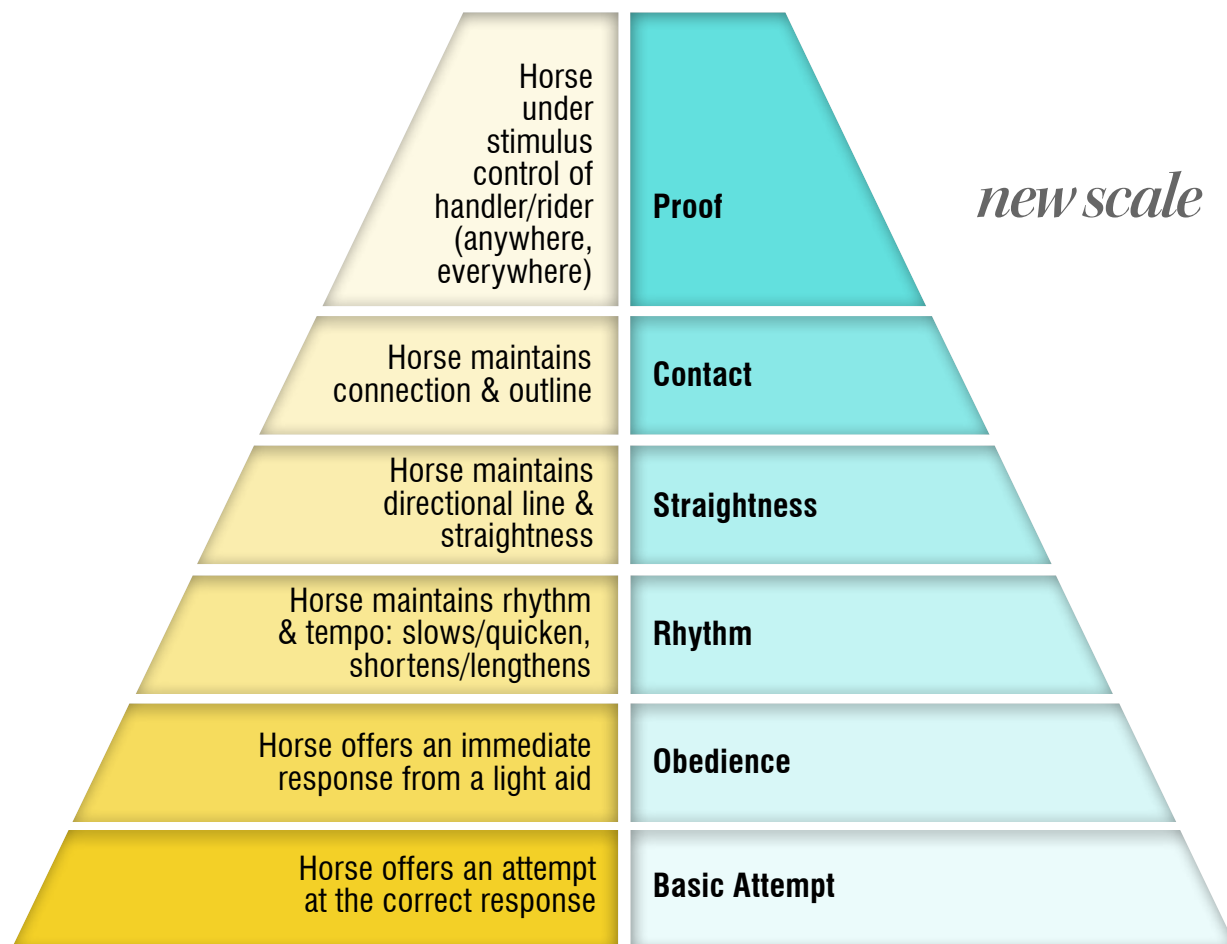


Dissecting *the* Dance



Australian scientist and horse welfare advocate
Dr. Andrew McLean on equine psychology and
 modernizing the dressage training scale.

BY HAZEL PLUMBLY



In an era when the glare of the media reaches beyond catastrophic breakdown of racing horses to other equestrian events such as endurance racing, public pressure is building alongside growing intolerance of animal abuse and questionable training practices. “If we use animals for sport, they have certain rights,” says rider, scientist, and horse welfare advocate Dr. Andrew McLean. “The right to not be in pain, not suffering and not afraid. All horse sport is under the spotlight and this welfare philosophy should be the guiding tenet for all riders and trainers.”

HUMANE TRAINING AND EQUINE LEARNING THEORY

With a PhD in horse cognition and learning, McLean’s goal is to use equine learning theory to clarify horse training and lift its veil of mystery for amateur and professional riders. “When people really understand about learning theory, they begin to understand they can make the horse’s welfare a lot worse, or a lot better. Sports people have to be particularly aware of this, because the goals in sport can overshadow, to some extent, the motivation for good ethics. But once you get trainers to really understand the theory, you find good ones do it, but they don’t know it!”

McLean’s fascination with equine psychology marked the end of his competitive riding career and launched him towards his PhD. To him, it’s clear the mental health of the ridden horse is inextricably linked to their training experience and

handling/riding methods used by humans.

“The animal needs to believe that he is in control of his world and he can ‘switch off’ things that cause him to experience aversion,” says McLean. “Language and clarity make the human world predictable.” Learning theory-based horse training is the language that clarifies the human interface for the horse, reducing the equine anxiety created by not understanding what is expected of them.

McLean has spent decades dissecting the waltz of dressage in an effort to make humane training easily understood. “Every single transition that is correct in rhythm and structure – this is part of my research – flows in three beats. Three beats translates as three steps of the forelegs in the walk and trot and three strides in the canter and gallop. Having a transition structure like this turns actions into habits because of the consistency. By the third step or stride, the transition is completed and the aid softened. This precise structure facilitates the development of habits, making horses very light to the aids because of the short time between the light aid and the softening of pressure. Three beats makes visibly smooth transitions that are really beautiful; it’s music ... it flows!”

McLean has even put the nebulous concept of ‘feel’ under the microscope. “Aids only work on swing phases of the limbs, so learning the use of the aids on the swing phase during these three beats teaches riders ‘feel’ and this facilitates



Will pressure to adhere to essential welfare principles shape how we train and even judge dressage?

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mains’ – ‘hands without legs, legs without hands.’ McLean agrees. “It’s definitely possible to get horses to the highest level of training in the world by just turning your training into a flow like a symphony, but where there are just single notes, no chords!”

But what causes horses to respond in a way they shouldn’t? McLean believes it is frequently confusion caused by conflicting aids. Speaking about the complexity of aids given simultaneously, he comments “To me, it’s a bit of a no-brainer. Dressage trainers talk about how the aids are like having a conversation, yet no human language ever piles multiple words up on top of one another! It’s always a flow ... words are incomprehensible if they are spouted out at the same moment, and the same is true for the aids.”

Why are these things important? Because McLean has highlighted in his research that horses have cognitive limitations that many of us don’t like to admit. This leads some riders to expect horses to understand what is asked of them despite conflicting or obscure aids. Yet equines also have some strong learning capabilities that can overcome their cognitive differences as well as their genetic and hardwired flight instincts – the very ones that make them, as McLean notes “... the most dangerous animal in the Western world.”

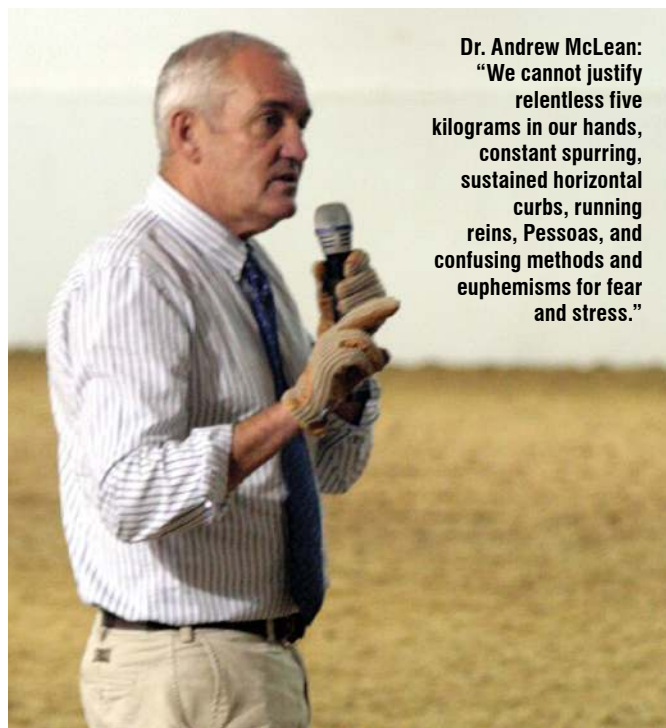
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the most rapid transfer to the seat ‘feel.’ It enables the true practice of dressage where the horse is free and supple and can use and develop his own balance.”

In the world of dressage, change can be slow. “The more we understand horse psychology and the processes of training, the more we realize we could do so much better, not just for [horse] welfare, which is my main motivation ... but also for improving performances.” he says. “Tradition can take us so far, but there are quite a few pitfalls of tradition. One of them is the way we understand what is going on in the horse’s head.” McLean picked up this meaty bone when completing his doctorate and has been gnawing on it ever since.

WAS BAUCHER ON THE RIGHT LEAD?

Turns out it’s quite an old bone to pick. Consider the innovations of maligned French riding master of the 1800s, François Baucher. While written off and named ‘the grave digger of dressage’ by German masters of the time, McLean frequently refers to Baucher’s later work. Baucher’s simply-put yet lasting tenet was ‘Mains sans jambes, jambes sans



Dr. Andrew McLean:
“We cannot justify relentless five kilograms in our hands, constant spurring, sustained horizontal curbs, running reins, Pessos, and confusing methods and euphemisms for fear and stress.”

JAMES PARDON PHOTO

Humane Training at Home



Dr. McLean working with a young horse to reinstall the 'stop' aids from the ground during a clinic in BC. Such groundwork would proceed or reinforce the work under saddle.

How do McLean's theories translate to schooling in your backyard arena? Remember these three points:

1. Get the correct response at the walk; the same response at other gaits will follow.
2. 'Three' is the magic number in all transitions (halt to walk in three steps/beats and vice versa).
3. Timing of aids means 'feel' for where the horse's legs are from the saddle. The horse's legs can only be influenced by aids while in the air (swing phase), not while on the ground (stance phase).

START SIMPLY

For example, reinstalling a light 'stop' aid replaces the need to dominate the horse using the 'horizontal curbs' to which McLean refers. To reinstall 'stop':

1. Use light pressure on the reins and a quick release. Your seat should flow with the gait, but not influence the horse until the rein aid is firmly re-installed.
2. A horse that leans on the bit without slowing or stopping has not learned the correct response to the aid. If you get a heavy response to your light halt aid, ask the horse for a full halt.
3. If the horse leans on the bit at the halt, ask for one step back.
4. Reward the horse with a stroke on the wither at the moment of the correct response.
5. The goal? Three good responses in a row.

MORE ADVANCED WORK

McLean describes the canter pirouette as a "complex mosaic of almost all of the basic responses (stop, go and turn on the fore and hind legs), achieved by only giving one aid at a time." Here are steps for a canter pirouette to the left:

1. Shorten the left canter stride with flexion from the left rein.
2. Turn the forelegs to the left with a closing right rein.
3. Right leg yield the outside hind leg to left.
4. Shorten the step of the inside hind leg with the right rein if necessary to reduce the pirouette size.

All four aids are given during the three-beat footfalls of the canter: left fore, right hind, then left hind and right fore together. Each aid is given during the swing phase of any of the legs; no aids are given at the same time.

NEW DANCE STEPS: REWRITING THE FEI TRAINING SCALE

McLean believes that great trainers often don't know why they're successful and can't articulate their training framework in a way that is easily understood. However, everyone needs to know what they do. Using training methods horses understand to teach them to respond to the lightest aids is about horse welfare. In *Equine Behaviour: A Guide for Veterinarians and Equine Scientists*, McLean's colleague Dr. Paul McGreevy defined those methods and the powerful training concept of 'shaping.' He wrote "A common characteristic among good trainers is their

ability to recognize an opportunity to reinforce improved 'approximations.' While poorer trainers complain that their animals fail to understand what is being asked of them and feel that the animals have peaked in their training, superior trainers have the sense and patience to capitalize on each tiny improvement as the only way of moving toward the final response."

From 1995 to 2008, McLean sought to close the gap between theory and practice by developing a revised training scale based on his extensive research on equine ethology and cognition. Through its use of 'shaping' to reward incremental success, his scale departs from the directive

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nature of the German training scale and tackles the obscurity of training.

McLean uses this Equitation Science scale in his clinics with riders around the world. Beginning with rewarding a basic attempt, and subsequently obedience, rhythm, straightness and contact, collection occurs naturally from the use of transitions and the physical development of the horse beginning with impulsion, then engagement, throughness and finally collection. At the top of the Equitation Science scale sits 'proof'; each trained movement proves correct in various environments, from the quiet school ring to the WEG arena in a downpour.

“I am utterly committed to the belief that modern dressage competition will take a solid turn-around in the next 20 years to these essential welfare principles...”

McLean explains Baucher's influence on the shaping scale, which installs rhythm and straightness before impulsion. “For him [Baucher], balance was a result of the reaction to light aids. He emphasized lightness, self-carriage and ‘balance before movement.’ In a sense it's the balance of the light ‘go’ and ‘stop’ aids that produces movement in the purest elegance.” Light aids are invisible, he argues, and a balanced rider produces a balanced horse. “Compare this to the modern day leg-flinging tension that is held by the rider. This modern style, inculcated into the minds of young riders as normal, cannot be sustained by the horse himself in true self-carriage.”

However, McLean is adamant that the German influence should not be understated. “In training dressage horses, the German tenets of *losgelassenheit* [suppleness] evolving to *durchlässigkeit* [throughness] are highly significant. *Durchlässigkeit* is where the rein aids as well as the leg aids flow though the entire body, creating a soft back in all events of acceleration and deceleration. Thus, the Germans were not only able to avoid hollowness of the back when the poll is at the highest point, but they identified it in their training directives.”

In clinics, McLean frequently returns riders to the basics; reinstalling light aids for go, stop, and turning both the fore and hind legs. Backed by research on what horses find rewarding, McLean also provides riders with a ‘carrot’ that can be given from the saddle for each “tiny improvement.” At clinics, he's frequently heard to say,

“Really go crazy with this positive reinforcement – say “Good boy!” and give him a good scratch at the wither when you get what you want and he’s light to your aids – that’s rapport building.”

FORWARD MOVEMENT: REVISING THE FEI JUDGING SCALE

A study published in late 2014 entitled *Conflict Behavior In Elite Show Jumping and Dressage Horses* concluded that “...the high incidence of conflict behaviour observed in elite jumping and dressage competition suggest that many horses may not be sufficiently prepared for competition in line with the FEI code of conduct guidelines. Clearly, this could lead to welfare concerns for the horses within these equestrian disciplines.”

From Andrew McLean, we hear “Training is about setting up a behaviour, reinforcing it and repeating it till it becomes a habit. When you’re riding a dressage test, you are not asking questions, but eliciting reflex reactions that you have installed. The horse isn’t obeying you like a slave, but reacting to what you have correctly or incorrectly reinforced.” When responses are installed and rewarded as opposed to coerced through dominance training, results are achieved without compromising the welfare of the horse. The end result is a willing, rather than submissive, dance partner. The word ‘submission’ has no place in McLean’s domain.

Most recently, McLean turned his attention to the institution that rewards training at its highest level, the FEI dressage judging system. In a brief presentation at the 2014 Global Dressage Forum in Denmark, McLean called for a “judging revolution” similar to what has occurred in other once subjectively-judged sports such as gymnastics and diving. What judges reward is what competitors will produce.

McLean says, “Judging and welfare should be synonymous, because judges are the housekeepers of welfare.” Citing the qualifiable Equitation Science scale, he suggests that if training dressage movements involves step-by-step shaping of behaviour, objectively judging those movements may be as simple as deconstructing the training and applying a scalable score to the observable result. If a dressage judging system can objectively recognize, measure, and reward training achieved through humane methods, McLean believes that the continuation of dressage as a sport is assured.

“Fifty years from now, everyone will be training with these principles in mind,” predicts McLean. “I am utterly committed to the belief that modern dressage competition will take a solid turn-around in the next 20 years to these essential welfare principles, most likely beginning again where Reiner Klimke left off. If this does not happen, there is no doubt in my mind that dressage and all sports that emanate from it will be banned. We cannot justify relentless five kilograms in our hands, constant spurring, sustained horizontal curbs, running reins, Pessos, and confusing methods and euphemisms for fear and stress. The writing is already on the wall. We have to change.” 🐾



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