

## **Decoding Dressage**

Dressage talk is plagued by often being in code. Judges, instructors, and riders use coded expressions, but often don't know the reality behind those expressions, or they use them because they are repeated babble – what they have always heard. Often there is no standardized meaning behind these coded phrases, and different trainers or schools of riding use the same code words for different ends. The mechanisms, biomechanics, and understanding of these phrases would be useful to explore, and to help us get over the tendency to talk in vague or indecipherable codes.

### **Code– “More Forward”**

Reality and Basics: Forward is a direction, not a measurement of energy.

Absolute forward means NO sideways, travelling in the direction to which the horse is pointed. Therefore, asking for “more forward” when speaking of a lateral movement such as Leg Yields or Half Pass literally translates to ‘less sideways’. In Shoulder-in, it would mean to leave the line of travel, and go forward onto the diagonal line across the arena. This wrong usage (though it is just plain English) is ubiquitous, and leads to a lot of bewilderment, bad riding, and bad training. The horse cannot go ‘more forward’ than straight ahead in the direction in which he is pointed.

Most often, the consequence of being told that a horse needs to be ‘More Forward’ is that the rider begins to rush the horse around out of balance. The rider seeks to get the horse More Forward by chasing with the legs, while holding the horse back with the rein for some semblance of control. In response the horse then becomes heavy in the reins and rigid in the neck– a defensive state of operation. Self-carriage is lost and the hind legs push out behind, driving the horse down onto the forehand.

If you are told, “Needs more forward”, you probably need to translate this dressage code to:

- Needs more energy

- Needs quicker tempo

- Needs more Miles Per Hour

- Needs for the hind feet to come off the ground sooner (when the

canon bones are close to vertical instead of when the cannon is angled back)  
Needs longer strides

This is to say that one can go forward in a different way, with longer strides or more speed, but this is a matter of how the horse is moving, not where. To know which of the above list is being referenced, a rider will need to seek clarification from the judge or trainer using this code, and hope that other dressage codes do not follow.

### **Code – “Ride from back to front”**

Reality and Basics: This sounds fine, and most of us think we know what it means – if only because we have heard it all our riding lives. Familiarity breeds, if not contempt, at least complacency.

Judges often say to ‘ride from back to front’ when they think the rider is pulling on the reins. That impression usually involves the horse tumbling along on the forehand, causing the rider to react defensively, and the hope is that the rider will somehow translate this phrase to riding with less rein.

Riding ‘from back to front’ also has different interpretations based on the different schools of dressage. In the German dogma it means to activate the hind legs and DRIVE the horse into the hand, rather than just pulling the head into a headset. The thought of activating the hind end is admirable, but this approach is often misconstrued and misapplied. This interpretation backfires when we “drive and hold” – in other words, we apply conflicting aids. “No hand without leg, and no leg without hand” is a common aspect of the German method. It often leads to the idea of ‘pushing a stalled car’ with prodding, grunting, and nagging. In many horses, this simultaneous application of ‘go’ and ‘stop’ leads to a defensiveness, an anxious horse because there is no escape route, or a horse that grows dull from constant nagging.

In the French and Scandinavian mind-set, ‘riding from back to front’ means something a bit different. One doesn’t drive the horse – it is meant to go eagerly with self-motivation and modifiable speed. Once the horse is

moving well the rider can adjust the head, neck, shoulders, and thorax -for lightness and nimbleness.

One can hardly think of “riding from back to front” without taking into account that any interpretation of this is a disaster if the horse is not light and balanced in front. Otherwise the rider is just chasing the horse around on the forehand with its chest hanging out and forward, its thorax sagging down between the shoulders, and its hind legs pushing backwards against the ground. No amount of ‘driving from behind’ or ‘driving from back to front’ will fix this – it just sends the horse more downhill.

This leads us to another phrase to decode

### **Code “On the forehand”**

Reality and Basics: Most of us have been taught that "on the forehand" means that the horse puts too much weight on the forelegs or front feet, and that some of it needs to be shifted to the rear feet - usually using half-halts and driving legs. Nice bit of levitation, if you can pull it off (pun intended).

As so frequently and typically happens in dressage, the code describes the rider's sensation, not the biomechanical actuality. When the horse feels like it is ‘on the forehand’ you can think of it as the chest falling forward out from between the points of the shoulders, with the forelimbs just thrust out to break the fall, and the hind feet pushing backward (not downward) against the ground.

What does it mean for a horse to **not** be on the forehand? In other words, what does it mean for a horse to be ‘light’, ‘up in front’, or ‘raisable in front’? Biomechanically the shift of the horses weight to the rear happens in part by an increased pushing of the front feet against the ground (at the right moment of the stride) to help 'push' the thorax upward. The thoracic sling and pectoral muscles then play a part as well to sustain the lifted and narrowed thorax, between the shoulders. A good in depth discussion of this is found in "The Dynamic Horse" by Dr. Hilary Clayton.

In the dressage guidelines 'mobility of the forehand' is mentioned, and most people think that this addresses the quality and freedom of the movement of the forelegs, which it does but only indirectly. 'Mobility of the forehand' actually addresses the nimbleness and accessibility of the forehand in all directions, which creates lightness. While important, lightness does not just address the amount of weight in the reins. It primarily addresses the horse's light-footedness, and the ease with which a rider can influence the forehand. It should feel like the horse is in a state of readiness, and able to respond to a cue in a moments notice.

### **Code: "Needs Bend in Ribcage"**

Reality and Basics: The ribcage is one of the most stable and unmovable parts of the horse – other than those that are solid bone. The ribs and the connective tissue between them, creates a pretty solid structure that is unlikely to 'bend' much – no matter how much it is jabbed and spurred. It is even more unlikely to bend if there is a death grip on the outside rein – as is advised in some schools of thought.

Where the horse CAN 'bend' is mainly in the neck and the lumbar spine. The Sacrum is fused at an early age.

This misconception of a 'bend in the ribcage' is based upon something else entirely – the way the ribcage hangs below the spine. The ribcage of the horse hangs from the spine, and swings to one side or the other, or swings more to one side than the other. When the muscles under the spine are contracted, the back is pushed up. If the ribcage then, relative to the spine, swings outward, the outer side of the back rises, and the musculature of the outer side of the horse elongates. This gives the appearance of a 'bend' in ribcage. When the horse moves this way, the rider feels the horse more level under her seat, and feels that there is a stable place for the rider's leg on the bent side, as the ribcage, as a unit, is swinging more to the outside.

I've never met a judge who can actually see bend in the ribcage itself – they have other visual indicators about bending, but tend to use the expression 'bend in the ribcage' because that is what they have always

heard, even though it has limited biomechanical validity.

“Needs Bend in Ribcage” is an expression based mostly on superficial observation, and sensation, with a limited knowledge of the biomechanics involved. This phrase is often given when some combination of the following four scenarios has occurred:

**1. The horse swings his whole neck to the inside.** Judges and instructors often say “too much bend in neck” (and therefore “needs bend in ribcage”) when in fact there is NO bend in the neck. Rather there is a displacement of the whole straight neck to the side - from the base of the neck near the withers.

**2. The inward swing, or inward pressing, of the horse’s whole ribcage and sometimes the neck.** Once the ribcage swings inward, it becomes more difficult, or impossible for the rider to maintain position and stability, and more difficult to use the inner leg, though that is the standard cure many trainers give to create more ‘bend in the ribcage’.

**3. The dropping of the outside side of the horse’s back.** This can’t readily be seen from most angles except by its effect upon the rider, and the verticality of the horse’s legs. The rider often slips to the outside of the horse. As the saddle slips to the outside and then sinks - as a result of the sagged outside side of the horse's back – it often causes the horse’s legs to slope inward from hoof to elbow. This is most often noticeable from the ground.

If the rider follows suit, and drops the outside seat bone where the horse's back has dropped, this creates an unlevel pelvis in the rider. The effect is exacerbated by a lateral collapse of the rider's core, or waistline, causing the side of the waist on the inside side to cave in. This collapsed waistline is caused by the rider's natural compensation for the outward displacement of the rider's Center of Mass and the dropping of the outside of the pelvis, by a slight leaning of the head and upper body inward.

**4. The horse is moving with a wide base of support.** The Base of Support, is the area defined by lines drawn from each point of support; in the case of the horse – the four feet. A basic principle in understanding balance, is that NOT maintaining the Center of Mass within this Base of Support causes a loss of balance or equilibrium.

The smaller or narrower the base of support, the more nimble and influenceable the horse is. When the horse abducts its legs the thorax drops down between the forelegs, and the rib cage (and Center of Mass) swings toward the abducted leg. In either case, the “bend in the rib cage” is even more impossible, because the actual bend in the horse’s body- which is mainly in the neck and lumbar area, as well as the lift in the back, is physically inaccessible when spraddling along on a wide Base of Support.

When one of these four ills occurs, riders are told to fix the bend, usually with “inside leg to outside rein”. While the intent of this is appropriate - that the horse should adduct the inner fore or hind leg, bringing them toward the midline, thus narrowing the base of support, this seldom works. Because the horse is starting at an ungainly and unbalanced position, the result of ‘inside leg to outside rein’ is that the horse steps sideways and abducts the outside legs instead of moving them forward. In response the rider tightens the outside rein, which results in a shortened outside instead of a lengthened one.

How to effectively address these issues is a matter of understanding and addressing proper biomechanics of both horse and rider. Biomechanics’ was practically unheard of in the dressage world 30+ years ago when I wrote the teaching material for the USDF L Program. Now it is a buzz word in the dressage world, and everybody hangs out a shingle, irrespective of actual knowledge. Consequently we have a new problem - finding a judge or instructor who actually knows something about biomechanics AND, in the case of an instructor, someone who knows how to improve it.