that a particular human may apply it very differently from another. For instance, a classical master such as Nuno Oliveira, used to bring a calm, conscious energy to the dance with the horse which did not rely solely on behaviourist control techniques, such as yielding to pressure. Indeed, one could argue that his sensitivity to the horse and the persuasive energy of his being contributed more to the interaction between horse and human than a reliance on mechanistic behaviourist techniques, such as pressure and release.

A similar argument could perhaps be advanced in the case of the “natural horsemanship” practitioner, Mark Rashid. Here is a man who has learned the fine art of employing human energy through a lengthy study of and experience in a form of martial art in which the ability to absorb and redirect energy is paramount, namely aikido. This is a discipline which relies on the human’s ability to relax and calm their mind and body in highly stressful situations and to interact with others confidently and directly. Observing Rashid in action clearly reveals that, although the instruments required for pressure and release are readily available to him, he relies more on his ability to direct energy to help the horse respond to his requests.

As such, perhaps it is advisable to bear in mind that an assessment of the methods and approaches discussed here are not intended to reflect on the practitioners who employ them. For in their own way, is it not possible for a practitioner who is schooled in the art of presence, interactive communication and energy to accommodate the nature of the horse more readily than someone who avoids such methods and approaches but is not?

## **A DILEMMA**

Around the world there is a growing tide of humans who are seeking an authentic way of relating to and interacting with their horse. They are questioning conventional horsemanship’s insistence on negative reinforcement and are turning to what appear to be attractive alternatives. For instance, many humans are taking up straightness and other forms of conventional training, which are accompanied by programmes of activities embracing yoga, Tai Chi, meditation, retreats or other pursuits designed to help humans become more sensitive to their horses and the latter’s needs. Others embrace “natural horsemanship” with its progressive regime of keeping and caring for horses and its invitation to pursue a “natural” approach to horse training. All of this is frequently accompanied by talk of respect for the horse and even love. Ultimately though, when all is said and done, in many if not most cases, behaviourist training remains at the core of most horse-human interaction, doesn’t it?

This is where a dilemma may arise. On the one hand, we seek an authentic way of relating to and interacting with our horses but, on the other, we try and achieve this through behaviourist training, which by its very nature is the epitome of an approach that will prevent us from attaining the authenticity that we seek. Are we not trying to combine the incompatible? Yes, it is possible to use behaviourist training to create the illusion of authentic connection and

communication between a horse and a human. But is it not in the nature of an illusion to be utterly inauthentic?

Horses are capable of far more than behaviourist learning and their repertoire extends to relatively advanced cognition, emotions, spontaneity, communication, connection, trust, *joie de vivre*, energy and more. All of these offer avenues for sharing and interaction between horse and human, don't they? And if they do, why would any human want to confine, completely or largely, their interaction with a horse to the extremely narrow and destructive confines of behaviourist training? Is it not time to remove the blinkers of behaviourist training, so that we can finally see the horse?

*(This is a work in progress. As such, your feedback is more than welcome. You may post feedback through the Horses and Humans website ([www.horsesandhumans.com](http://www.horsesandhumans.com)), the Horses and Humans Facebook group ([www.facebook.com/groups/horsesandhumans/](http://www.facebook.com/groups/horsesandhumans/)), the Horses and Humans Publications Facebook page ([www.facebook.com/horsesandhumans](http://www.facebook.com/horsesandhumans)) or my Facebook page ([www.facebook.com/andrewglynsmail](http://www.facebook.com/andrewglynsmail)).*

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