editorial@usdf.org

Evaluating the Extravagant Trot

Have dressage horses' gaits become so big they're no longer correct? An FEI judge explains.

By Jayne Ayers

For decades, dressage judges have been trained to look for the parallel positions of the horse's hind cannon with the radius (forearm) of the front leg during a trot extension, and to deduct points when the horse reaches "more in front than behind." This methodology has not changed, but the leg positions of the modern dressage horse have become more difficult to assess. That's because selective breeding for dressage has vastly improved the gaits of our equine athletes. Today, extravagant movement is often the norm. A horse that reaches "well" behind but "extraordinarily well" in front may not be totally correct as a result, but still is able to impress.

In this article, I'll explain how gaits and training affect a horse's ability to extend, and how judges evaluate extravagant movers. I'll also look at how video analysis has profoundly altered our understanding of the gaits—and when a trot that's not strictly two-beat can actually be a good thing.

TROT DEVELOPMENT: *The German Olympic team gold medalist Damon Hill as a young horse (left) and as a mature Grand Prix competitor (right). As the stallion matured and developed strength, his ability to use his hind legs increased. Both photos show hind-first dissociation and uphill balance, but the mature horse is truly correct.*

EURODRESSAGE.COM; FEI/BOB LANGRISH

How to Evaluate the Extended Trot

Judges want to see the parallel position of the horse's legs in a trot extension (see photo of Damon Hill above) because its absence may indicate a momentary or fundamental lack of thoroughness—incorrect connection between the activity of the hind legs and the stretch to the hand—attributes that we expect to be consistent in a well-trained dressage horse.

The reach, freedom, cadence, and uphill balance we so value in a good dressage extension are produced when the hind legs not only propel the horse forward to cover more ground, but also take an increased amount of weight to "unload" the forehand so that there is upward thrust, as well. This upward thrust produces the suspension seen in a good extension.

For upward thrust to happen, the horse must bring his hind legs under himself, closer to a point beneath his center of gravity. A horse that has the ability to take more of its weight onto the hind legs, both from nature and as the result of training, is able to propel himself both forward and upward with those hind legs. This produces increased ground cover accompanied by reach from the shoulder. Uphill balance while in motion and lightness of the forehand are achieved by the use of muscles near the tops of the forelegs that allow the horse to push against the ground in a way that

SUSPENSION: *Upward thrust in the trot extension produces suspension, as exemplified by the British world champion Valegro (shown at the 2014 Reem Acra FEI World Cup Dressage Final)*

FEI/ARND BRONKHORST

elevates the forehand. Horses with long front legs, sloping shoulders, and "open" elbows have a greater range of motion in a forward direction as they swing their legs while in the air during the trot. The result is what is often called an "expensive trot."

When a horse reaches "more in front than behind," he is often operating with a hollow back and sagging belly—a form of incorrect throughness. Those belly muscles are what help the horse bring the hind legs under. Contraction of the belly muscles also produces what the rider feels as the lift of the back, which can then swing rhythmically. When the horse's back is hollow, it becomes stiff and blocks the flow of energy from the hind legs to the rider's hand. The suspension, length of stride, and ability to stretch to the hand and find self-carriage are diminished as a result. The hind legs are more likely to "step" than "leap." In the worst cases, the horse appears to walk behind. If the difference between front and rear is slight due to incomplete throughness, the horse is likely to simply achieve less ground cover and air time, or might show a lack of self-carriage.

There are horses whose conformation predisposes them to an extravagant front leg with minimal reach behind. They are often much smoother to ride because their hind legs do not produce as much propulsion. As a result, we will probably always see this type of horse in the show ring.

What Technology Has Taught Us About the Gaits

A gap in understanding exists between traditional dressage theory and the new insights available by way of modern technology. The selective breeding of horses for dressage has in some cases caused this gap to be exaggerated in the highly developed gaits of top equine athletes.

Video and slow-motion gait analysis have forced us to change the way we describe a horse's rhythm. It is tra-

editorial@usdf.org

TIME TO NOMINATE CANDIDATES

April 15, 2016

is the deadline for nominations for Participating Member (PM) Delegates in *All Regions*

To accept the nomination, and if elected, a PM delegate nominee must:

- Be a current Participating Member of USDF.
- Have a permanent residence and reside in the region for which they are running to represent.
- Agree to serve a one year term, from the time of election in 2016 until the election in 2017.
- Attend the 2016 USDF convention.

June 1, 2016

is the deadline for nominations for USDF Vice President, USDF Secretary, Regional Director in Regions 1, 3, 5, 7, and 9

Nominations for USDF Vice President, USDF Secretary, and Regional Director in Regions 1, 3, 5, 7 and 9 will also be accepted from the floor of the Board of Governors meeting at the 2016 annual convention in St. Louis, Missouri.

e-mail all nominations to

nominations@usdf.org

"MORE IN FRONT THAN BEHIND": *An incorrect connection can lead to a trot with an extravagant foreleg whose reach is not matched by the corresponding diagonal hind leg. Even top international horses (pictured: Totilas with Matthias-Alexander Rath of Germany in 2015) may occasionally show this problem.*

ditional to think of a correct trot as a gait with exactly two beats, but we've learned that this is often not precisely true. We now know that what the eye perceives as a trot "on the forehand" is often not a true two-beat gait: Instead, each front foot hits the ground just before the hind foot of the diagonal pair. Conversely, for a good trot that we describe as "uphill," the reverse is true: The hind feet hit just before the front feet.

The well-known equine-biomechanics researcher Dr. Hilary Clayton discusses these findings at length in her book *The Dynamic Horse*. She notes that the "downhill" broken effect (known as negative or front-first dissociation) occurs in horses that increase ground cover by traveling with a short stride length and a long time in the air, pushing their bodies forward with the hind legs and carrying on the front legs. This is the way that a Standardbred trotter increases speed in a harness race. It is also the case for most dressage horses that travel "out behind" as they lengthen the stride in an extension but appear to be going "downhill."

In a good dressage trot extension, the horse covers more ground than in collection, but in the same or perhaps even a slower tempo. The time on the ground is short compared to the time in the air. The resulting cadence is highly desirable but must be shown in an uphill balance. As the horse's hind limbs operate under his body rather than out behind him, they take more weight and tend to have what's known as positive or hind-first dissociation, meaning that the hind foot lands a split second before the corresponding diagonal forefoot. The front legs also play an important role, pushing against the ground in a way that elevates the forehand. This balance correlates with hind-first dissociation.

As horses are bred to be more naturally uphill in their way of going, they tend to show more hind-first dissociation. The trait increases with training, both in the collected and the extended trot.

If we think of the horse's body as a parallelogram, with the front forearm and hind cannon parallel to each other, swinging back and forth, it is the horse

LYNN VAN WOUDENBERGH/ARND.NL

whose legs operate more of the time in front of the vertical that carries more weight on the hind legs, and the horse whose legs operate more of the time behind the vertical that is more on the forehand. Judges have used this concept for a long time to assess balance, and recent research by Dr. Clayton has borne out its validity.

When considering the gap between classical theory (as expressed in the USEF and FEI rule books) and actuality, it may be helpful to think about a good canter pirouette. Although the rule books state that the canter rhythm must be maintained, it is clear even without slow-motion video that the rhythm is four-beat during the pirouette, with the hind feet landing first before either front foot hits the ground. If the rhythm is close to three beats, the horse usually is said not to be "sitting" enough to warrant a high score.

Some descriptions in the USEF and FEI rule books have changed a bit to incorporate what we've learned about the gaits. For the canter pirouette, the FEI now states that "the Judges should be able to recognize a real canter stride although the feet of the diagonal—inside hind leg, outside front leg—are not touching the ground simultaneously." Nothing in the rule books has changed yet for the trot because dissociation is not often visible to the naked eye. However, as the biomechanics of the horse become better understood, judges are using this information to improve their efforts. ▲

Jayne Ayers is an FEI 4 dressage judge, an FEI and USEF Young Horse judge, and a USEF dressage sport-horse breeding and dressage-seat equitation judge. She co-chairs the USEF Dressage Committee and is a faculty member of the USDF L Education Program. Retired from breeding and training at her Hearthstone Farm in Dousman, WI, she teaches dressage riders at all levels and coaches for competition.*