

# PIAFFE IN ENGLISH

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magazine page 4

## Collection and Extension of Frame

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What does this mean? What happened to it? In how far is it important to the horse's health?

By Dr. med. vet. Gerd Heuschmann

In its classical understanding, the term "dressage" does not mean "to train" or "to drill". In its essence, it is better described by the German derivative "gymnasticize", that is to tone certain muscles in the horse in order to make him strong and flexible enough to carry his rider. After years of correct training and schooling, the results of systematic gymnasticizing will show most clearly in dressage tests. The German training system considers the well-known steps of the "Training Scale" its only accepted guideline in order to correctly gymnasticize a horse. Looseness, collection and suppleness, in particular, are essentially important to improve the horse's natural predispositions and talents.

According to the Principles of Riding, collection is defined as follows:

"The goal of all gymnasticizing and schooling is to train your horse to be willing and able to perform. In order for him to do so, his weight and the weight of his rider need to be distributed as evenly as possible onto all four legs. The forelegs need to be relieved since, naturally, they carry a bigger share of the horse's weight. At the same rate, the hind legs have to take on more weight even though their natural purpose is to propel the horse forward. Once a horse starts to collect, he will

increasingly flex his haunches (hip and knee joints) and, with his hind legs, further reach forward underneath his center of gravity in order to carry more weight on his hindquarters. Thus, pressure is taken off the horse's forelegs allowing them to move more freely. To riders and bystanders, a collected horse seems to be moving "uphill". While the strides in walk, trot and canter are shortened, the horse's movements remain as diligent and active as before. The degree of impulsion stays the same and translates into elevated movements. It is possible to increase the carrying power of the horse's hindquarters, i.e., to help him develop and improve the respective muscle groups. To strengthen the forelegs, however, is possible only to a small extent. This is why it is useful and necessary for trainers to help their horses regain their balance by way of systematic schooling.

As a result of pronounced flexion of the haunches, the horse's neck is elevated. Once he has developed sufficient carrying power, the horse will be able to balance himself and show self-carriage in all three gaits. Since a collected horse covers less ground, he will be more receptive to his rider's aids and, thus, more supple." (cf. Deutsche Reitlehre, FN Verlag, p. 106)

It goes without saying that not all horses will be able to achieve the same level of collection in dressage work. With regard to the current developments in equestrian sports, however,

we have to ask ourselves: What happened to collection?

Is it possible that collection has disappeared from dressage shows because of the rising significance of flashy movements?

The foundations of classical riding theory can be explained by the laws of biomechanics. The latter help us understand the great significance of the Training Scale in order to master its ultimate step, correct collection.

If the back as the center of motion is inflexible, neither physiological strengthening nor collection can be achieved.

As we have seen in the definition of the term "collection", flexion of the haunches is used synonymously as a description of the Training Scales' sixth step. In professional literature, when they use the term "flexion of the haunches", most authors are describing the moment weight is transferred to a hind leg causing the joints to be passively flexed and the respective side of the hindquarters to be lowered.

The term flexion of the haunches does not describe the flexion of the joints at the moment a leg leaves the ground entering suspension phase. The only point in which authors differ is the exact definition of the term "haunches". A certain degree of rebounding can be observed in

all joints of the hindquarters, even in the joints of the toe area. A resistance to this flexing mechanism, i.e., active stiffening, is possible only in the larger joints and is always found in horses that have been trained in a mechanized and coerced manner. Leg movers (characterized by absolute elevation) and hyperflexed horses are both incapable of flexing their haunches as neither type is balanced or supple in the back. In this case, negative tension in the topline and stiff back muscles prevent flexion of the lumbosacral joint (to some degree maybe also of the iliosacral joint), which determines the angle between lumbar spine and pelvis. Negative

tension in the back muscles always occurs when the horse's neck is not allowed to support the torso the way nature intended it to do – usually caused by an insensitive rider pulling backwards on the reins. Riders, who are very stiff and try to get their horses to move forward with the help of exaggerated rocking movements of hip and pelvis, will also make the horse tense up his back muscles. Negative tension of the back is passed on through a flat, broad tendon (lumbodorsal fascia) to the gluteus maximus muscle (croup muscle) and on to the hamstrings.

As you can see, an obstructed motion center (i.e., back) will start a chain reaction leading to stiff hip and knee joints as well as haunches by way of negative tension in the hamstrings. Knee and hock joints are connected in a way the Germans call "frame saw construction": they can only move interdependently and in a synchronized manner.

Independent from the torso's main skeletal muscles, the three joints in the toe area of the hoof are responsible for passive flexion during the weight bearing phase. Especially the fetlock joint, which is supported by a suspensory apparatus of ligaments, will give way to a high degree in horses with stiff back muscles. The suspensory apparatus can be described as the last resort, the last possible

point of suspension the hindquarters have to offer. In incorrectly trained horses, ligaments and tendons are often overstrained, the result being commonly dreaded injuries to the suspensory apparatus.

In my opinion, however, the definition of the haunches should be extended to include the connection between sacrum and lumbar spine as well as pelvis and sacrum. The haunches would thus include all major joints of the pelvic area, which can be flexed depending on the degree of positive or negative tension in the large skeletal muscles.

The haunches should consist of the following joints:

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I lumbosacral joint: actively flexed by abdominal muscles

I iliosacral joint: actively flexed by abdominal muscles

I hip joint: passively flexed by weight

I knee and hock joints: passively flexed by weight

Therefore, the flexion of the haunches happens passively (contraction of extensors).

The biomechanics of my definition of the haunches differ from the common understanding in that only the deep loin muscles and abdominal muscles (flexors) can actively change the angle of the lumbosacral (and iliosacral) joint (pelvic angle). In order to develop flexible and energetically operating abdominal muscles, the horse's longissimus back muscle (extensor) needs to be flexible as well. In this way, the flexors can decrease the angulation of the pelvis, i.e., the position of the pelvis becomes steeper.

During the supporting phase, distally located joints are passively flexed by the horse's weight. Relaxed limb extensors will allow this kind of passive joint flexion (passive muscle stretching).

With regard to the laws of biomechanics, the relationship between the flexibility of the back muscles and the ability of the horse to collect is equally important to the definition of the term "balance" as the connection between the flexibility of the back muscles and good rein contact in combination with yielding in the poll. A horse is considered to be balanced when he allows his rider to sit comfortably – irrespective of his level of training and degree of collection. A balanced horse uses his neck to "carry" himself while his back is responsible for motion as intended by nature.

"The elastic tension, which has nothing to do with tensed up back muscles, is maintained by impulsive, energetic movements and allows neck and head (which are elevated) to have a leverage effect on the hindquarters. Depending on how and to which direction the rider guides the forward thrust of the hindquarters, the energy can be turned from a forward-pushing to a carrying power." (Based on Waldemar Seunig, Von der Koppel zur Kapriole, p. 145)

Once again, this statement illustrates the importance of flexible back muscles with

regard to the ability of a horse to move in a balanced manner.

When starting a young horse under saddle, the first step will be to restore his natural balance disturbed by the rider and to make it the foundation of all future training. Only a horse with rhythmical movements will be able to regain his natural balance (cf. Training Scale). The goal of correct schooling is to make sure that horizontal balance is well established so that after straightness (i.e., vertical balance) has been achieved, the horse can be collected. Consequently, a correctly trained horse will be able to go through all forms of balance – from stretching down and forward to collection – without resisting. No matter what manifestation of balance a horse shows, you will always see chewing on the bit, a flexible poll, a solid and strong neck capable of self-carriage from the withers up, supple back muscles, and haunches ready and able to be flexed.

#### The Biomechanics of Collection

The biomechanics of collection are defined by the capability of the major muscles of torso and hindquarters to allow passive flexion in hip, knee and hock joints as well as active flexion of lumbosacral (and iliosacral) joint during the supporting phase of the hind legs. The ischium is lowered, the pelvic angle decreases.

While the hindquarters are lowered, the hip joint moves down and forward in a circle around the lumbosacral joint. In order to actively flex the lumbosacral joint, all distally located joints need to be flexed passively (flexion of the haunches). When the hip joint moves forward, the horse's frame is shortened. Thus, the square of ground the hooves cover (i.e., the supporting surface) becomes smaller, moving the center of gravity towards the rear of the horse (more weight is carried by the hindquarters). Instead of merely providing forward thrust, the extensors of the hind legs develop more and more carrying power. The fact that the hind limbs are now positioned farther forward with regard to the angulation of the lumbosacral joint, does not change the way the horse's hooves strike the ground. In trot, both the supporting diagonal and the suspended

diagonal maintain their symmetrical motion sequence. The hind cannon bone keeps moving parallel to the front cannon. If the rider asks for extended tempi, the pelvic angle widens causing the extensors to increase pushing power. Carrying power turns into forward thrust, thus, extending the horse's frame.

Looking at the anatomical features of the back of the lumbar spine and the pelvis, it becomes clear that the lever constituted by lumbosacral (and iliosacral) joint and tuber sacrale plays just as important a role as the lever created by lumbosacral (and iliosacral) joint and hip joint. When in the collected horse the distal (lower) lever moves forward and down, the upper lever has to move exactly opposite, backwards and up.

The meaning of the term "relative elevation" becomes clear when you realize that starting from its attachment to the ala of the ilium and the sacrum, the longissimus back muscle runs along the horse's torso, thus, connecting the pelvis to the back of the cervical spine. In a well-trained horse, the position of the pelvis directly influences the position of the neck and vice versa. You are now able to understand the logical connection between relative elevation of the neck and the position of the pelvis and the degree to which the haunches flex. Making the horse change the position of one of the two attachments of the longissimus back muscle (i.e., cervical spine or sacrum) will always result in negative tension along his back. Problems will occur with regard to rein contact and straightness as well as in the form of decreasing activity in the hindquarters. The coordinated positioning of neck and pelvis can biomechanically be defined simply as "balance".

Every form of balance can be plainly and unambiguously explained by the biomechanical interplay described above. The only factor able to disturb the horse's balance is a rider who uses his hands in a dominant or incorrect manner, thus forcing the neck into a position either too high or too low. Applying rein aids in the way just described will always cause negative tension in the longissimus back muscle and nip any activity of the hindquarters in the bud. As a result, the

respective horses will end up in absolute elevation or hyperflexion (hollow, tense back or overbent, respectively). The flashy movements in trot that can currently be seen at shows are usually caused by tense back muscles. Collection as defined by the Principles of Riding is impossible to achieve if based on spectacular knee action and more or less trailing hindquarters.

The most common causes of tension in the horse's motion center (i.e., the back) are:

1. A stiff rider who grips up with his knees and tries to push the horse forward by rocking his pelvis backwards and forwards.
2. A rider who pulls backwards on the reins forcing the horse's head into an artificial posture, thus shortening or overbending the neck.
3. Horses whose nosebands have been fastened too tightly. He cannot open his mouth to actively chew on the bit. The result is a tense and non-yielding poll.

It is of essential importance to make sure that any bridle and the way it is constructed fit the anatomy of your horse's head. Bridles may never cause pressure, restrict or rub. Quite commonly, you can find bits allegedly meant for retraining (especially with regard to show jumping), some of which qualify as instruments of torture regulated by animal protection laws. With regard to bridles, any kind of restrictions will lead to negative tension in the areas of head, neck and back. Moreover, it causes "mental tension" in the horse's psyche disrupting the harmony between horse and rider.

Serious balance problems will ultimately result in issues related to rein contact, straightness (natural one-sidedness is reinforced), irregular rhythm and sometimes even rein lameness. Morphologically, the most common problems pertain to injuries of the suspensory apparatus of ligaments in the area of the fetlock. In my opinion, these injuries are caused by incorrect training and incapable riders.

Riding theory in its classical understanding contributes to the protection of animal health. This is why no compromises should be made by the trainers teaching it or by the judges enforcing its principles – in the best interest of the horse.

# The Seat Debate

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## Riding Is Learning by Doing

*By Jürgen Kemmler*

This spring, Eckert Meyners, college lecturer on physical education science and author of various books on the topic of “the rider’s sense of motion” and the correct seat, caused a landslide of discussions when he claimed (*Dressurstudien*, January 2010): “We have never questioned whether the way we teach riding today actually is an appropriate method to make it as easy for beginners as possible to take their first steps in the saddle. We usually look up to the Riding School of Vienna [the editor: the Spanish Riding School], which has always been a figurehead of good riding. For centuries, its instruction program has been based on lunge lessons without anyone ever questioning their usefulness.” Meyners’ conclusion: “To me, riding instruction on the lunge line and on a circle is absolutely counterproductive and a false belief we finally have to get rid of.”

This is coming from a person who has never sat on a horse in his entire life yet questions the famous principle that riding is learning by doing. Admittedly, his list of references with regard to kinesiology on horseback is remarkable, and the more than five hundred exercises he compiled in his book *Das Bewegungsgefühl des Reiters* (the rider’s sense of motion; Franckh Kosmos; English translation to be published in 2011) are the work of a very diligent person. In comparison, his second book *Übungsprogramm im Sattel* (training routines for horseback riding; English translation to be published in 2011), featuring his model student Heike Kemmer (Olympic team gold medalist in Hong Kong), focuses a little more on practical application. However, its usefulness might be limited to advanced riders such as Miss Kemmer, who is posing as someone much less talented and gifted with regard to motor skills than she actually is.

In this May’s issue of the German horse magazine *Reiter Revue*, you can find the heated discussion between Mr. Meyners and Johann Riegler, who used to be the head trainer at the Spanish Riding School until 2008 and is the creator of the movie *Der geschmeidige Sitz – die Sprache zwischen Reiter und Pferd* (supple seat – the language of horse and rider; Wu Wei Publishers). In the article, Meyners revealed himself to be a know-it-all when it comes to teaching riders how to sit and unwilling to acknowledge the arguments made by Riegler, a practical man through and through – after 39 successful years of working in Vienna, where he started as a student (Eleve) and became the head trainer.

As a side note, we have to mention that there have been other head trainers before Riegler who were interested and concerned about the elasticity of riders. Therefore, this topic is in no way uncharted territory.

The greatest happiness on earth is sitting in the saddle of a horse: even children can already agree to this when sitting on the backs of wooden horses on a merry-go-round. It is places like merry-go-rounds or pony riding at fairs (on an actual pony) that create their love of riding and, of course, horses. This unique and, in the true sense of the word, elevated feeling, once memorized at a young age, will stay with you for the rest of your life. It is quite divine, this sensation, and unlike any other kinetic experience other sports will give you.

Right from the start, learning how to ride means playing with your balance. If you have correctly understood riding as “balance in motion”, you will have realized that, especially with regard to beginners, physical aspects can never be separated from psychological and

emotional ones. Therefore, it is very important to pay attention to all three levels of sensation during any form of riding instruction. Every honest beginner – as well as many experienced riders – will attest to the fact that during lessons, the horse becomes the mirror and sensor of our feelings.

This is essential because experiencing moderate sensations of fear can help us drop psychological and physical inhibitions, which sometimes hide who we really are or what we are able to do with regard to riding.

Being a good riding instructor also means to teach your students which thoughts and tasks might be interfering with their learning progress. Oftentimes, you need to rethink the entire situation because formal comments focusing on the student's posture alone ("head up", "heels down", etc.) will most likely lead into a dead end. It is much better to learn using your kinesthetic senses. Every person has one sense organ that is more or less dominating the others; one person might be visually talented, another intellectually, while a third has particularly good motor skills (kinesthetic).

Schooling coordination is the only way to sharpen your senses

The fundamental coordination skills, such as for example

- spatial orientation
- sense of motion
- balance
- reaction skills
- rhythm

are very important not only for beginners.

These skills, which were (hopefully) acquired during childhood and have been engrained as motion patterns, can be reactivated relatively quickly and usually without any major problems even late in life. You own a whole treasure chest of motion patterns, which you

as a beginner rider can open up, pick out the motion you need and reactivate it.

If, however, you did not regularly attend the "elementary school of natural athletics" during your childhood, as an adult beginner, you will have to face a long journey of hard work until you will reach harmony on horseback. In this case, it has proven very helpful to do exercises at home to improve the flexibility of your neck, back of the neck, shoulders, chest and pelvis. In this regard, Mr. Meyners' idea of adding this entirely new dimension (i.e., rider-specific gymnastics) to lunge line instruction is certainly useful.

Based on the above and as experience shows, the common practice of teaching beginners on the lunge line is the best way to improve someone's riding skills step by step without asking too much of either horse or rider. The first step in the learning process is to sit balanced and relaxed – the foundation for all further progress. The best way to get there is riding on the lunge line, just like it has been practiced at the Spanish Riding School for generations. This holistic method allows you to acquire a special sense of motion necessary for riding and enables you to apply aids in a competent and highly coordinated manner. "At the Spanish Riding School, students have to practice on the lunge line as long as it takes to develop and stabilize their correct seat. Usually, we are talking about half a year to a year.

Quite often, however, experienced riders have to go back on the lunge line in order to eliminate mistakes that have become ingrained over time." (Alois Podhajski, director of the Spanish Riding School between 1939 and 1964). Brigadier Kurt Albrecht, who served as director a few years after Podhajski (1975-1985), once said: "The most important thing for lungeing is to work with a horse that is able to do the exercises you want your student to 'feel'. The first lessons in seat training are supposed to help the students overcome possible fears they might be harboring. The quicker they develop confidence in themselves and their balance on horseback, the quicker and better they will progress." Mr. Meyners describes this method

as “puppet gymnastics”, which is rather demeaning.

Moreover, in his book Mr. Meyners recommends his customized stool “Balimo” (cf. picture below) as a tool to help you improve the mobility of your pelvis and, thus, the straightness of your upper body. Mr. Meyners also provides a multitude of exercises you can do to mobilize your upper body and pelvis and to stimulate your hip joints, and he recommends that “you use the stool on a daily basis to do the workout. You decide on the duration and number of exercises based on your own feeling. You cannot do anything wrong with regard to movements.” This last statement, however, is where Mr. Meyners is making a serious mistake. Not only does it take a significant amount of time to do the exercises (You were planning on riding too, right?), practical experience has shown that because of the way “Balimo’s” seat is constructed (unrestricted mobility to all sides, yet jerked to a stop when you reach the limit of its mobility), even experienced riders develop incorrect postures and imbalances – the opposite of a flexible seat. Axial adjustment and relaxation are out of the question! Quite the opposite, actually: if you regularly practice (incorrect) postures on the stool, they will become a habit so that they might even feel right to you when you sit on your horse. Congratulations, Mr. Meyners, for this lapse in judgment with regard to athletic motor skills. This kind of advice can only come from someone who has no practical experience in riding. “Balimo”, the customized stool, is a down-right deceptive package and might be an appropriate piece of training equipment for notorious couch potatoes, but not for riders. Telling beginner riders to find their balance by doing gymnastics is a detour. The only way to improve problems on horseback is on horseback – by doing the right kind of exercises and by working on the control center located between the rider’s behind and the horse’s back. The rider’s main task is, after all, to develop a feeling for the motion patterns of the horse in walk, trot and canter. The ability to adjust and coordinate the intensity of the aids is called “Reitergefühl” (the rider’s sensitivity), which can only be acquired by having a flexible seat

that allows you to follow your horse’s movements at all times. Trying to learn how to swim in your bathtub is not such a smart idea. Neither is trying to learn how to ride a bike by practicing on your stationary bike or to ski by doing ski workouts. There are many more examples from other athletic disciplines, but you get my drift.

The fact that in his book on quick training routines for better riding, Mr. Meyners as an expert in physical education science recommends special exercises to improve speed strength (as supposedly needed to push your horse forward), shows that he has not understood the rider’s sense of motion with regard to applying aids. Once again: The only thing beginner riders should concentrate on is finding and improving their balance on horseback. This means that they have to learn how to align their own center of gravity with the horse’s; “keep the balance between the distribution of your weight and that of your horse, as the latter can quickly change energy and direction of motion” (Seunig).

In addition, targeted exercises on horseback are the only way to overcome possible fears the beginner might have. It goes without saying that you should only use a school horse able and trained to do all the exercises required. Therefore, Meyners’ method is advisable only as a guide to “fix” muscular imbalances and deficits with regard to motor skills (caused by a lack of variety in motion experience in childhood). It may also be useful to explore the biomechanics of the rider, certain muscle chains or functional connections. No more and no less than that.

<Pictures p. 13>

These fundamental coordination skills are essential abilities every beginner needs to have or develop:

- Rhythm
- Timing
- Adaptation and adjustment skills
- Ability to multitask and execute actions simultaneously

- Other, e.g., ability to adjust strength, hand-eye coordination
- Reactions
- Dexterity
- Balance
- General coordination skills

< Pictures p.14 >

The circle of learning

Fine-tune the coordination of the aids.

Improve/Consolidate your body awareness.

How does the horse react?

Try out/Learn how to apply aids.

Build on your motion experience.

Learn how to follow the horse's movements.

How does the motion of the horse's back feel like to you?

This concept is based on the fact that we absorb information by way of our sense organs (eyes, ears, skin, muscles and sense of balance), which is processed in the area of our brains responsible for motor skills before being compared to stored experience. Afterwards, the brain sends nerve impulses to the muscles in order to turn the processed information into motion. The results of these tests are compared to images of motions we already have in our minds so that we can add new information to them or adjust them. The circle of learning begins once again.

< Pictures p.15 >

The centers of gravity of horse and rider: aligned along perpendicular and horizontal lines.

## The Rider's Seat and Influence

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The following text is an excerpt from “Die deutsche Dressurprüfung” (German Dressage Tests) by Hans von Heydebreck (published by Verlag Dr. Rudolf Georgi, Aachen, Germany, 1972).

Dressage judges have to face a very important question when trying to come to a general assessment of the competitor's performance: How do you evaluate seat and aid application, i.e., influence? In order to find the answer you have to first of all understand which aspects of the seat determine the rider's posture. Which prerequisites does the rider have to meet in order to have a good seat in the equestrian sense of the word?

[...] The way someone sits does not only tell you a lot about his riding skills, but also about how their horse moves. Therefore, the rider's posture and the horse's movements are directly connected and mutually influence each other; your horse's movements influence the way you sit just like the way you sit determines how your horse moves. [In a previous chapter] about the qualities and characteristics of a well-ridden horse, we concluded that the general impression of horse and rider is based on their ability to become a perfectly coordinated whole. You will only be able to meet this demand if your posture is relaxed and flexible enough to keep your center of gravity aligned with your horse's at all times. Following your horse's movements smoothly is, therefore, the primary and most important requirement of a good seat.

Your entire aid application is also dependant on your posture and the position of your body parts. Aids can only be applied correctly if you sit correctly. This is why you need to position yourself and your limbs in a way that allows you to apply aids correctly and at the right time.

As an additional requirement, competitors performing in public need to sit straight and decently while staying relaxed. Unnecessary movements and subtle signs of carelessness, which are quick to sneak into every rider's training routine, need to be avoided during a recognized test as they are undermining your general impression. Therefore, all the rules about seat and posture have to submit to the three aspects described above: harmony with the horse's motion, correct aid application and decent general impression.

What conclusions can we draw from these demands?

A supple, flexible yet influential seat depends, first of all, on the correct position and posture of the spinal column. On the one hand, it needs to be flexible enough to cushion the horse's movements, on the other hand, it has to provide sufficient stability to support the rider's application of aids. In the same way as the horse's spinal column allows him to freely use his limbs, your backbone needs to support your posture and serve as the core from which all influence originates and to which all influence returns.

If your horse is balanced and carries himself with his back nearly horizontal, you have to keep your upper body – including your hips – straight without your buttocks leaving the saddle. This is the only way in which you will be able to keep your own center of gravity aligned with your horse's, irregardless of his movements and the fact that the location of his center of gravity is constantly changing. Your backside can only stay connected to the saddle if it is placed on your horse's back in its entirety, muscles and hip joints relaxed and

legs hanging down your horse's sides in a naturally loose position. The more points of contact you have with your horse's body, the more still and secure your seat is going to be and the quicker you will feel a change in movement. This seat not only creates the best conditions for correct aid application, it also just in itself improves your horse's movements and posture. Your spine acting as a supple spring, your buttocks glued to the saddle, and your legs hanging down your horse's sides in soft contact in themselves improve your horse's back muscle activity and his impulsion. In this way, your seat will drive your horse forward into rein contact while encouraging and maintaining forward thrust, which you need to control your horse and to secure impulsion in all gaits, including at the highest degree of collection. Your horse will, in a way, apply the forward-driving leg aids for you if your legs are positioned as supple as described above: the reason being that, in sync with the rhythm of your horse's hind legs and his torso, your legs will alternately swing against the respective sides of his body.

A seat like this not only secures correct and steady rein contact but allows you to develop a feeling for the right moment to apply rein aids because the swinging motion is passed on to the reins and constantly changes the pressure on your hands and your horse's mouth. Be aware, however, that in the same way as your legs, your arms and hands have to be positioned appropriately. They need to maintain soft and steady contact to the bit without interfering with your horse's movements or frame. The only way your arms and hands can do this is if they follow your horse's motion in a relaxed manner.

You have to adhere to these principles in order to remain in sync with your horse's rhythm and react appropriately, quickly and effectively. They teach us that naturalness, softness and suppleness are the main characteristics of a good seat. Such a seat will be effortless and look beautiful, especially if you pay some attention to good posture and leaving a decent impression as suggested above.

Since the bodies of all riders and horses are different, we have to adjust the observations made so far and acknowledge that strictly defined standards, especially with regard to the position of individual body parts and limbs, are impossible. A wide and barrel-chested horse requires a different leg position than a narrow-chested one, and vice versa. A rider with long and skinny legs has to sit differently than someone with short, wide thighs. In a way, the same principle applies to arm position because long arms and a relatively short torso – very advantageous with regard to riding – allow for a sharper angle in the elbow than short arms on a long torso. A standard seat that any rider could assume on any horse is, therefore, impossible. However, there are certain ground rules with regard to posture that you have to follow in order to be able to sit, feel and control your horse correctly.

You influence and control your horse with your upper body – i.e., your weight, your buttocks and the small of your back –, your lower legs and your hands (by way of the reins). Upper body and weight create the most important and influential aids, which at the same time are also the most subtle and least visible ones. Since leg and rein aids are essential to being effective and influencing the horse's motion and posture, the latter two will be discussed first. Unconditional obedience to leg aids is the prerequisite for the general obedience of a horse. In order for your horse to do this, your entire legs have to be in soft and steady contact with his body at all times. Your horse has to accept your legs around him. There are two ways to apply leg aids: either you knock your lower legs softly against your horse's sides or you press a little more strongly. Their effect (forward-driving, guarding or forward-sideways) depends on the position of your lower legs (at or behind the girth) and the intensity with which you apply them. Positioning your lower legs too far backwards is just as false as sliding them forwards and standing in the stirrups.

Only if you are able to use your legs in order to encourage your horse's hind legs to constantly reach forward, i.e., showing them the way and, thus, nipping any kind of lagging

behind or leaving the track in the bud, you can keep your horse straight and maintain his impulsion. Your legs are guiding the hindquarters; your horse has to stay between them like between two rails. Spurs may be used in order to emphasize your leg aids. You can either rest them flat and softly against your horse's sides to increase the guarding effect of your legs or use them more pointedly and strongly (either press or push momentarily) in order to encourage a hind leg to step further forward. Since spurs cause the muscles to contract, they should not be used on ticklish and tense horses. It is a serious violation of all the principles defining the rider's seat if you keep pressing your spurs into your horse's sides. Your horse will disobey and refuse to work. The rein aids define the gait, the pace, and the direction your horse is moving at or in, respectively. Therefore, the action your hands are executing and passing on to the reins is called "guidance".

Guidance can only be good if your seat is independent and steady and your hands are correctly positioned and still. Your horse can only follow your rein aids willingly if he obeys your leg aids unconditionally and is on the bit. Rein contact must never be established and maintained by pulling backwards on the reins but has to be the result of your pushing the hindquarters forward so the horse will stretch his entire spine forward towards the bit.

On a well-trained horse, closing your hands a little tighter around the reins or, if necessary, taking your arm slightly backwards has to be enough to achieve the desired effect of your aid. Every rein aid needs to be supported by the small of your back and your legs. You may never leave the impression that you are not yielding or, even worse, pulling on the reins. Yielding is the only way to success. Lifting your hands a little, which might be necessary at times when you are using a snaffle, is absolutely wrong when your horse is wearing a double bridle – instead of encouraging your horse to elevate his head and neck and keep his noseline in front of the vertical, your hand movement will cause him to support himself on the bit and hide behind the vertical avoiding rein contact. It is also wrong to move the hand holding the curb bit reins sideways

as this would give more control to the incorrect rein; moving one hand outwards over the horse's neck is incorrect as well. A horse that is balanced and carries himself is supposed to maintain rhythm and frame even if you cease contact for a moment by taking your hands forward.

Weight, tension in the small of your back and the position of your buttocks all support leg and rein aids. Weight aids are applied by shifting your upper body backwards, forwards or sideways, given that it is otherwise positioned upright. By shifting your center of gravity, you are encouraging your horse to do likewise. Moving your upper body backwards behind the vertical puts more weight on your horse's back and hindquarters creating a forward-driving effect. Moving your upper body forwards can both relieve your horse's back and slow down forward motion. The result also depends on the intensity of leg and rein aids that accompany the shift of position. Shifting your weight sideways makes your horse turn if you are correctly weighing down on your inside sitting bone instead of sliding your behind to the outside while collapsing your inside hip. The weight shift needs to happen above your hips by turning your upper body inwards; your shoulders have to follow into the turn, staying parallel to your horse's. In this way, the lateral weight aid leads to a turning rein aid since your arms and hands are moving inwards together with your shoulders. Your inside hand moves sideways-backwards, your outside hand sideways-forward, i.e., yields somewhat.

Your buttocks can also be used to apply aids by putting more pressure on one or both sitting bones. Their effects vary depending on whether you straighten your spine by tensing your lower back muscles or whether you curve it by tensing your abdominal muscles. In the first case, the aids will have a collecting effect; in the latter case, they will push your horse forward. Moreover, these aids are strongly influenced by the different forms of weight aids.

Aids applied with the small of your back are produced by restricting the movement in your spine, making it even more stable. They are

used to emphasize the effect of your weight aids and the small of your back and to support your rein aids while you are applying non-yielding aids.

Only if your seat is supple and you are following your horse's movements at all times, you can develop the sensitive feeling necessary to correctly coordinate the different forms of leg, rein and seat aids in order to help your horse develop good self-carriage, impulsive movements and obedience.

In order to evaluate someone's seat in its entirety, you need to observe the person from behind to see if their upper body is aligned with the vertical line you can draw through the horse. Moreover, there should always be contact between upper arms and body as well as knees and saddle. The sideways motion of the horse's body is not supposed to push the rider's lower legs away from the horse's trunk.

The general behavior of good riders during a performance must express relaxation, calm decency and confidence in their skills. While their aids are nearly invisible, these riders will

immediately react if some irregularities require them to do so. Sitting and moving this way is not only proof of equestrian tact and sensitivity, its beauty and expression of art also appeal to the audience.

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The seat as advocated and taught at the Spanish Riding School can be the basis of any style of riding. The main aspect is a deep, steady seat that follows every movement of the horse in a flexible and smooth manner.

< Pictures p. 22>

Dr. Reiner Klimke: „The secret of the rider's influence on the horse is based on an assertive yet sensitive interplay of weight, leg and rein aids as well as the yielding afterwards.”

< Pictures p. 23>

Richard L. Wätjen: “A good seat will always result in positive influence on the horse; it is every rider's duty to constantly monitor and correct their seat in order improve and stabilize it.”

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## Respect the Nature of the Horse

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by Gerhard Kapitzke

The term “classical riding” can be understood in different ways and is easily misunderstood. In his riding theory, Xenophon was the first to mention the rider's aids, used by the Celtiberians to collect their horses. During the periods of renaissance and baroque, this style of riding was further developed, creating a basis we still referred to today. At some point, “the art of classical riding” was defined as striving for the highest levels of dressage all the way to the exercises of classical dressage (e.g., piaffe). As a form of aesthetic art, it is

not regulated by any competitive equestrian discipline. Based on this information, the term classical could be defined as historically developed tradition. However, it signifies much more than a mere historical process – from an equestrian point of view, it is synonymous with timeless validity, highest standards of quality, exemplary training methods, nonviolence and respect for our fellow beings; in short, it represents a cultural asset recognized by numerous generations, which stands for the harmony between animals and humans and is a fundamental and powerful example and guide to many.

No horse likes it when we put a saddle on his back, tighten the girth, and shove some piece of cold metal into his mouth. Neither does he appreciate being at our disposal, especially when we are acting as a weight on his back. Therefore, it needs to be our obligation to make riding as pleasant for the horse as possible and to adjust our demands based on his abilities and disposition – not the other way around. As a consequence, we can add to the definition of “classical dressage” the quality of being a horse-friendly and nonviolent form of riding in accordance with animal protection laws. It recognizes the horse as a being, his characteristic behavior and his well-being while encouraging him to voluntarily participate in dressage work without pushing him beyond his natural abilities or performance limit. Classical dressage is a form of science put into practice, challenging the rider’s intelligence and sensitivity. Its goal is to get the horse to do dressage exercises in self-carriage, which we interpret as proof of his voluntary participation. The classical style of riding renounces force and respects the individual predisposition of each and every horse. A collected horse carrying himself during passage is not something humans have created and forced on the horse, but something taken out of his natural repertoire of movements – it is a modification of the display behavior of an elegantly trotting stallion trying to impress a rival or a mare. This type of exercise based on a natural gait and executed in self-carriage is an example of respectable riding, which leaves no room for violence or forced, unnatural artificialities and effects. Some excesses in the training of horses are based on a lack of knowledge of the horse’s nature and have become a common habit because of negative role models. Habit has then been mistaken for tradition. Do not forget that riding also requires a great deal of thinking. You should check the definition of every single term of equestrian terminology – as they are often misunderstood – and then rethink their meaning – by yourself or with fellow riders. You need to know about the horse’s natural behavior and the anatomy of the contraction systems supporting him if you want to ride. This, you owe to your horse in order to

protect him from harm and to create a mutual relationship. An example for a misunderstanding of terminology is the term “applying aids”, which specifically and unequivocally says that we have to help our horses to carry our weight instead of allowing us to torment them with force, which would make weight bearing even more difficult.

Advocates of animal protection laws are trying to expose and prosecute cases of animal cruelty. Considering the multitude of animal species, it is understandable that offences in the treatment of animals have to be defined in general enough a way so even people unfamiliar with animals will recognize them. Subtle manipulations to exploit and thus harm an animal are usually only visible to an expert. In the same way, subtle violations of animal protection laws, i.e., incorrect aids, remain undetected as even the most passionate animal advocates are unable to recognize them if they lack the specific riding experience.

The martyrdom of the horse under saddle has been sufficiently documented in the history of equitation. If we compare the riding practices of the past to today’s competitive dressage, we might come to the conclusion that increased understanding has helped us overcome violence. However, appearances are deceptive. Sure, the state and animal advocates are looking out for horses, prosecute violations of the respective laws and take cases of animal cruelty to court. However, when people take aid application too far, which must be considered animal cruelty, they often escape prosecution. The exploitation of horses, sometimes against better judgement, but mostly encouraged by profit-making, has become more cunning and inconspicuous. Reprehensible training methods, which are officially allowed, torment in discrete ways.

One example is rollkur, where you see-saw until the horse’s mouth touches his breast. Some people try to play down its severity by calling it “hyperflexion” (overbending), which can be easily misunderstood. In any way, rollkur is cruel and reveals the ignorance of the rider who has not understood a thing

about mutual balance. It interferes with the horse's movements and works against logically developed collection that is based on gymnasticizing and anatomy. Due to the current trend towards more violence and brutalization, it seems to have become popular to see-saw in order to force the horse's noseline behind the vertical. Motivated by commerce, people with this mind-set feel acknowledged and encouraged while lacking any kind of empathy for the misery and pain of the animal subjugated by the reins. Using rollkur ignores the nature of the horse as being an animal that needs to run and whose passion is to go forward. Excessive wear and tear of the muscles, tendons and joints involved in supporting and moving the body shortens his natural life-span. Every kind of riding needs to be based on the respect for the nature and dignity of our fellow beings in the sense that we have to protect them. In connection to rollkur, we must not forget to mention tormenting bits, bridles so tight they are cutting off air supply, and draw reins, all of which are officially allowed in one form or the other.

Many riders do not seem to have any idea about how much harder they make their horses work by adding their own weight to the horse's back and by using the reins to exert pressure on the horse's sensitive mouth. In order to compensate for expecting the horse to carry our weight, we as riders have the duty to think about how to apply aids and to develop some empathy for the horse's feelings – see the world through your horse's eyes and imagine yourself in his shoes so you can lighten the weight on his back as much as possible. Using aids to force your horse to do something makes it harder for him to carry weight, while supporting aids make it easier by relieving muscles, tendons and joints, by allowing him to save energy, and by protecting him from premature wear and tear.

Movements and gaits taken to the extreme – misunderstanding or abuse?

Historical texts and riding manuals written during a period from antiquity to the present

tell the story of violent acts against the horse and how it was forced to submit to his rider. Despite the fact that an increase in knowledge of his nature brought about a general improvement of the horse's situation in the care of humans – can a horse of the present really be sure that he will not have to face ignorance and lack of knowledge, force and abuse? Let us take a look at the development of the gaits, for example, where we can detect both positive and harmful changes brought about by selective breeding and the demands of riders.

Evolution equipped wild horses with five gaits, all of them idiosyncratic and designed for a special purpose to facilitate and secure survival in the wild. Later on, riders widened the range of motion to meet their ideas and purposes. It became an essential building block of riding theory to use nonviolent aids to encourage the hindquarters, which are stronger than the forelegs, to step further forward underneath the horse's body in order to carry the rider's weight. All the while, there are four limbs that, in a coordinated fashion, determine the beat of a gait. With regard to wild horses in flight, we can say that the faster the pace of the gait, the fewer or shorter the intervals in which the hooves touch the ground and/or the more frequently and longer the suspension phase.

#### Walk – strolling around grazing

Prehistoric horses during the ice age chose walk when they were feeding, strolling around grazing, step by step. In the process, the horse's head is lowered while his hind legs step forward alternately, creating a path for energy to flow from the neck all the way to the hind hooves, i.e., putting the horse in a natural stretching posture. Walk is a slow gait with a four-beat rhythm, featuring sequences of two or three hooves, respectively, on the ground. There is no suspension phase. From a rider's perspective, walk is the "mother of all gaits": if you are unable to follow the rocking motion of walk in a balanced and relaxed manner, you will most likely encounter serious problems in the other gaits. If you use the

reins forcefully, you will interfere with the rhythm and regularity of the perfectly adjusted beats that form the walk and prevent the horse's back muscles from serving as elastic springs. Once you are advanced enough a rider and your horse is loose, however, you will be able to shorten the walk and turn it from a relaxed stroll into an elegant stride.

As a variation of walk, the Spanish Walk is designed to improve the mobility of the shoulders and prepares the horse for passage. At the same time a foreleg stretches forward, the diagonal hind leg is supposed to reach forward, too, instead of being dragged behind. Thus, the back muscles have to work, rounding the horse's back and turning the walk beat into a trot beat.

In addition to walk, we have the medium-paced gaits trot, pace and tölt (rack), which are natural and differ in the sequence of footfalls and speed. All three, however, developed when the horse was adjusting to different habitats, environmental conditions and soil conditions.

#### Trot – long-distance endurance

Prehistoric or wild horses needed trot to cover long distances in search of lush grasslands when food got scarce in the course of the seasons. Trot is an impulsive gait of medium speed and features a two-beat rhythm based on diagonal front and hind legs striking the ground as a pair. The two diagonals are separated by a suspension phase.

When we are schooling a horse in dressage, we are using the sequence of footfalls that define trot in order to gymnasticize and strengthen all the muscles, tendons, and joints involved in supporting the horse's motion so that we can prevent wear and tear caused by our additional weight. The tension that is created during collection rounds the horse's topline and turns it into something like an elastic spring, allowing the horse to carry the additional weight without negative physical effects. At the same, it enables you as a rider to control your horse without force. The most

expressive form of collection and goal of all the dressage rider's efforts is the piaffe, performed in self-carriage and unrestricted head and neck posture.

Stretching and extensions of strides and steps serve the purpose of relaxing the horse after exhausting exercises, such as flexion of the haunches in piaffe, and to allow an animal that needs to run to stretch his body and fulfil his urge to go forward. In competitive dressage, trot extensions are sometimes extremely exaggerated and over the top: in a flashy, exaggerated movement, the forelegs stretch so far forward to be almost parallel to the ground, pointing way ahead of where the respective hoof is going to strike down, while the diagonal hind leg is already about to touch the ground. The regularity of the diagonals is lost as the hooves touch down not simultaneously but split seconds apart from each other. This form of unnatural exaggeration of trot, which is either the result of breeding or of the rider's demands, has absolutely no gymnasticizing effects and is the opposite of relaxation – much less an endurance speed.

We can use the impressive trot that is part of the stallion's display behavior by turning it into a dressage exercise: the passage. Delaying the suspension phase in trot is no unnatural artificiality at all but of natural origin and clearly expresses a high degree of collection. A motivated stallion will be eager to show passage if you ask him to.

In harness racing, which is mostly controlled by monetary interests, breeders select sires and broodmares based on their ability to show trot extensions. Pulling their sulkies, trotters are "decorated" with all kinds of leather and metal (e.g., overcheck, hobbles, tongue tie) to keep them from striking off into canter or sticking out their tongues in refusal. Forcing horses to accelerate trot sequences to canter speed is to abuse and ignore the purpose of a gait that was created by evolution to be of medium speed and intended for long distances instead of short, exhausting dashes. Harness racing is designed and used for profit-making only – it is all about the totalizer.

Pace – gentle gait of an animal that needs to run

In the wild, thirsty long-distance runners like camels, giraffes and elephants like slow pace or pace-tölt in order to make it to the next water hole. The Mongolians prefer and appreciate horses with a natural predisposition for pace for long-distance travel because the rider experiences hardly any uncomfortable motion from the horse's back. Icelandic horses also often show a natural predisposition for pace – Icelandic riders, however, do not care for its naturally low speed. Classical dressage also disapproves of pace as its movements disagree with collection. Natural pace, which evolved to be slow, is characterized by a clearly audible two-beat rhythm. Lateral fore and hind hooves strike the ground simultaneously, followed by the other lateral pair of hooves – there is no suspension phase at this slow a speed. It seems like the horse was cut in half along his longitudinal axis as each side comes forward separately. Of all the medium-speed gaits, synchronizing the body halves this way requires the least amount of strength. When horses and dogs get old, they often develop this gait in its slow variety as it is very gentle on their stiff and arthritic limbs. For the same reason, you can see exhausted donkeys in some southern European countries resort to a lateral gait when they are almost breaking down under a heavy load. It also helps them keep their balance.

In Iceland, people have a high esteem for pace at a racing speed, which is, however, a human creation and imposed on the horse. While keeping the sequence of hoof beats lateral, the horse reaches canter speed. The increase in speed and body extension leads to suspension phases – not only when the two laterals alternate, but also between front and hind hoof striking the ground. The two lateral feet touch the ground one after the other (hind before front) instead of simultaneously. The question here is if flying pace can still be considered riding. The horse no longer obeys the aids, goes where he wants and takes off with rock hard back muscles. Audiences love this gait, however, as it features amazing speeds, spectacular leg movements and

soaring suspension phases. You will have a hard time finding the suppleness of a “back mover” (horse that uses his back muscles in a relaxed manner) in this picture. The horse requires an enormous amount of strength and can only keep up his speed for a few hundred yards. Exaggerating the speed of the lateral gait to become as fast as canter turns the gentle gait into a ridiculous waste of energy, that does not increase the carrying power of ponies and small horses at all.

Tölt – survival in the swamps

From a prehistoric point of view, tölt is the heritage of the horse's ancestors, generations of which used to live in swamps during the glacial period. During the course of evolution, tölt took on the sequence of beats and speed of walk since bolting in flight was impossible in the swamps. In order to keep from sinking into mud, prehistoric horses had to tentatively search for safe places to set their feet and set down and lift their hooves separately and in quick succession. On solid ground and at the rider's request, a horse in tölt can move at the speed of trot.

The sequence of hoof beats in slow tölt is the same as in walk, for example, left hind, left front, right hind, right front or vice versa – the horse goes from three-leg support to two-leg support to one-leg support.

In Iceland, people differentiate between the desired steady four-beat rhythm (all sequences are the same length), a trot-tölt, and a pace-tölt. The latter leads the horse to show a tendency to pace when he brings down his feet, i.e., the intervals between the lateral feet touching the ground are shorter. Trot-tölt, on the other hand, is more uncomfortable for the rider to sit as the intervals between the diagonal sequences are shorter. For shows, some people try to turn the sequence of beats into a steady four-beat rhythm by manipulating the natural form of the hooves by cutting them to shape or by attaching weights to the hooves in order to produce more spectacular forehand action. You can also find tölt among Latin-American

and North-American horses. Most of them move at a slower pace because their limbs are longer and their riders feel it is more comfortable that way. Icelandic horses have shorter legs and a lower body weight, which makes it harder for them to balance under relatively large riders – they are dependant on quicker sequences.

In speed tölt, the sequence of hoof beats remains the same while the speed of the gait that was created by evolution to be useful for moving around slowly in marshy areas, is forced to equal that of canter. No Icelandic horse would ever think of moving in speed tölt if it was not for the rider on his back – he would canter instead. Forcing a horse to accelerate the sequences of walk (in which the legs move separately) to canter speed is, just like flying pace, a useless idea and an abuse of the gait without any gymnasticizing effect on the carrying power of the little horse.

Icelandic riders usually sit with their upper body tilted backwards, feet pressing forward against the stirrups, and their buttocks placed far back in the saddle, which puts a lot of strain on the horse's kidney area and lumbar spine. By force of reins, the head and neck are lifted up, which causes the underside of the neck to stick out. Weak back muscles lower the back instead of stabilizing the spine and giving it the strength to carry the rider's weight. The instrument of torture that is the traditional Icelandic shanked bit pinches the corners of the mouth. Back and mouth pain taken together cause many horses to bolt or rush because of fear. In Iceland, there has been a positive development towards classical riding theory, however, since basic knowledge about horse-friendly training seems to be gaining ground.

Bits like the traditional Icelandic bit and other instruments of torture, which are officially allowed in Germany, harm the horse's mouth and cause him pain and injuries. An appropriate bit is almost always a double-jointed one with shanks, worn without (!) a noseband. Being in the best interest of the horse, this bit supports painfree steering because of the shanks. The absence of a noseband turns it into an indicator of the

quality of the rider's rein aids: too much force and the horse will open his mouth wide to protest; led by yielding hands, the horse will be content, start to chew with his mouth closed and accept the bit. In addition, the saddle needs to be placed correctly in accordance with the center of gravity, while the rider has to sit straight and upright, avoiding swaying of the upper body. This will contribute to the stability of balance of both horse and rider and the self-carriage of the horse. Icelandic horses, based on both their psyche and motion patterns, need their riders to renounce violence and manipulation, to reduce their aids to a minimum, and to adjust to and support the horse's movements – they need to let their horses do their jobs.

A fundamental and unrenounceable prerequisite for a rider of an Icelandic horse is perfectly adjusted balance of both horse and rider. The following comparison underlines this fact:

- The ratio of rider to Icelandic horse is about 180 lbs. to a maximum of 700 lbs.
- The ratio of rider to warmblood is about 180 lbs. to 1,300 lbs.

Every swaying movement of the rider upsets the balance of an Icelandic horse, even more so because it weighs only half as much as a warmblood, but has to balance the same type of rider, who, in relation, looms higher above his back. The head and neck serve as a balancing pole to adjust and regain balance – using the reins to force them in a specific frame disables this function.

Canter – gait of choice to flee in case of danger

During the ice age, when horses were roaming wild and it was winter in the northern hemisphere, horses cantered sparingly in order to save energy. Canter was only used in threatening situations such as danger from predators. Stallions would also canter in order to keep their mares together in a herd or to

forcefully drive away other stallions after a fight.

Canter used to be the fastest of all gaits, and at a medium pace on a straight line, it shows as a three-beat rhythm with a suspension phase. On the racetrack, Thoroughbreds choose a four-beat rhythm to reach high speeds and stretch their bodies as best as possible. The diagonal inside hind and outside front hooves strike the ground after each other instead of simultaneously. To “baroque” types of horses, four-beat canter in uphill balance often comes naturally and can also be observed when these horses canter in the pasture. Many horses also show flying changes when they canter on uneven ground without riders in order to help them stabilize their balance.

The common and profit-driven practice of starting young horses on the racetrack before they are physically ready leads to premature wear and tear and shortens the life-span of race horses.

Some of the old and questionable masters of riding used to swear by rein-back in two-beat canter, which goes against all knowledge of the horse’s nature and his urge to go forward.

In a nutshell, collection in the classical sense requires sensitivity in the coordination of forward-driving aids (first and foremost) and secondary asking and regulating aids, i.e., an interplay between accelerating and gently reining in forward thrust. The goal is to encourage the hind legs to reach further forward underneath the horse’s body and center of gravity so that they carry an increased amount of the rider’s weight. As a direct consequence of lowering his croup, the horse will elevate his head and neck to support his balance. Based on the solid foundation of natural gaits, classical dressage enables the horse to carry his rider’s weight and obey the aids. Perversions of gaits designed to cater to the audience’s sensation-seeking weaken the horse’s body and increases the risk of leg injuries. Forcing the horse to accelerate medium-paced gaits to canter speed without changing the sequence of hoof beats is also a perversion of the

purpose evolution created them for. Energy-saving gaits are turned into a senseless, exhausting ordeal. The only thing, misdirected selective breeding, exaggerated performance standards and meddling with the horse’s legs does is secure the livelihood of veterinarians.

On another note, there has been a development in camel races in the desert of Qatar and the United Arab Emirates, which I hope will not influence horse racing. Over a distance of about 19 miles, children were used to race the camels because they weigh so little. The children were tied to the camels’ backs and given sticks to hit the animals and drive them forward. At some point, people stopped abusing children in this way because a new, mean technology promised better outcomes. Animal cruelty reached a new level. Now, people tie remote-controlled robots to the camels because they weigh even less and come equipped with a software that allows the camel’s owner to trigger whiplashes through radio signals. If radio contact to robo-jockey and whip fails, the computer automatically triggers electronic shocks. Switching from child to robot cut racetime in almost half. That leaves us with the question when perversions like these are going to sneak into horse racing. Sadly, electronic shocks, applied by way of whip and spurs, and other dispicable “aid reinforcers” have already been tested in secret.

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By aggressively lashing out with his foreleg, this stallion is threatening to start a fight with his rival.

Turning the threatening gesture into Spanish Walk improves the mobility of the horse’s shoulder and prepares him for passage.

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Different forms of a collected frame:

Young, uncollected horse: the hind feet do not overstep the tracks of the forefeet, the croup

is not lowered, the torso does not show any uphill balance.

Piaffe: highest degree of collection, the croup is lowered so the haunches can flex, the hindquarters take on more weight, the head and neck are elevated.

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Medium trot: an imaginary line can be drawn from the noseline forward and down to where the front feet will strike down.

Extended trot: the stretching of the front leg is exaggerated.

Lengthened strides in trot: release after piaffe allows the horse to stretch and relax in forward motion while the rider yields the reins.

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Pace was originally a slow gait to be used to cover long distances. The lateral feet strike down simultaneously – no suspension phase in between the laterals.

Pace at trot speed shown under saddle. The lateral feet strike down simultaneously – no suspension phase in between the laterals.

Flying pace: high speed leads to suspension phases when the horse switches from one lateral to the other. Moreover, the hooves on one side do no longer strike down simultaneously but after one another.

Racing trot in harness: the diagonal feet strike down in succession instead of simultaneously.

The horse strikes off into canter indicating that maintaining trot at canter speed is too difficult for him.

< Pictures p. 33>

Sequences of hoof beats in tölt and the implications of increasing the speed.

The horse switches from three-leg support to two-leg support at a low speed (like a hurried walk) as intended by nature for survival in swamps.

The same sequence, but at swift trot speed as requested by the rider. The horse switches from two-leg support to one-leg support. Three-leg support is omitted so that one leg alone carries all the weight for a fraction of a second.

Both sequences are followed by a lateral two-leg support sequence.

< Pictures p. 34>

Balanced and steady sequence of hoof beats in tölt without any flashy forehand action.

Spectacular (man-made) forehand action, which strains the forelegs unnecessarily. It is very exhausting for Icelandic horses to move their legs separately in tölt which is why on long trail rides, Icelandic riders always take along at least one other horse so they can switch once an hour.

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Latin-American breeds with specialty gaits

Paso Peruano in tölt (pasdo llano). He alternates between three-leg and two-leg support.

Baroque type of horse showing four-beat canter in uphill balance. The left forefoot strikes the ground shortly after the diagonal left hind.

The picture shows a young stallion's voluntary display of submission to the lead stallion, who underlines his claim to superiority and leadership by elevating his head and neck. The young stallions is harmed neither physically nor psychologically and simply accepts the

hierarchy as a system he must obey. (Herd of young Lipizzan stallions in Piber, Austria.)

Mangalarga Marchador (Brasil) in tölt, switching from three-leg to two-leg support. The sequences of hoof beats of Mangalarga Marchador and Paso Peruano differ slightly with regard to when in the sequence the individual feet touch the ground. Both movements are of medium trot speed.

Thoroughbred at full speed stretching his body as much as possible. The result is a four-beat

gallop in which the diagonal hind and front feet touch the ground after one another. The left hind hoof is already back in the air while the right front is still on the ground.

Rollkur (overbending) and forced submissive frame and humiliation (as well as forced absolute elevation of head and neck without any possibility for the horse to move) do not only harm the tendons, muscles and joints the horse needs to support his movements, they also have serious negative effects on his psyche.

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## Core Exercises

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### Gymnasticizing your horse evenly on both hands

*Monica Theodorescu was interviewed by Jessica Kaup.*

Every rider and trainer has their own “favorite exercise” to gymnasticize their horse. Someone might prefer transitions, someone else lateral movements or other exercises particularly helpful in improving suppleness. In our new series, qualified trainers will be presenting their “core exercises” and explain why they are so much in favor of them and their positive effects on the training of their horses.

Monica Theodorescu: Serpentes

Actually, my favorite exercise is serpentes, loops width of the arena. In trot and canter, for that matter. I feel like serpentes are a terrific exercise to gymnasticize and work the horse equally on both hands.

Serpentes require quick lead changes, bending and flexing which keeps older horses

flexible while teaching young horses to become equally supple on both reins. Horses need the same degree of flexibility on both reins and must not become stiff on either one. However: just like us, horses have a good side as well as a bad side to which everything is harder to do. Some riders get stuck trying to improve the horse’s weaker side, while others purposely neglect it in order to enjoy riding on the good rein. With regard to this, serpentes do not give you a choice in a way. You simply have to change reins at regular intervals.

Serpentes are also a good way to get your horse in front of your forward-driving leg aid. Rein contact remains even and relaxed since the hind legs alternate in carrying weight.

Correct figures

The most important thing is to actually ride the serpentes correctly. It is pointless to just keep crossing over from one long side to the other. You really have to ask your horse to be exact in his changes from curved line to straight line, in changing bend and flexion

from one lead to the other. In order to do this, you need to ride the loops precisely and from marker to marker, irregardless of the number of loops.

While working on serpentines, I can focus on activating the inside hind leg. Since the quick change of reins also changes the leg that has to work most, I prevent one-sided overstraining. In short intervals, both hind legs are thus asked to carry more weight.

As a variation of the regular serpentines, you can turn the half-voltes into full voltes. In this way, you can correct your horse if he resists your inside leg and does not want to bend. I also like to continue with a full volte if my horse puts too much weight on his forehead.

#### Rhythm and pace

I pay special attention to regularity when riding the exercise. Rhythm and pace are supposed to stay the same throughout the entire serpentines.

I consciously pick a pace I will stick with. It might be working trot, collected trot or even (good!) passage. I do not care for serpentines ridden with passage-like hovering steps – not because of the serpentines, but because of the tense movements that I despise. And by the way: many riders, who ride serpentines in this manner and cause their horses to become tensed up in their back, will end up with irregularities of rhythm during the course of this exercise – horses that were able to reach far forward with their forelegs on a straight line, will expose the tension in their backs by showing visible balance problems and irregularities of rhythm.

#### Counter-canter on the serpentine track

In addition to the possible usages mentioned above, when ridden in canter without lead changes, serpentines are a terrific way to work on counter-canter in short intervals. In my opinion, counter-canter is an exercise particularly helpful to gymnasticize your

horse. Unfortunately, neither serpentines nor counter-canter are required in advanced tests (in Germany, in any case). Horses and their movements are supposed to become shorter and shorter and as spectacular as possible – while important elements of gymnasticizing work are being neglected. As a consequence, they are also often neglected during training at home which is not supposed to happen!

Serpentines are a tool to gymnasticize your horse and really are useful at any time. It goes without saying that I will not ask a young horse for six loops in canter. In trot, however, you may very well include loops of appropriate size and at shallow enough an angle. In order to ride serpentines in canter, your horse needs to be trained enough to move at a clear three-beat rhythm. He will learn to actively bring his hind legs forward underneath his body and control his pace. Most horses will collect more easily this way and learn how to carry themselves. If you feel that your horse slows down too much and starts becoming irregular, it might be necessary to ask for extended canter strides on a straight line until his natural forward thrust has been reestablished. Afterwards, you can continue working on serpentines.

#### Possible mistakes

Besides paying attention to riding serpentines correctly, you also have to watch out for your seat. Your legs have to change position correctly. While your inside leg bends your horse and drives him forward, your outside leg regulates the hindquarters. The leading rein also has to be changed smoothly. During all of this, the flexibility of your seat is very important. You must not tip your upper body or collapse your hip. Naturally, you have to follow the direction of movement – do not do this, however, by bending to one side and collapsing your hip. You must also avoid to throw your weight from one side to the other when changing leads. This would interfere with your horse's balance and cause irregularities of rhythm.

Besides haunches falling out, a possible mistake your horse could make is leaning on his inside shoulder. He might also tilt his head.

#### How to ride serpentines

During this exercise, your horse basically commutes from one side of the arena to the other and back again. It starts with a half-volte, followed by a straight line across center line, followed by a change of rein and another half-volte on the new rein.

Even though it might not be obvious, you start the exercise in the middle of the short side. After pushing your horse deep into the corner, you turn and follow a line parallel to the short side, crossing over to the other long side. The number of loops possible and the diameter of the half-voltes depend on the size of the arena and the training level of your horse.

Originally, one half-volte was to immediately follow the next, omitting the phase during which the horse had to go straight. This version of the exercise is still useful if you want to work on bending your horse more intensely. In order to do so, your inside leg needs to push him forward even more. Try this version in walk on long reins to improve the activity of your horse's back muscles.

<Pictures p. 39>

In order to relax: allowing your horse to stretch down and forward.

< Pictures p. 40>

Monica Theodorescu was born on 02 March 1963 in Halle, Germany. Being the daughter of famous trainer George Theodorescu († 2007) and successful rider/trainer Inge Theodorescu († 2010), she basically inherited a passion for horses. The important dressage arenas of the world were her sand box. In her dad's lap, Ms. Theodorescu experienced her first flying changes before riding piaffes on his successful mare Cleopatra when she was five years old. Even on her own horses, the lady raised in Füchtorf, north-west Germany, was successful at a young age. On Colorado, she won team gold and individual silver at the European Championships for juniors and young riders, respectively. After becoming a business assistant in languages and correspondence, she continued her riding career professionally. Her really important wins, however, are thanks to her pitch-black mount Ganimedes. On "Gani", Ms. Theodorescu won Olympic team gold, became team World Champion and earned individual bronze at the World Championships. On another occasion, Grunox, her impressive silver-maned chestnut, carried her to Olympic team gold. Her career is lined with wins at the German Masters, World Cup events, and the German Dressage Derby. For the last couple of years, her guarantee for success has been Whisper, who has been helping the sought-after trainer find her way back to the top.

# How to Find a Riding Instructor Who Is Right for You

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by Ina von König-Bunk

The number of self-proclaimed riding instructors has grown tremendously. More and more of them advertize as “classical” or pride themselves on being students of successful trainers even though all they did was attend a weekend-long clinic. These individuals are the reason why the image of riding instructors in general has become conflicting. The question about which qualifications you need to have in order to be considered a good instructor remains unanswered.

In Germany, a three-year apprenticeship as professional horse trainer/instructor recognized by the German National Equestrian Federation (FN) is required to become an instructor. However, you also have the possibility of earning a number of specific certificates, which will allow you to gain a trainer’s license and work as an instructor at a riding club. You could also take a special test to become an amateur instructor, which is possible only at the FN’s facilities in Warendorf, Germany.

As you can see, there are a number of possibilities to be officially allowed to call yourself a riding instructor. As in many other areas, however, your education alone does not define whether you are good at what you do or not. Especially with regard to working with people and horses, an instructor needs a significant amount of knowledge, empathy, experience and people skills. In addition to solid riding skills and didactic and methodical principles, you are required to have knowledge about kinesiology and riding theory.

Considering the complexity of these requirements, we have to ask the following question: How do I recognize a good riding instructor who will, for example, help me on my journey from First to Second Level, and what can I expect from this person? This article will present practical examples of what good lessons and instruction can look like if done properly.

Example 1: Proudly, a rider tells her new instructor about her successes in First Level dressage and that she feels like it is time to start at Second Level. Pleasantly surprised about her elegant and impulsive horse, the instructor gets started right away and has the rider work on the respective exercises to comply with her request.

They practice counter-canter, voltes and half-voltes back to the track – the entire Second Level repertoire. The instructor’s advice is along the lines of “too loose, collect him more, the volte is too large, improve contact”, etc. Unfortunately, she does not get any explanation as to how she could improve the issues. At the end of the lesson, the rider has ridden all the exercises, but the actual point of Second Level – the beginning of collected work, that is – she did not understand or feel in any way. Horse and rider are exhausted even though they did not actually learn anything.

How can you help this rider? As a good instructor, you would come up with the following concept:

First of all, you would have to watch horse and rider to see for yourself how advanced the two of them really are. Let the rider present her horse to you in warm-up so you can check if she is able to ride him forward-downwards at any time. You have to observe the two in

order to detect possible flaws in her seat or shortcomings with regard to the Training Scale. Since applying aids correctly and developing collection is possible only if the rider's seat is correct, you need to explain to your student the importance of her posture and the effect of faults on her horse. In our example, the rider shows a tendency to fork seat. In order to correct this, an experienced instructor would regularly ask her to ride without stirrups and practice her seat on the lunge line. While constantly correcting her seat, you should let her ride exercises that improve suppleness. Transitions within a gait or from one gait to another are very helpful, for example. In order to develop a good collected canter, it is particularly useful to transition to canter from walk in shoulder-in. As soon as the horse has collected for a few strides, the rider should transition to walk and strike off into canter once again. As an instructor, you have to remember to have your students praise their horses regularly as horses might understand constant repetition as punishment. If the degree of collection has improved by the end of the lesson, you can ask for some of the exercises in the order they appear in a Second Level test.

An instructor needs to find out where on the Training Scale horse and rider are situated and continue from there. It is impossible to correctly train a horse if certain training steps are skipped; as a result, he will sooner or later develop psychological or physical problems.

Example 2: In our next example, the student has the same recurring problems with contact. Her mare usually goes against or above the bit or leans on it. The only advice her instructor has had to offer over the last couple of months was "do not pull, soft hands, push forward, push, push". Besides that, the rider is supposed to flex her mare in the poll when she is standing at a halt in order to get her to yield. As soon as the rider asks the horse to come forward, however, the usual problems reappear almost immediately. There has been no improvement.

How can you help the two of them get out of the dead end they are stuck in? As a good instructor, you would get on the horse

yourself to analyze the problem. It is often the case that the mouths of horses like these have become so insensitive that it takes the experience of a good trainer to encourage them to change. You have to drive the horse forward by tensing the muscles in the small of your back and applying leg aids while, at the same time, asking him to yield in the poll by applying non-yielding rein aids. Once the horse understands that the pressure on the bit lessens as soon as he yields, the first step in his retraining has been made. Afterwards, the student has to get back on her horse and maintain the "new" feeling she will experience. It is most important in this situation to teach her when to yield and when not to yield while simultaneously driving her horse forward. This is the only way to enable the student to ride her horse in steady contact later on.

Irregardless of whether students are beginners or well on their way between Third and Fourth Level, they should pick an instructor who has trained horses at their level before. As a competent instructor, you will thus be able to correct the horse yourself and offer solutions to specific problems. This is the only way to find out what you can expect from your students. Students beware, however: an exceptionally talented rider is not necessarily a good instructor!

Example 3: A rider has been successfully competing at First Level and her horse would be able to do collected work in canter. Counter-canter is a problem, though, as the horse changes leads or swaps leads behind when turning. The instructor asks the student to strike off into counter-canter again and again and after the tenth unsuccessful attempt, she has to punish her horse. The subsequent advice is to put even more weight on the outside sitting bone and flex the horse more clearly in the poll.

The mare becomes increasingly nervous during the course of the lesson and in the end, the two of them are completely frustrated and the horse frightful. The instructor calls the mare "a little stupid" and feels like "she has to get through this now".

As a good instructor, you would analyze the problem and realize that in counter-canter, the horse keeps bringing her croup inwards. In order to maintain her balance in turns, the mare has to change to cross-canter or the correct lead. Therefore, the first thing to do is improve straightness. What is the best way to do this? You should ask your student to come forward in counter-canter and use her guarding, inside leg a little stronger in order to push the horse's croup back to the track. Ask her to take her outside shoulder forward so that it does not push the hindquarters back towards the middle of the arena. Do not forget to check the direction your student is looking in. The horse will straighten out after a while and the likelihood of changing leads will decrease. After the first successful turn, tell your student to transition to walk or trot and praise her horse. After the next correct attempt, the horse has earned a break and a lot of praise. The best thing to do is to work on this exercise at the end of the lesson so that the horse is also rewarded by the rider dismounting.

During training, horses react to physical principles. A lack of support from the rider makes it unnecessarily hard for the horse to maintain counter-canter during turns, especially since the exercise is new to her. As a good instructor, you would understand the connection and work on it.

Example 4: In the following example, the horse of our next student is easily spooked, likes to suddenly jump to the side and keeps an eye on his surroundings at all times. Sometimes, he gets a little "naughty" and takes off bolting through the entire arena. The instructor wants the student to keep riding past the frightful objects over and over again. She must punish her horse at the first signs of resistance. "Come on, show some self-assertion. Don't put up with his behavior. You are the boss and decide where you want to go. Use your whip ... etc." The horse naturally becomes more and more nervous during the course of the lesson. In the end, he does go past the objects, but it costs the student a lot of energy and strength to get him to do so. The instructor is satisfied and emphasizes once again the importance of being assertive.

The next day, the student tries to ride past the disturbing objects again. This time, however, the horse already shies 15 meters (about 14 feet) before she gets there.

What would be a better solution to this problem? Horses are flight animals and very different in their personalities. An experienced instructor is always aware of this fact and would try to first of all explain to the student the flight behavior of horses. Nevertheless, the student would still like to be able to ride anywhere she wants. Without even getting close to the fear-inducing objects, you should have the student work on the horse's suppleness by concentrating on transitions. This way, bolting can be better controlled in the long run. Afterwards, speaking with a soothing voice, you should lead the horse to the objects, show them to him and let him sniff them. The next step would be to ask your student to ride past the objects in shoulder-in while clearly flexing the horse's head and neck away from them. It is essential to keep praising the horse and talk soothingly to him at the same time. Additionally, you can improve the horse's trust in his rider by recommending ground work, trail rides in the company of a reliable lead horse, and lots of diversion. Monotonous "work" will eventually lead most horses to come up with silly ideas. At the end of the lesson, you should leave your student with a short summary so she can understand your reasoning and the method you chose. You should also provide her with a training program she can follow over the next couple of days until her next lesson. What about the really "naughty" horses, however, that like to get rid of their riders every once in a while even though there are no external factors responsible for the behavior? As an instructor, you have to face them with clear, respect-inducing behavior – not brutal force. Horses are intelligent enough to tell the difference so every instructor needs to make sure not to cross the line. This is the only way communication and obedience can be based on trust, the prerequisite for a relationship, in which the horse is your partner.

Example 5: In the next example, the horse has been correctly trained in all Second Level exercises. Since he is relatively big, his petite

rider is not able to keep him collected and collapses her hip. Her current trainer keeps telling her in a loud voice to “keep the horse together, the hind legs need to reach further forward. Come on, use your legs. You can take a break later.” The collapsed hip is hardly commented on and only referred to as “don’t bend”. Especially before extended strides, the rider gets a bad feeling because her instructor’s loud and harsh comments have begun to make her really uncomfortable.

Every student is different. While some of them can take a lot of criticism, others quickly lose self-confidence and motivation. Dealing with this fact requires a high degree of empathy. You also have to always express positive feelings about your students and let them know that you think they are capable. If a student has memorized an incorrect motion pattern (like our rider collapsing her hip), it will take countless corrections in order to get rid of the mistake. Nevertheless, you have to make an effort to act professionally, concrete, motivating and in a friendly manner. Otherwise, your students will become afraid of you, which is a guarantee for failure and can be avoided. On the other hand, students should not feel offended by sudden loud expressions their riding teachers might be blurting out in the heat of the moment, when they get all excited about something. Often, a certain degree of tension is necessary to push your students’ limits and get them to show top performances. This also applies to yourself, by the way. A satisfied “awesome, well done” is like music to the ears of riding students.

When correcting your student’s posture, you have to explain the connection: when you collapse your hip – you put pressure on only one sitting bone – which causes your horse to become crooked. The comment “do not collapse your hip” will not be helpful to your student as she is most likely not aware of her incorrect posture. It would be better to tell her: “Lift the shoulder that is lower than the other – imagine a thread attached to the ceiling pulling up your shoulder.” In this way,

the mistake is visualized so that later on, it will suffice to say “thread” in order to correct it. Since we are living in the age of media and technical equipment, you can also record your student and let her see the seat problem for herself. To improve the issue of the horse falling apart and losing collection, you can help your still weak student by asking her to ride lots of transitions and keep intervals of intense work short. When you are asking her for extended tempi, you should only concentrate on if her horse obeys her aids for the first steps and pushes off more powerfully. If she succeeds, you have to praise her and the horse. In this way, you create momentum, which will be motivating for both of them. At the beginning of each lesson, agree on a common goal and set priorities. Choose small steps so that there will be a feeling of success for horse and rider at the end of the lesson.

To sum up, we would like to expressly warn you not to check your brain at the entrance when entering the barn. Unfortunately, there are still many people who worship their “masters” and, full of admiration, call them “horse whisperers”. Whether your riding instructor is beneficial to you and your horse or not, you need to decide for yourself. You should be able to make an informed decision after reading this article and taking a close look at the person you have chosen.

#### Piaffe interactive

We would like to know how you would correct a horse that tilts his head instead of correctly flexing in the poll – on the basis of being ridden by a rider with a correct seat. How would you help your students?

Describe your method in 50 lines or less and get a chance at winning a book. Our jury will pick the best short essay.

We are looking forward to your contributions.

# A Masterpiece of Evolution:

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## Long Way Home – The Evolution of the Horse

By *Arnim Basche*

Horses and their ancestors had been on a long journey before we finally met them. If you are one of those people who enjoy riding or watching equestrian sports from all over the world, you are probably not thinking about how horses became the way they are today – or about the incredibly long journey their ancestors had to endure, surviving in a world long gone. The voyage was a difficult one lined with dead ends, but the horse emerged victorious in the end. The little being that first set out and found his way did not look anything like *Equus caballus* does now, eons later. After all, horses were no prefabricated “modular beings” that came with a final construction plan.

The earliest ancestor of today’s horses lived about 55 million years ago during Tertiary Period, was the size of a rabbit and scampered through brush-covered swampland looking for leaves to eat. More precisely, we are talking about the Eocene Epoch, which is the second eldest period within this geological era. For this reason, some scientists started calling the oldest known member of the Equidae *Eohippus*. Another less common name is “dawn horse” – based on the Greek word “eos”, which the ancient Hellenes used to describe the goddess of dawn who opened the gates of heaven with her “rosy fingers”. More than 170 years ago, the first fossils were found by mere chance. We are only talking about little hints at its former existence. In his book „Die Urpferde der Morgenröte“ (Prehistoric horses of dawn), renowned paleontologist Dr. Jens Lorenz Franzen describes the following discoveries, which are essential to the phylogenetics of horses: “It was only a small tooth found by William Colchester, a brick yard worker, in 1838. Colchester discovered the relic in a clay pit near Woodbridge in

Suffolk, England. One year later, another piece was found, this time a large part of a skull including well-preserved teeth. It turned out to belong to an animal the size of a rabbit and was discovered by another Englishman called William Richardson. He was studying nature near Studd Hill at the coast of Kent when he came about the fossils. Both discoveries found their way into the hands of Sir Richard Owen, who later became the director of the department of natural history at the British Museum in London. Owen realized that both fossils belonged to the same species. In 1840, he officially named the animal *Hyracotherium leporinum* (“Hyrax-like beast”), but he did not understand that what he was looking at were the remains of the 55 million-year-old ancestor of all horses – extinct and alive today.”

The eldest ancestors of all equids lived during an era when the world did not look anything like today. Europe, for example, was a partly flooded archipelago, its climate was tropical and its shape very different from what it looks like today. The Alps still had to come of age and become the 745 mile-long massif we know so well, while the ancestors of human beings were at the level of development of prosimians. Moreover, continental Europe and North America were still connected by the De Geer Route or land bridges, respectively. Crossing the Thulean bridge, which was farther south, the *Hyracotherium* traveled from Europe to the New World, where it evolved into different species. The same evolutionary changes happened in the Old World, where 49 million years ago, three different horse species had evolved. One of them was *Eurohippus*, a Fox Terrier-sized equid. These little guys were well-preserved in evolutionary tailings so that we have surprisingly detailed knowledge of their skeletal structure. For example, their forelegs

showed four separate hooves and their hind legs three. Therefore, instead of just four, Eurohippus had a total of fourteen hooves, which were all of different sizes. The place where an amazing amount of high-quality prehistoric horse fossils were found and torn from their subterranean existence, is an open-pit mine called Messel, near Darmstadt, Germany, which used to be a source of oil shale. Messel is the most famous place of discovery of prehistoric horse fossils – and, so to speak, the epicenter and mecca of scientific research concerning this matter. In 1975, Dr. Franzen, who was carrying out excavations on behalf of the Senckenberg Institute, discovered the first Eurohippus, which was considered a special treasure when pulled from the hardened prehistoric mud it had been sitting in. Currently, we are counting sixty more or less complete skeletons of prehistoric horses from the Eocene Epoch that were found in Messel – among them foals and mares in foal. Some of the remains are in such excellent condition that even their coats, manes and tails were preserved. With the help of modern scanning electron microscopes, scientists were able to find and analyze their stomach contents. It seems incredible that people, due to their provincial narrow-mindedness, were thinking about turning this site the whole world envies us into a huge landfill serving the entire Rhine-Main area! Fortunately, after 25 years of heated debates, the matter was decided in favor of Messel and scientific research – thanks to countless supporters all over the world. Today, Messel is considered a treasure chest of geological history and was declared part of our World Natural Heritage based on its being a unique source of knowledge. It is Germany's only World Heritage of natural quality.

Over the course of time, fossils of prehistoric horses have been found in other places as well, most of all in North America. Here, the main phylum of a new species of horses was to evolve, which turned this area of the world into a catwalk of Equid evolution – at times, thirteen different types of ancient horses coexisted! Eventually, some Equidae as well as one type of the Equid family migrated to the Old World by way of a land bridge existing at the northern edge of the Bering Strait at that

time. In North America, the last two types of Equidae, *Equus lam-bei* and *Equus occidentalis*, became extinct not long after the last ice age 8,000 years ago. Horses did not return to North America before the sixteenth century when looting Spanish conquistadors were roaming through the southwest part of the continent after it had been discovered by Christopher Columbus or Amerigo Vespucci, respectively. With regard to actual prehistoric horses, only one fossil of similar age and high degree of preservation like the ones in Messel have been found in North America. While in other parts of the world, no successful discoveries have been made at all, additional fossils of Eurohippus & Co. were unearthed in areas of Germany called Geiseltal (near Halle) and Eckfelder Maar (located in a low mountain range called Eifel).

All prehistoric horses were similar in body structure and way of life. The animals were about 12 to 20 inches in height (3 to 5 hands), had stocky necks, short legs and spines curved in the way typical for Duiker antelopes. Their tails were of medium length and ended in a tassel. At the end of the Eocene Epoch, these types of Equidae became extinct in Europe so that, 35 million years ago, the evolution of the horse continued only in North America! Powered by environmental influences, evolution in its leisureliness kept working on the creation of modern horses. Since we have ways and means to disclose its secrets, we know what happened all those millions of years ago. Due to a drier climate, grasslands were spreading while wooded areas became smaller. Prehistoric horses had to react to this development and evolved into *Epihippus*, *Meshippus* and *Miohippus*. These genera were slightly bigger than their predecessors and their backs less curved. Moreover, their legs, neck and skull were longer. The most important changes with regard to becoming browsers and grazers happened to their extremities, however: both front and hind legs were equipped with three toes. In addition, the two side toes became shorter and would only touch the ground and act as support when the animal ran fast or put more weight on its feet. Under normal circumstances, the “three-toed horses” would only walk on one toe or hoof, respectively, of each leg. This was

an important step towards walking on the tips of their toes and becoming odd-toed ungulates. In some genera, the shape of the jaws changed too while the masticatory organs adapted to ecological circumstances and high-crowned molars evolved featuring complicated and effective grinding surfaces.

The evolution of the horse kept progressing until, about 22 million years ago, equids divided into grazers and leaf-eaters such as *Merychippus* (who stood as high as 40 inches or 10 hands, respectively) and *Anchitherium*. The latter was the first genus to migrate back to Europe by way of Asia. For 16 million years, there had been no equids at all living in Europe. Eleven million years ago, *Achitherium* was displaced by *Hippotherium*, whose spine was straighter than those of any equids before. Thirteen skeletons discovered near Höwenegg/Tuttlingen prove that it also used to live in Germany. One million years after the dawn of *Hippotherium*, *Hipparion*, another three-toed horse, evolved and spread from Europe all the way to Africa. Scientists discovered 3.6 million-year-old tracks of a *Hipparion* mare and her foal which prove this claim. Close to Laetoli, North Tansania, their prints have been preserved in volcanic ash, which used to be wet before turning into stone. It is safe to say that the African savannas where the place where humans and horses (in their early forms) met for the very first time since the area of Laetoli also contains the foot prints of *Australopithecus afarensis*, a prehistoric human being able to walk upright, which were found in the same type of soil and are of the same age as the ones the two *Hipparions* left behind.

3.6 million years ago, evolution had already begun to create horses in their final and current form. As a matter of fact, 5 million years ago, improved versions of prehistoric horses had once again evolved in North America: *Astrohippus*, *Pliohippus* and *Dinohippus*. Their development can be traced back to *Merichippus* and their existence marks the beginning of the last chapter of a masterpiece of evolution called 'the horse'. In all of them, we can see a concurrent loss of the two lateral toes on each foot – the final step toward becoming single-toed animals.

The fact that their habitat had changed from woods to grasslands had driven these types of horses out onto open and wide ranges. As a consequence, they had to escape from predators and dangerous situations by fast and long flight – this time on significantly different soil conditions than before. Over time, the speed necessary for flight triggered the growth of the middle toe, which became capable of carrying most of the horse's body weight. At the same time, the lateral toes degenerated and became redundant. Since horses were moving on hard grasslands, three toes, which had kept the horse from sinking in, were no longer necessary. The only one to make use of this process, however, was *Dinohippus* (50 inches or about 12 hands, respectively). Together with *Hippidion* (existent in Patagonia, South America, until shortly after the last ice age), *Plesippus* and *Allohippus*, *Dinohippus* was the closest direct ancestor to the modern-day genus of *Equus*, which has been existing for at least two million years. The evolutionary process from *Dinohippus* to existent horses began about four million years ago. Once browsing through brush and bushes, horses had finally evolved into highly specialized runners and – same as donkeys, onagers and zebras – the only single-toed ungulates in the world. 2.5 million years ago, *Allohippus* became a pioneer with regard to evolving into true horses and migrated from North America to Europe by way of Asia.

As you can see, it took fifty million years and a lot of ingenuity until horses finally arrived at the stage they are now – and, at the same time, became the prime example of evolution. Even though the way their line of ancestors has evolved was very complicated and includes some wrong turns here and there, it is the most complete of all mammals considering the fact that it is an almost continuous sequence of species with regard to chronology and types! Summing up, we can say that the genesis of the horse is thanks to the environmental conditions his ancestors had to face and adapt to on their journey through time and space – even though evolutionary trends are also always serving economic principles in order to improve the energy balance of an animal and its

adaptation to the requirements of its respective environment.

The only reminder of Hyracotherium and his ancestors are some fossilized bones. Real horses, however, survived – even in North America, where they became extinct (together with other animals such as the mammoth) only after the last ice age about 6,000 BC. The reason for this mass extinction is unknown. What we know for sure is why horses were able to survive, up til then, alongside other animals in an environment similar to the arctic desert. After the dawn of the ice age 1.8 million years ago, northern North America did not completely consist of ice-covered, hostile regions. Even though, all over the world, glaciers had migrated south and were covering significant parts of what is now the United States, they were trapping incredible amounts of the world's water supply so that in times with the greatest amounts of ice, the sea level was up to 410 ft. lower than today! Therefore, during the ice ages that followed periods of warm climate, the Bering Strait between Alaska and eastern Siberia dried up several times turning into a land bridge. The Bering land bridge was part of a land mass called Beringia, which encompassed about 13 million square miles in its peak. It reached from the Mackenzie river in the east to the Lena river in the west including parts of the Arctic Ocean. Beringia was mostly ice-free and surprisingly life-sustaining: despite its similarities with Arctic tundras or mammoth steppes, this huge area and its rich grasslands served as a highly productive ecosystem. In a 2003 issue of the trade magazine "Nature", Canadian scientists described the composition of the plants in the area after they had discovered and analyzed a 24,000-year-old rodent nest and the stomach contents of a frozen horse carcass. They found leaves, blossoms and seeds of meadow-grass (*Poa*), sedges (*Carex*) and rushes (*Juncus*). Moreover, they discovered mugwort, poppies (*Papaver*), cinquefoils (*Potentilla*), *Ranunculus* (e.g., buttercups) and other types of herbs. Therefore, Beringia must have literally been a Garden of Eden, which offered abundant amounts of food to countless animal species. This paradisaical environment was home to the first "real" horses, which – about 20,000 years ago – must have certainly

run into some weird-looking creatures walking on two legs. Those horses that had migrated to Europe had already encountered human beings 40,000 years ago. Who knew that thousands of years later, humans would domesticate horses so they could share a common destiny?

The domestication of wild animals is a fascinating chapter in our history and is called the "earliest biological experiment" of the human race. Wolves were the first to make their contribution without which we would not be able to enjoy the company of the more than 400 different breeds of *canis familiaris*, who is a descendent of wolves. Afterward, humans domesticated sheep, goats, pigs and cattle – horses followed relatively late. Like everything else that happened in prehistory, we cannot exactly pinpoint the year and date of when our ancestors began taming horses. For a long time, scientists believed that the domestication of *Equus* started about 3,500 or maybe even 4,000 years BC. However, domestication as a significant change in the horse's way of life dates back to at least 5,000 BC! No prehistoric human being carved this date into a stone, however, so we would know exactly. Our knowledge about these events is based on molecular biology, a highly important and successful side-kick of paleontological research – instead of sifting through layers of soil, this form of hi-tech science takes genes to look for clues. Genetic material, also known as DNA, can be extracted from any eukaryotic cell – even if the respective animal has long been dead. In April 2009, a team of German and Spanish molecular geneticists used this technology and were able to analyze fossilized horse bones to find eight mutations of six known coat color genes. The analysis of fossilized bones of wild horses found in Siberia, Eastern and Central Europe as well as the Iberian Peninsula did not show any of these variations in color. The respective horses had been living at least 10,000 to 12,000 years ago and their coats were uniformly earth-toned or reddish-brown – the original color of horses, which is well-known thanks to impressively life-like and artistic prehistoric cave paintings. After the glaciers finally began to melt about 10,000 years ago, the matter of coat color became

more interesting. Scientific findings point to the existence of black horses, which could be seen for the first time between 8,000 and 5,000 BC. Black coats evolved as a reaction to the increase of forests and wooded areas. In Siberia around 5,000 BC, there were chestnuts and, surprisingly, sabinos (horses with distinct spotting patterns and white markings). Afterward, the coat color spectrum of prehistoric horses literally exploded including colors such as tobiano (large-patterned pinto). Much of the variation is due to human influence on the wild horse population and selective breeding, however.

Hundreds of thousands of years, horses had simply served as a source of meat to humans and their predecessors. Our ancestors had been tracking and hunting them using long-distance weapons. The New Stone Age, however, brought about the “Neolithic Revolution”, drastically changing the living conditions for human beings. Formerly a roaming hunter-gatherer, man settled down and invented agriculture, cultivating his fields using crops and bred livestock to suit his needs. An early form of affluent society developed, which coincidentally liked to keep horses as domesticated animals. Archeologists assume that the first attempts at taming them took place in the Eurasian steppes. Over time, wild horses must also have been domesticated in other places far apart from one another, however, as it seems unlikely that the entire process could have happened in one single spot. Once again, molecular genetics produced evidence that points to at least 77 original mares necessary for the variability in horses we can find today. In reality, it was most likely a lot more than that. The Alps supposedly served as an independent area of domestication, by the way. Here and in Central Europe, however, domesticated horses only existed after 3,000 BC. One of the last areas to have domesticated horses was Western Europe, where they were still hard to find during the first half of the third millennium BC.

Domestication is defined as capturing and taming wild animals in order to selectively breed them until they become pets or domesticated animals. It is passed on through

changes in genetic make-up, which are caused by mutation and selection. We do not know how this process worked with regard to horses, considering the size of the areas horses were populating. The question why domestication took place seems to have been answered for the most part, however. Post-glacial global warming and the resulting environmental changes had made life much easier for human beings and increased their population. In order to survive, man had to interfere with the animal population and decimated it to a degree that could no longer meet his needs for meat. Since man had settled down and did not want to defer to ecological constraints, he decided – after a very special light bulb moment – to fence in some animals in order to slaughter them when he needed to.

Considering the fact that wild horses have excellently developed sense organs and are constantly ready to speed away from danger, humans must have taken great pains to exert their influence on them. How did they succeed anyway? Were they crafty and patient enough to drive a herd of horses into a suitable, previously selected area and blocked its only exit? Or was the first step towards domestication the capture of weak or injured foals? The latter method is described in a prehistoric novel by French author Jean Marie Auel, in which a young woman treats the broken leg of a filly before raising the animal. When the mare is finally in heat, she is accidentally bred to a stallion from a herd living nearby. If you have some imagination combined with a sense of reality, you can imagine how the story continues. No matter which methods were used in the domestication of horses, human beings reached their goal – and must have realized that it was not that easy to take care of several, let alone lots of horses. Much to their surprise, they must also have noticed that, over time, horses decreased in size since height reduction was one of the essential effects of domestication. In addition, horses also changed behavior and color as it was no longer nature in its merciless selection that eradicated colorful mutants on a regular basis.

At first, human beings probably saw to it that their horses increased in number so they could use them for meat without decimating their herds. Remains discovered on plains north of the Black Sea dating back to 4,000 BC suggest that it was mostly stallions that had to bite the dust. Mares were obviously spared due to their reproductive function. Their ability to produce milk might have also contributed to their higher life expectancy around humans. The fact that horses could be used for better mobility did probably not remain hidden for long – and might have been another reason for the domestication of the horse. However, scientists long believed that horses were first used as draft animals before expert opinions changed in favor of riding as the initial usage. It seems obvious that keeping a herd of animals as fast as horses would suggest their being used for riding. In any case, there must have been a bold and fearless person somewhere, some time, who jumped onto the back of a horse and marked the beginning of a whole new era in human history. The time and date, the person and the geographic region in which this fundamental act took place are unknown and will probably remain hidden in the darkness of history, just like the methods and the exact date of domestication – both can be safely described as mighty deeds of humanity, however.

In the same way, we are in the dark about the direct ancestor of *Equus caballus*. At first, this question seemed to be an easy one to answer since drawings in caves near Lascaux, Pech Merle, Chauvet, and other places of prehistoric art depicted horses that looked exactly like *Equus przewalski*. Prehistoric “Picassos” had painted them in colors and shades such as light brown, reddish, yellowish, whitish and black, which suggested a striking resemblance to the horses we call the “last surviving wild horses” and that have survived only in zoos and reservations. When they were sifting through ancient dust, scientists also discovered little horse figurines prehistoric humans had carved out of bones and ivory. In most cases, these relics look like animals with a chunky head, erect mane and stocky body. The question remaining is whether the horse that can be seen on cave walls really is the same one discovered by

Russian explorer Nikolai Michailowitsch Przewalski in Mongolia in 1879. For a long time, scientists believed that Przewalski’s horse was the direct ancestor of modern domesticated horses – and turned out to be on the wrong track. As a matter of fact, Przewalski’s horse has 66 chromosomes, while common horses only have 64. Scientists also concluded that they separated genetically about 120,000 to 140,000 years ago. The Tarpan, another species and often mentioned in this regard, is also out of the question. But who really IS the horse’s direct ancestor then? Current research points to *Equus mosbachensis* as a valid candidate since he is the oldest European species that qualifies. He used to be unusually tall, most likely an immigrant from North America, lived during the Pleistocene Period about 500,000 years ago and was very common in Central Europe at the time. Towards the end of the last glacial period, he evolved into different types of wild horses, which can be summarized by the names of *Equus gallicus* and *Equus germanicus*. As mentioned above, we know what they looked like thanks to cave paintings. Unfortunately, we cannot reconstruct whether the missing link in the line of ancestors is hiding somewhere in this group holding the decisive clue to the horse’s recent past.

Therefore, we have to be afraid that even the most detailed genetic “road maps” will not get us to the place where the secret is hidden. That is a pity – and a painful disappointment to all of us who are infected by the most virulent kind of horse fever and equestrian curiosity.

<Pictures p. 48>

The most beautiful prehistoric depictions of horses are probably the ones found in a cave in Lascaux, Dordogne (France), in 1940 – the most famous “art gallery” of the last ice age. The coloration of the horses shows an “M”-pattern, which can also be seen in Przewalski’s horse. The horses you can see here in full gallop were painted about 17,000 years ago!

< Pictures p. 50>

Of all the fossilized bones discovered in a famous mine near Messel, Germany, it was the ones of the species Eurohippus that were most often found. About the size of a Fox Terrier (12-14 inches or 3-3.5 hands, respectively), he belonged to the smallest equine species found in Messel.

< Pictures p. 52>

Over the course of 55 million years, horses evolved from having multiple toes to becoming odd-toed ungulates. Since weight was carried increasingly by the middle toes, the lateral toes became shorter and withered away over time. Therefore, the evolution of Equus is characterized by a progressive reduction of the lateral toes accompanied by a simultaneous growth of the middle toe.

< Pictures p. 53>

These pictures of horse heads were discovered in a grotto near Chauvet, southern France. The depictions of animals found in the grotto are 32,000 years old and the oldest known cave paintings in the world.

< Pictures p. 54>

Are these expressive pictures produced in the dawn of art incantations of a successful hunt? Were they supposed to ask forgiveness from the spirit of the animal killed? Or were prehistoric human beings just trying to express their artistic side? Several interpretations are possible.

< Pictures p. 56>

Bone structures of the feet of three-toed Hipparion and modern horse in comparison – even though Hipparion only played a supporting role in the evolution of Equus.

Reconstructed skeleton of Equus Mosbachensis, who was of considerable size and whose fossilized bones were found in prehistoric sediments of the Rhine near Mosbach, Germany. It is on exhibit in the Museum of Natural History in Mainz, Germany.

< Pictures p. 57>

Przewalski's horse is the last "true" surviving wild horse. It is native to Mongolia where it became extinct during the second half of the last century. Today, it lives in several zoos and reservations all over the world and a few years ago, it was reintroduced to its country of origin.

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## The Journey Is the Reward

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Your horse defines who you are

By Sandra Adamczyk

Looking for a horse I could train to be my next show horse or that I could maybe resell afterwards, I started searching numerous websites until I came upon an incredibly inexpensive 7-year-old Lusitano gelding. In the picture posted on the website, he looked a

little chubby, croup-high and relatively insignificant. I was really only seeing a huge neck and hind end covered by a thick layer of fat. Since I have always been a sucker for baroque horse breeds and was very aware of the high prices people were asking for these horses because of their popularity, I was not

sure if the ad was for real. Did they misprint the price? Why was he so cheap? Where was the catch? Since the horse was located not too far away from where I lived and because I was curious, I decided to embark on the adventure of looking at him. My riding instructor Kerstin Gerhardt was going to join me. For the entire duration of the drive, she kept mumbling to herself what the hell she had been thinking when she agreed to waste half a day on looking at a horse that was not going to work out anyway. With a grin on my face, I just ignored her – she was not going to jump out of the car now, was she?

It was in March, 2006, when we drove off in pouring rain. Over hills and through little villages, over the seven jeweled hills, beyond the seventh fall ... until we finally reached our destination – a farm that had parts of its property converted to housing horses. It was still more appropriate for cattle than for horses, but anyway. Together with some other geldings, the gelding for sale was standing in a muddy paddock connected to a shed and some acres of pasture – an effort to create some kind of pasture stabling. The deep mud would have caused every horse owner to break out in a cold sweat. I, for my part, quickly learned to appreciate the footing after finding out that my prospective horse was nicknamed “wild horse” and was going to live up to his name. After chasing him around the pasture for a while, the suction effect eventually tired him out. At least, I knew for sure he was not lame and had decent basic gaits. I was also impressed by the way he used his hindquarters since I had numerous chances to see them from behind while chasing after him. Mrs. Gerhardt just rested her chin in her hand and went like: “Hmmm – hmmm”.

One and a half hours later, soaking wet and as good as out of treats to bribe him with, I crept towards the object of my desire one last time. For the umpteenth time, I had lost one of my shoes which did not exactly elevate my mood either. I mumbled soothingly while the horse was eyeing me suspiciously. He had carefully taken all the treats I had offered him, but had taken off as fast as lightning before I could get a hold of him. While my riding instructor was

sitting in the car ranting quietly and cursing the day, I started my very last approach, jumping courageously for the halter – and miraculously, the gelding did not budge. My hands shaking, I tried to get the lead line out of my pocket and almost let go of the horse. A few minutes later, I triumphantly and happily dragged him towards the gate where I was greeted by the astonished look on his owner’s face. The gelding was shaking as hard as I was. I was told that for the last one and a half years, no one had actually really caught him while he was out in the pasture. Lucky me, who always picks these kinds of adverts and offers and gets herself in situations like these ...

We quickly came to the conclusion that the gelding became completely stressed out as soon as he was crowded by humans, who he was visibly afraid of. Just lifting my arm or moving too quickly caused him to panic and try to flee. He was truly scared and feral. However: he had a certain something. Even though he did not believe in himself or trust us at all, he was desperately trying to understand and please us. Of course, I felt deeply sorry for him – my urge to help was triggered. In hindsight, I could have kicked myself for that since there are millions of horses that would have been easier to handle. One thing was for sure: they were not going to be able to sell this horse – never ever.

In the mean time, I was able to take a look at his hooves since we were standing on solid ground now. It had been a while since a farrier had taken care of them. His halter, which he had been wearing day and night for several years, was almost immovable – we later realized that it was ingrown behind his ears. I am not mentioning the name of his owner deliberately as the person was seriously ill and could not take care of him properly.

We agreed to put the gelding in a stall for the night and come back the next day to see if his claustrophobia was going to create dangerous situations. We needed to know if we were putting our lives on the line if, God forbid, I was crazy enough to actually buy him. Before we left, the owner told us that lots of people and prospective buyers had come and tried to

catch him. All of them had to leave empty-handed.

On our drive home, I was literally torn apart by my riding instructor. She was tearing her hair out asking me if I was aware of the consequences I would have to face buying a horse like this. I would be risking my life and, even worse, hers too. She was concerned about the fact that this horse was an actual feral horse and, to make things worse, had had really bad experiences. Training him successfully would be a masterpiece, which also meant that I could forget about actual riding for the next couple of years. She went on and on. After a heated discussion, we agreed on giving him a year to show if he could be turned into something in the line of a riding horse. If the situation got so bad that it was too dangerous to deal with him, he would have to be put to sleep. We would also base our decision on what the next day was going to bring – his behavior in the stall we had put him into. On the inside, I was grinning moronically because my instructor was not completely against the idea of buying him.

The next morning, we brought along a trailer. As expected, catching him in his stall turned out to be risky. But since he did not purposely attack us or put us in danger by trying to escape, we decided to give him a chance and bought him. His owner was delighted – after having tried really hard to find someone with common sense among all the baroque breed aficionados who had been interested. But there was no way a professional would have bought a horse like this.

Much to our surprise, my new horse, shaking like a leaf, went straight into the trailer without any problems at all. Standing behind him, we just had to lift our arms and snap our fingers a little ... Had I known about the consequences this would have for his future training, I might have changed my mind about buying him. At that point in time, I simply lacked experience.

The drive home went quietly. As we arrived at the barn he was going to be living in and opened the trailer, however, we thought we had to call the vet immediately – if there was

still time: my new gelding was soaking wet, covered in white foam and about to have a breakdown. He had peed his entire face. It looked like his heart was about to jump out of his chest. We led him into his new stall and gave him some space. Much to our surprise, he immediately started to eat his hay and calmed down quickly. Then we had to try and convince the community of agitated riders and horse people populating the stable that the horse would still be there the next week for them to look at and that maybe in a year or so, they might actually be able to pet him without risking their lives. In hindsight, it was a really good idea to stable him at a barn mostly populated by pleasure riders. People kept secretly giving him treats all the time because they felt sorry for him, which taught him that human beings were mostly a good thing. In an anonymous barn, he would have been even more fixated on me, which I did not want with regard to everyday handling. What if I got sick or could not make it for some other reason?

The next days were all about waiting: waiting for the aisle to clear, waiting for the indoor arena to empty, waiting for all the nosy people to leave the barn. So all we had were a few hours late at night. The first couple of months, I mucked his stall myself as I did not want to put anyone in danger. It did not take long for us to create a routine, our daily grind, which was really good for him mentally. Deviations from the routine immediately brought back his old behavioral patterns, i.e., panic attacks. Even though he could be led with a halter, you always had to watch out that he did not run you over because of fear. It goes without saying that you could not punish him for his behavior, which meant that you just had to be quicker at jumping in the direction he would probably not jump into. You always had a 50:50 chance.

In the meantime, my horse had been dewormed, deloused, vaccinated, seen a farrier and been checked by a vet without any casualties with regard to professional personnel. Unfortunately, he lost his gorgeous mane and tail because of all the worms and mites he had. The pleasure riders accused us of purposely giving him a show clip and turned

their backs on us indignantly. I, for my part, would have been thrilled if I could have come anywhere close to him with scissors in my hands. Surprisingly, I was able to groom him pretty much without any problems since he had begun to enjoy any kind of attention around that time. I realized that deep down inside, he was a real gentleman who simply happened to be his own worst enemy – he still is a little like that today. He would never dream of being rude or pushy or exploit the fact that we kept giving him treats all the time.

In order to get him used to being caught, we had to permanently attach a short lead line to his halter as it was impossible to quickly grab him or simply take him by the halter. You had to come equipped with food and carefully and slowly close your hand around the lead line. Otherwise, he would realize what you were up to and jump into the next corner. If someone was standing in front of his stall gesticulating wildly, he would be beside himself. This led us to the idea of placing a mannequin in front of his stall with its arms raised in the air. We kept changing its clothes or draped something around its arms until, one day, it was lying on the floor tragically killed by a basal skull fracture. We declared this approach to be officially over and started dancing in front of his stall ourselves. Our weird-looking fertility dances and tai chi movements were not really appreciated by the other riders and horse owners, who thought we were a little nuts and pretty much out of our minds.

After three months, we were finally able to lift our arms without causing any overreactions. Nevertheless, even two years later, thoughtless quick movements were still out of the question. More and more often, we were asking ourselves what this poor animal must have experienced. The only information we had was that his previous owner had given him to a training facility to be started under saddle and that something had gone terribly wrong. The owner had then put him in the pasture so the horse could “forget” about it. Well, unfortunately, he had not forgotten anything – especially not the bad parts. A lot must have gone wrong, that was for definite. Worst of all, they had destroyed his trust in human beings and the fact that they can be

good by not doing anything with him at all after he came back home. We did not know if he had been started under saddle, but we were pretty sure that they must have at least tried. He had been gelded relatively late in life and only because they were hoping he would become easier to handle. After a while, we decided that we did not want to know what exactly had happened to him so that, at some point, we could go about starting him under saddle without thinking too much about how he might react. Even though during the first year, we were a far cry away from even thinking about sitting on his back! At some point, even the people in the barn stopped asking about when one of us was going to mount him. The only thing I knew for sure was that this event, I would share exclusively with my closest confidants.

As training progressed, we were finally able to cautiously tack and untack him. All the while, he enjoyed being out in a small pasture in carefully selected equine company. It did not take me too long to catch him so we could put the time to better use and go out on walks around the barn and into the woods, accompanied by his friend Elvis, a Shetland pony. I would like to use this opportunity to express my gratefulness to Elvis, who has been the greatest help in training difficult horses. He works miracles by just being as nosy as he is and by walking up to and examining things he does not know. In the process, he makes as much noise as possible just to show that things could be way worse ... he destroyed two umbrellas I had placed in the arena to get my horse used to them. Elvis simply crushed them to death – which all humans and animals present thoroughly enjoyed.

“Wild horse” quickly got the hang of racing around in circles on the lunge line and stopping wherever the person with the feed bucket was standing. This procedure always required at least three people. One on the inside holding the lunge line, one on the outside with the feed bucket, and a third with a cell phone and the emergency contact at hand. Trying to get him to graze while I was leading him on a halter was completely impossible at first, but after a while, it became

easier and easier. That was when we decided it was time to familiarize him with the rest of his tack. An elastic blanket surcingle seemed to be a good idea for a start, phase one so to speak. After long deliberations, we decided to put it on in his stall so we would have as much control over him as possible. As it turned out, this was not one of our smartest ideas. As soon as we had closed the surcingle, we had to flee his stall because he got so scared he did not dare breathe any longer and blew himself up so much that the surcingle tightened even though there had been space for two fists. He kept rushing into one corner of his stall and ran in circles like crazy. For more than two hours, we tried to enter his stall before we left the barn at 12:30 in the morning, close to tears for not having achieved anything. We were hoping that the next day, we would come back to find him alive – anything else would have been too dangerous for everyone involved. In the morning, he was unharmed and happily munching his hay. And he must have started breathing again at some point too. Thank goodness! The blanket surcingle quickly became part of our routine as did putting it on and taking it off.

Now, it was time to put on a bridle. Since the gelding was extremely head shy and did not tolerate anything going on behind his ears, it took me about a year during which I had to piece together the bridle around his head every time I wanted to put it on. We are talking about the bare necessities here: cheek pieces with bit and headpiece. Even today, putting on a bridle can be a problem sometimes. To cut a long story short, after about three months, it was possible to get my horse to move in a circle on both reins equipped with a bridle and a surcingle. The speed was ridiculous so that we still did not consider starting him under saddle. One thing we noticed was that outside or in a roundpen, the horse did not panic as much as he did in an enclosed arena. Therefore, the main part of our work was moved outside. We had learned from our mistake with the surcingle so that the first time we put on a saddle, it was outside in the open where we could lead him around. Mrs. Gerhardt was really making an effort in her involuntary position as traditional

trainer-gone-alternative when she started going for walks with my horse. I do not need to mention that the saddle was a difficult stepping stone besides our best intentions. Coming close to him and lifting the saddle over his back alone was enough to trigger a panic ... an extreme case of cinchiness. For a while, we used the mannequin as a saddle rack by positioning it in front of his stall – causing laughter and amusement among the immigrant farm hands.

After about eight months, it was possible to lunge the horse on both reins with saddle, bridle and side-reins more or less decently. His chubbiness (and lack of fitness) proved to be an advantage and sped up the process. We used a 50" girth with an extender on a 15.3 hh horse. Finally, we were ready to start mounting him.

We patted and knocked against the saddle, stroked the horse on the croup, leaned over his back, etc. Lungeing him with the stirrups down, as often done in order to familiarize young horses with the rider's legs, we only tried once and then discarded the idea. My horse let us know pretty clearly which way he wanted to go in his training. More and more, I started imagining what injuries I would be suffering from and which one of them would land me in the hospital. In addition, people stopped asking us when we would finally get on the horse for the first time. They were just interested in when we would get out of the indoor arena so they could work. How were we supposed to know? Every day was different, every day was a new day. If just one day, we did not do exactly what we had done the day before, we had to start from scratch.

For about a month, we practiced stopping next to a mounting block, me lying over the saddle and being led that way, him experiencing the weight in the saddle, and other things like these. I had bruises all over my stomach all the time. The familiarization phase also required at least three people – preferably four. The fourth person had to be the one with the strong nerves and the clear enunciation on the cell phone.

Since winter was on its way, we had to move our training sessions back indoors, which triggered some of his old behavioral patterns. By that time, the other riders and horse people had gone back to being their carefree and thoughtless selves, creating lots of noise at the worst possible moments by wheeling around grooming boxes, for example. We had our ups and downs so I never felt entirely comfortable with just swinging my leg over his back without expecting to be thrown off. Nevertheless, at long last, the moment of sitting in the saddle had finally arrived. Of course, I was crouching over the horse moronically and just wanted to dismount immediately. If I had known that I would be spending the next three months in this position, I would have googled some exercises to prepare my muscles for this kind of work. Unfortunately, I was utterly helpless in the face of his movements. Almost lying on my horse's neck, I was being led around in walk and trot while the distance between me and the person leading my horse steadily increased until I was finally riding a volte. In this regard, I have to say that my horse once again proved to be a real gentleman and I knew I had not misjudged him. To this day, my horse has never had the intention of harming "his" human being or rider. He really pulled himself together, which I am still deeply grateful for.

Our first decisive breakthrough with regard to riding was when, one day, we were lungeing him in the large indoor arena (20 x 60 meters) where lungeing is prohibited. That day, we had to use it because the smaller arena was occupied as was usually the case and, for once, we did not have time to wait. Even though my horse was familiar with the large arena, he had only been in there for a quick walk, not serious work. This was the first time I was actually able to sit upright without worrying about him getting scared of my shadow or mistaking me for a predator. We finally understood that his claustrophobia was also triggered by a small indoor arena and not just his stall. After this "light bulb"-moment, we decided to ignore the cold and moved our training sessions back outside where I managed to ride freely – my horse was simply a lot more relaxed outside. I will never forget

our first memorial trot without someone leading or assisting me. We had survived our first year together! It was about time I got to name my horse and to find a name that suited him. We decided to call him Oso Polar, which means polar bear – just like him, they can be dangerous and are an endangered species. I am pretty sure we had a little too much to drink the night we came up with his name ...

The second year I had Oso, we went from starting him under saddle to beginning his actual training. Another breakthrough moment was when Elvis, the Shetland pony, moved into Oso's stable/paddock – all necessary precautions to protect the pony were taken, of course. Soon, we were able to ride walk and trot in the large indoor arena as well as trot over some ground poles – the latter was only possible, however, if Oso had someone he could follow. For two years, every time he was supposed to go over poles it went like this: the first time he would refuse, the second time he would jump way too high, and the third time he would go over normally as if nothing was wrong. At this point, we were able to join a small group of trusted riders on trail rides in walk and later in trot.

Unfortunately, trail rides usually include canter. So far, I had only seen Oso canter on the lunge line at relatively high speeds. Once again, his chubbiness and short-windedness came as an advantage when we decided to give canter a try. We picked a relatively steep and long hillside, had Chubby go at the very end of the group and let the horses smoothly transition from trot to canter. Well, he stroked off into canter as requested, but slowed down to trot after about 40 yards and followed the others up the slope at a distance. At least, now I knew that a) my horse was not really all that ambitious and b) canter under saddle was possible without risking my life. Therefore, we asked for canter under saddle on and off the lunge line so that Oso could officially be described as having received basic training in walk, trot and canter on both reins – and it "only" took us one and a half years. At this point, Oso was about eight years old and – I think it is safe to say – relatively fresh without any signs of wear and tear.

Even though I did not really need one, I still wanted to get him used to me carrying a stick – you never know when it might come in handy. I started by breaking off little branches when we were out on trail rides, which grew from four inches to the length of a jumping stick. After each session, Oso was allowed to eat the sticks. To this day, changing the stick from one hand to the other is still a problem, however, and only possible in walk, sometimes trot.

In any case, we had built a foundation on which we could base advanced training. Since we had lunged him so much during the familiarization phase, Oso excellently obeyed to voice commands – as it turned out, this was a very helpful tool to the person in the saddle. In the indoor arena, we had him follow his buddies so he would learn the different arena figures – we even went over some small fences. Being part of a ride was absolutely no problem. The only thing that was absolutely impossible was instructors or unfamiliar horses inside the arena – I just could not get him to go past. Mrs. Gerhardt got really upset about this and took it personally. After a while, however, it became almost impossible to keep Oso away from her. Back then, he would not tolerate other horses at all – it was either him attacking or getting scared. As his trainer, I had to constantly adjust to his schizophrenia so I trusted my feeling in the respective situation and decided accordingly. For the most part, this method worked out fine.

I am still riding this way today, which is one of the reasons why I do not show Oso – aside from the fact that riding in the trailer itself would stress him out unnecessarily. And why would I be interested in competing? By now, he has given me more than I ever dreamed of and improved my riding and training skills more than any other horse I have ever ridden. Even though I still have to carefully choose what I want to wear on any given day – windbreakers or loose and rustling sweaters had better stay in the closet. Oso does not share the opinion that all good things come from above.

Due to a job change, I had to move Oso to a new barn, which left me a little worried about his training progress. Luckily, his buddies moved with him – most important of all, Elvis – so the change in environment did not completely unsettle my horse, who is so dependent on his routines. For the first time, Oso shared his hay with Elvis because his little buddy offered the security he needed. Unfortunately, the new place had an indoor arena with white walls, a huge mirror covering the entire short side, and lots of windows. I had to press my knees against the saddle like a show jumper, but somehow we managed to get through the rough times that were the first couple of weeks thanks to the basic level of trust Oso had in me. I started practicing lateral movements and onsets of collection and introduced ground work. In general, Oso became more dependable even though it took me months to get him to go past a specific gate he did not like. I got so annoyed with him that one day, I could not help myself and punished him for his behavior. That night, I cried like a baby because I thought I had destroyed everything we had been working for so hard. Or worse even, I thought I had done wrong by Oso. To my surprise, the next day he went past the gate without objection. I learned that he could accept justified punishment and kept that in mind. The fact that he had gotten used to me carrying a whip during ground work might very well have been a factor which got him to accept whips and sticks in general and in specific training situations.

Oso and I had also practiced and succeeded in shortening his steps – both from the ground and under saddle. He had learned to flex his haunches when I touched him with the whip. For months afterwards, we refined the exercises, familiarized him with the double bridle, worked in the outdoor ring and went on trail rides – until we had to move once again. This time, however, I was not too worried about Oso and how his new environment would influence his training progress. After all, this was his third year of training, the second under saddle, and we had mastered many other problems before. I trusted him.

Being used to a 16 x 39 meter arena, we were now looking at a whopping 20 x 70 meter roofless arena with high boards, lots of wind, sometimes even rain or snow, and all kinds of different noises. Environmental stimuli became complex and manifold, which influenced Oso's movements by directing them forward and, thus, improved his collection. If we wanted to go on a trail ride, we had to walk along a country road, through developments with front lawns and backyards full of children on trampolines, and past pastures with bucking cattle – but Oso and I had grown together, had we not? From this point on, his training progressed at lightning speed, especially with regard to half-passes, piaffe and passage as well as general suppleness.

To relieve me of some of the work, I tried to find someone to share my horse with who would ride him without putting too much pressure on him. I already had the ideal person in mind, someone with sensitive hands and a good attitude towards riding and horses (a rare trait these days). Unfortunately, we did not reckon with our fellow riders who ran over horse and rider twice. It took me two months until I was finally able to ride Oso in the presence of other horses again. To our disappointment, we had to consider the matter of horse sharing closed and realize once again that it would be just me and Oso what riding was concerned. Today, he is really fun to ride and train and I do not need to concentrate one hundred percent every single day. It is still the first twenty minutes of a riding session that decide about the quality of our work that day, but Oso often delivers the opposite of what I thought he would. In hindsight, I have to say that he was definitely worth the trouble even though I do not think that I would want to do it all over again – he did demand a great deal of me and others. I also doubt that I would have the courage and discipline to commit to another horse in the same way – a horse that behaves as oddly as Oso so you never know what to expect. The only thing I know for sure is that this horse made me rise above myself and shaped me

into who I am today. I will always be grateful for that.

<Pictures p. 62>

2006: With his imperturbability, Elvis the pony helps Oso with confidence building.

< Pictures p. 64>

April 2006: Completely insecure.

August 2007: A member of the "ground staff" is lifting his hand because of the sun – the horse spooks.

May 2008: Carrying weight on the hindquarters is not that easy if you are croup-high.

Fall 2008: Carrying an unfamiliar rider: check!

< Pictures p. 65>

June 2006: A mannequin with outstretched arms placed outside his stall so he would get used to it.

August 2007: Obedient but overjumping.

May 2009: He is actively coming forward towards the bit.

< Pictures p. 66>

July 2009: Groundwork

< Pictures p. 67>

Oso's third year of training, the second under saddle. From this point on, his training progressed at lightning speed especially with regard to general suppleness.

< Pictures p. 68>

After moving to a different barn, Oso became more and more reliable. Step by step, we started practicing lateral movements and onsets of collection and introduced groundwork.

# The Correct and Easy Way to Learn Riding

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## International Level

### Series – Part 5: Pirouettes, sequence changes, piaffe, passage

By Karin Lührs

“Fourth Level and Grand Prix are divided by the Alps!”

I would like to begin the last article in my series on core dressage exercises with this statement by legendary trainer Willi Schultheiss. It describes the incredible step from “ordinary” Fourth Level to Grand Prix. Even though Fourth Level is already difficult, Grand Prix raises the demands another incredible notch! The reasons for this are the Grand Prix exercises piaffe, passage and one-tempi changes, which only a handful of horses are able to learn or have the talent for, respectively.

Nationally and internationally, all levels above Fourth are subdivided into two categories: the first one includes Prix St. Georges and Intermediaire I, which are also known as S\* and S\*\*, respectively. In S\* tests, you have to show half-pirouettes in canter and four and three-tempi changes, while at S\*\* Level, canter pirouettes and three- and two-tempi changes are required.

The second category is made up of Intermediaire II and Grand Prix or S\*\*\* and S\*\*\*\*, respectively, and includes canter zigzags, steep trot half-passes, canter pirouettes on center line, one-tempi changes, piaffe and passage. In Intermediaire II, piaffe can still show some forward motion (3.28 ft. is allowed), passage has to be developed somewhere between two specific points, and the number of one-tempi changes is limited to nine. At Grand Prix and Grand Prix Special

Levels, you have to show fifteen one-tempi changes, piaffe on the spot and passage exactly from point to point. Most of this takes place on center line, which increases the level of difficulty even more.

The topic of this article is particularly complex and comprehensive. Describing the steps on only a few pages is a great challenge. Therefore, my objective is to show you the general direction and basic paths that will get you closer to your goal and move it within your reach. I am aware of the fact that the steps I describe are relatively large. However, they determine the objective and direction of your training. Putting all this theory into practice will most likely take much longer due to the individuality of every single horse (character, talent, conformation, quality of movements) and potential problems that might occur and require you to take a detour or go back a few steps. Moreover, every mature rider needs to be aware of the possibility that their horses might not be suited for advanced dressage. A horse needs a special basic quality and special talent in order to be able to learn the most difficult dressage exercises. If your horse has a really hard time learning specific movements or refuses to obey because it turns out you are asking too much of him, you need to let go of the thought, not force your horse to perform and only ask for things he is physically able to do.

As an interested reader, you will realize that the success of your horse’s training depends on one single factor: the correct use and implementation of the Training Scale!! Deviations from the norm and possible

mistakes or problems will occur when the Training Scale can no longer take effect. Once rhythm and looseness are lost, you will not succeed even if you try as many auxiliary aids and auxiliary reins as you can find or apply your aids too strongly. Good results are possible only after you have returned to the basics, where you have to gymnasticize your horse's entire body according to the classical principles of the Training Scale!!

The sequence of the following eleven steps corresponds to their appearance in international tests and their level of difficulty. The exercises include:

1. Meet the prerequisites – check suppleness
2. Half-pirouettes
3. Moving towards sequence changes
4. Zigzags in trot
5. Zigzags in canter
6. Canter pirouettes
7. One-tempi changes
8. Developing piaffe
9. Developing passage
10. Piaffe-passage transitions
11. Grand Prix

1. Meet the prerequisites – check suppleness

What?

Suppleness is essential to horse training. It is the result of fulfilling all six steps of the Training Scale. The more parts of the Scale your horse has mastered, the more supple he will be. As a logical consequence, we can say that horses in their basic training can also be supple – just to a lesser degree. Suppleness means that your horse accepts and obeys your aids at all times and lets them pass through his body. According to the Principles of Riding, it

is very important that your horse shows relaxed and obedient reactions to forward-driving, guarding and forward-sideways driving aids equally on both reins.

Why?

If your horse is supple, you can collect him whenever you need to, control him and “operate” him as he allows your aids to pass through his body. You are creating a direct line through your horse that runs from back to front and from front to back (cf. the concept of impulses originating in the hindquarters, PIAFFE Issue 5).

In order to compete at Grand Prix Level, obedience to aids must be perfect – otherwise, difficult exercises will not be possible. If your horse is only a little bit supple, your degree of success at any exercise will be limited. At the highest levels, suppleness has to be nearly one hundred percent – “a little bit” is not enough. Every step and stride counts when deviations will immediately lower your score and your chances of success.

How?

In everyday training, suppleness is constantly requested. You ask your horse to obey your aids and correct him if necessary. It is pointless to ride exercises if he is not supple. Every training session has to start with gymnasticizing exercises in order to check the condition of your horse's body. I am referring to the first article in this series, in which I explained the importance of horse and rider being regarded as a whole and being looked at in a holistic manner. In order to check your horse's suppleness, you can ride transitions, ask your horse to collect in all gaits (a supple horse can be collected at any time) and see if he is willing to stretch by letting him take the reins forward and down – combine all of this with exercises that require your horse to be loose, obedient and impulsive in his movements.

## 2. Half-pirouettes

Half-pirouettes have to be ridden in collected canter. Your horse's forelegs have to move in a circle around his hind legs while he is flexed and bent in the direction of motion. The inside hind foot is supposed to move on as small a circle as possible, which translates into three to four strides within a 180 degree turn. Due to the increase in collection, your horse's haunches will flex and the hindquarters are lowered as they carry more weight.

### Why?

Half-pirouettes are part of S\* or Prix St. Georges tests, respectively, and are one of the elements that distinguish Third Level from Fourth (besides sequence changes and canter half-passes). Usually, they have to be shown on the diagonal; in a few tests, they are required on a long side.

Half-pirouettes demand a high degree of collection as your horse needs to maintain his canter strides on a minimum of floor space. He must not lose rhythm, which is particularly difficult, and has to develop carrying power and balance. As his rider, you need to be dexterous and experienced. Half-pirouettes leave lots of room for mistakes.

### How?

In preparation of half-pirouettes, you have to practice training pirouettes and very collected canter (pirouette canter). Both exercises were defined and explained in the previous article. Now, you have to concentrate on getting your horse to perform pirouettes on the smallest half-circle possible.

Pick a diagonal within the arena on which you want to ask for a half-pirouette. Only ask if your horse is ready and prepared to obey your request. He needs to clearly collect and flex his haunches, maintain his canter strides and bend correctly before you can lead him into the turn.

You will have to apply the following aids:

- Put more weight on your inside seat bone.

- Your inside leg is positioned at the girth and responsible for keeping your horse's inside hind leg active while asking for longitudinal bend.
- Your outside leg is positioned behind the girth and acts as a guarding aid, preventing the hindquarters from falling out. Together with the other aids, your outside leg leads the horse into the turn and helps maintain forward motion.
- Your inside rein needs to be shortened in order to flex your horse and guide him forward-sideways.
- Your outside guarding rein yields somewhat and controls flexion.

If your horse is new to half-pirouettes, you need to be experienced enough to know immediately if the exercise will succeed or not. Besides maintaining the three-beat rhythm of canter, it is essential that your horse is always willing to go forward.

If preparing for the exercise is not going so well, you should abort and get your horse to regain suppleness before you try again. Your horse should only get used to and learn the correct version of half-pirouettes. Your horse's stamina and the ability to concentrate decide on and limit the success of the new exercise. You should not work on it for too long in order to avoid tension and signs of fatigue.

Let your horse gain practical experience by asking for half-pirouettes at arbitrary points on the diagonal; how much time this will take depends on your horse and his talent. Once the two of you have mastered the exercise in its gross form, you can start practicing pirouettes the way they are required in tests, i.e., on a diagonal between the first marker and X.

It is often the case that during pirouettes horses lose their balance. This is due to the level of difficulty of the exercise, which requires a high degree of carrying power on a minimum of floor space. As a rider, you need to be experienced enough to provide your

horse with the positive support he needs. If he leans to the inside, you have to control him with your outside rein and support him with your inside leg if need be. The weight aid has a central role in this exercise – you have to sit balanced and aligned with your horse's center of gravity so you can shift your weight to one side or the other if your horse needs you to.

### 3. Moving towards sequence changes

What?

Flying changes were discussed in the last article. You and your horse need to be able to execute them in your sleep, i.e., at any point in the arena and at any time. Your horse has to obey in a supple manner before you can start thinking about sequence changes. The latter are defined as a specific number of flying changes on a predetermined line. The easiest form of sequence changes are three four-tempi changes or three three-tempi changes, respectively, on a diagonal. Starting at Prix St. Georges (S\*) Level, you are required to show five sequences.

At this level, you are only facing five four-tempi and three-tempi changes. At Intermediaire I (S\*\*), however, you have to be able to do five three-tempi changes and seven two-tempi changes.

Why?

Sequence changes are required from Fourth Level on, which is one of the reasons why we are discussing them at this point. In order to do them, your horse needs to collect and straighten even more than before and become more supple. Therefore, changes gymnasticize additional parts of your horse and contribute to complete suppleness.

How?

We already discussed the aids you have to apply in order to ride flying changes. Besides just executing the individual flying change in a technically correct manner (straight, uphill balance, rhythmic strides), you now have to focus on the precise number of strides and the way you evenly distribute the changes within the space you are given. Horses with long

strides, for example, have to start in on four-tempi changes almost immediately after they turn onto the diagonal in order to be able to show all five sequences before they reach the opposite side of the arena.

The respective medial change always has to be shown at X. This means that with regard to relatively easy tasks such as three sequences, you have to figure out and practice when you have to ask for the first change in order to be able to place the second (medial) change precisely at X. If you are practicing five sequences, you have to get your horse to do the first two changes in a way that places the third one at X, etc.

Schooling sequence changes is done as follows: practice every task as long as it takes your horse to understand it in gross form. Only then, take the next step. The amount of time necessary may vary greatly since some horses only take a few days to understand while others need a little more time. In both cases, maintaining looseness is the most important thing. If your horse tenses up too much while you are practicing a new exercise, you have to take a step back and regain his trust. The specific training steps are the following:

- Ask for two single flying changes down the long side on the inside track. Start on the true canter lead, change to counter-canter and then back to true canter.
- Three changes on the diagonal – sequences do not matter
- Three four-tempi changes
- Five four-tempi changes
- Three three-tempi changes
- Five three-tempi changes ...
- Once you have mastered all of the above, you can get started on two-tempi changes.

During the exercises, you need to find out where your horse prefers to do flying changes or where it is easier for him, respectively. Every horse is different in this respect. If the changes turn out better down the long side on the inside track than on the diagonal, you should keep practicing the exercise on the long side until your horse has gained some experience. In a next step, you could then ask for changes on the diagonal.

With regard to sequence changes, your aids play a special role: you really have to sit absolutely still and balanced. Flying changes require your horse to have an incredible degree of balance and great balancing skills. You must not disturb your horse but apply aids that are clearly understandable. Some horses immediately obey the aids for changing leads while others show delayed reactions. Knowing this, you need to find out how your horse reacts and apply your aids accordingly and at the right time. You also have to understand that the time it takes to progress from a number of single flying changes all the way to two-tempi changes depends on your horse's talent and your level of experience.

#### 4. Zigzags in trot

What?

Starting at Third Level, dressage tests include zigzags in trot, i.e., half-passes in both directions and with changes of rein. There are easy versions with half-passes counting 5 – 10 – 5 meters from center line, while Grand Prix tests call for 4 – 8 – 8 – 4 meter half-passes or 5 – 10 – 10 – 5. In Grand Prix Special, you have to show two half-passes on the short diagonals (from one long side to the other).

Why?

In order to do zigzags, your horse needs to be well gymnasticized and supple because you are dealing with a very demanding exercise: during the respective half-passes, your horse is supposed to stay balanced and supple and maintain his flow of motion. Zigzags serve the purpose of checking you and your horse for even longitudinal bend and fine-tuning of aids.

How?

What is new about this exercise is that you have to flex and bend your horse into the next half-pass while maintaining his flow of motion – this is the main focus of zigzags. The individual half-passes are considered familiar – an old hat, so to speak.

1. We will keep adhering to our principle of progressing from easy to difficult and begin with half-passes at an obtuse or shallow angle starting in a corner and moving in towards quarter line. You only change rein and direction once and can take your time to prepare for it. At this point, you should only focus on the way you change flexion and bend – precisely staying the course is of secondary importance. My advice is to always practice changes of rein away from the wall to have more space, so you might want to start your half-passes on center line. For now, it does not matter how far out you go.

2. While you change reins, you have to watch out that your horse stays parallel to the walls and maintains his tendency of leading with his forehand – the worst mistake is to have the haunches leading. The smartest way to depart from a half-pass is by continuing in a moderate form of travers, to change reins and to then begin with the next half-pass. This way, your horse's forehand will be leading. When you first start practicing, you can ride straight for a few strides in between the half-passes so you have enough time to straighten your horse and bend him to the new rein. Only once your horse is flexed, bent and balanced in the new direction, you can continue with the next half-pass.

3. After you have practiced two half-passes, you can add one or two short ones so you are riding zigzags. As a rider, you are supposed to playfully develop control over your horse's haunches, i.e., be able to define their position and angle to the wall. In order to do this, you also have to practice making the haunches trail or lead on purpose – developing flexibility and dexterity should be your main focus.

4. Once you are able to change reins while keeping your horse balanced and in forward

motion, you can start practicing the way zigzags are required in tests.

- Begin with zigzags counting 5 – 10 – 5 meters so that the 10 meter half-pass crosses X (or a little before X to leave enough space for the last half-pass). In this way, you adhere to the correct line while keeping the zigzags symmetrical.
- Another aspect to practice is hitting the quarter lines precisely in order to achieve symmetry. Cast a quick look towards the short side where you can focus on the spot that evenly divides C (or center line, respectively) from the corner.
- Later on, you can increase the level of difficulty by moving on to steeper zigzags counting 4 – 8 – 8 – 4 meters and 5 – 10 – 10 – 5 meters as required in S\*\*\* or S\*\*\*\* tests, respectively.

## 5. Zigzags in canter

What?

On the highest competitive levels, there are two versions of zigzags. In S\*\* tests, the individual half-passes are defined in meters while the number of strides does not matter. At Grand Prix Level, you have to show a clearly defined number of canter strides (counting 3 – 6 – 6 – 6 – 3), which is extremely difficult and, therefore, only required at S\*\*\* Level and up.

Why?

In S\*\* tests, the level of difficulty is significantly raised. Zigzags, first defined in meters and later in strides, require quick reactions, good technique and balancing skills from both horse and rider. Within seconds, you need to be able to apply aids, detect possible problems and try to prevent them.

How?

Start by practicing zigzags counting 5 – 10 – 5 meters. Your horse should be used to two half-passes crossing half the arena with one

change of rein or direction, respectively. I advise using the following method:

- Start on center line and ride three half-passes while moving sideways left and right for only a few meters. Before you change direction, ride straight ahead and let your horse take enough strides to allow you to change reins. Do not worry about symmetry yet since balance and correct change of rein are most important at this point. It is essential that you only concentrate on a few new details at a time in order for the exercise to turn out successfully. Too many new aspects will lead to failure.
- Once you and your horse have mastered the first step, you can proceed by transferring your skills to 5 – 10 – 5 meter zigzags. Same as with regard to trot zigzags, you should begin the second half-pass a little before you cross X in order to have enough space for the third and last one. Practice the exercise on both reins.
- After the 5 – 10 – 5 meter zigzags turn out well, you can start practicing the exercise while counting strides instead of meters. First, begin with counting 5 – 10 – 5 strides while after the penultimate stride, you already have to straighten your horse in order to ask for a straight flying change. After the change, immediately flex and bend your horse in the new direction and begin the next half-pass. You have to practice counting the strides so it becomes a habit.
- Your next step is to practice zigzags counting 4 – 8 – 4 strides. This intermediate step leaves you less time to change your horse's flexion and bend so you and your horse have to react faster.
- Afterwards, add another half-pass to raise the level of difficulty. You are

now counting 4 – 8 – 8 – 4 canter strides.

- After a few weeks of practice, you can try and see if you succeed in the Grand Prix version of the exercise counting 3 – 6 – 6 – 6 – 3 canter strides. You are now facing five half-passes and four flying changes plus one additional flying change to change reins in the end. In order to succeed, you need lots of practice, good technique and, most important, a supple horse.

If you are experiencing difficulties or a lack of suppleness at some point, practice easier versions of the exercise or do something completely different before returning to what you were working on. If your horse is tense or lacks suppleness, it makes no sense to keep practicing – just the opposite, it interferes with your progress. These are basic aspects you have to pay attention to on a daily basis. Exercises like zigzags are completely out of place if your horse does not obey your aids or use his back muscles. They are possible only as the result of good preparation and your horse's entire body being sufficiently gymnasticized.

## 6. Canter pirouettes

What?

Pirouettes are 360 degree turns on the haunches that require between six and eight canter strides. The description of the exercise is the same as the one for half-pirouettes (cf. 2.).

Why?

Canter pirouettes are first introduced in Intermediaire I tests and appear at every level and in every test from that point on. While first only required on the diagonal, in advanced test starting at Intermediaire II, pirouettes have to be ridden on center line, which significantly increases their level of difficulty. Grand Prix Freestyle is the only test that allows a pirouette with up to two turns.

How?

Pirouettes require balance and a high degree of collection, which has to be prepared accordingly. Under "2. Half-pirouettes", I discussed half-pirouettes and, thus, prepared you for actual pirouettes. I take it as a given that you are able to do half-pirouettes.

The following approach makes sense:

- In order to warm up, ask your horse for some half-pirouettes.
- Pick a circle (without support from the walls) and practice large training pirouettes – the two of you are supposed to get used to pirouette canter strides and 360 degree turns.
- Keep practicing training pirouettes and focus on rhythm. As soon as your horse loses his rhythm, immediately ask him to go straight and start again. Your horse has to be in front of your aids at all times. It is better to allow him to move in travers than to have too little bend.
- As you and your horse progress in training, your pirouettes will become smaller and smaller. All the while, you have to make sure your horse maintains his rhythm and balance.
- In order to maintain balance, you can imagine you are riding the pirouette radially and star-shaped. For every single canter stride you need to turn and ride forward radially – your horse has to keep moving forward towards the bit and maintain his forward and uphill tendency.
- In order to keep the haunches from falling out, your guarding rein and leg as well as your weight aid are of great importance and have to control your horse's outside hind leg. Use your inside leg and shift your weight to your inside seat bone if your horse needs a signal to go forward. This means that you have to apply aids in accordance with the situation and

where and when your horse needs them. Horses, for example, that tend to rush and throw themselves into the pirouette can be slowed down with the outside rein and, as a short-term solution, by your shifting your weight to your outside seat bone. Horses, whose movements are labored, can be made a little quicker if you shift your weight to your inside seat bone and, to a certain degree, show them the direction with your inside rein.

## 7. One-tempi changes

### What?

As the name suggests, this exercise requires your horse to change canter leads after each stride. One-tempi changes are supposed to be straight and rhythmic and in uphill balance. The pace has to stay the same.

### Why?

One-tempi changes are required from Intermediaire II Level (S\*\*\*\*) and up. At first, you only have to show nine changes, in Grand Prix tests, it is fifteen on the diagonal, and in Grand Prix Special, judges want to see nine changes in between canter pirouettes on center line.

It is important that you evenly distribute the changes along the line you are riding: the first one has to be placed in a way so that the medial flying change hits X in order for the exercise to remain symmetrical. It all depends on the horse you are riding and his canter stride and requires systematic preparation.

### How?

One-tempi changes are extremely difficult: as a rider, you have to have fast reactions, be very flexible and completely balanced. You and your horse need to almost have your own sign language to communicate.

Your horse needs to be dexterous and talented in order to stay ahead of the quick succession of one-tempi changes. Not every horse is able to learn this exercise! As an experienced rider, you will be patient enough

and take the time needed in order to reach your goal, but you also have to accept the fact that your horse might be overburdened and will not learn one-tempi changes. With regard to his level of training, you have to make sure that your horse is absolutely straight and that the muscles on both sides of his body have developed evenly. At this point, all the steps of the Training Scale come together and unite!

The aids are the same as for one single flying change. What is special about one-tempi changes is that you already have to apply the aids for the second change before your horse has even reacted to the first. A common mistake is to wait for your horse's reaction before you apply the aids for the next change. At that point, it is already too late. The aids need to be applied while your horse is still working on the preceding change. If you want to start working on one-tempi changes, you have to make sure that your horse is obedient, supple and loose and that he has mastered all previous sequence changes.

To progress from two one-tempi changes to sequences of fifteen takes a long time and depends on the aspects mentioned above as well as the way the two of you are feeling on the respective day.

I advise to practice one-tempi changes as follows:

- As a preparatory exercise, you can ask for two-tempi changes down the long side – ride on the inside track as far inside as quarter line and practice on both reins.
- Then you can get started on one-tempi changes on the same line. Change from true canter to counter-canter and back again so your horse understands what the exercise is all about. In true canter, keep riding forward until you ask for two more flying changes. Practice on both reins until your horse can do the changes reliably. There is usually one lead to which the changes turn out better and which you should pick for more

intense training until you have perfected the exercise.

- Once two one-tempi changes turn out well, you can move on to three (1 – 1 – 1), i.e., change from true canter to counter-canter and back to true canter. Afterwards, keep cantering for a few strides before asking for another three one-tempi changes. You have to decide which lead you want to begin with and then stick with it until you and your horse have become familiar with the exercise and gained some experience.
- It goes without saying that you have to take breaks every once in a while and praise your horse as much as possible in order to prevent or, if necessary, relieve tension. You may only start working on one-tempi changes if you and your horse fulfill all the necessary criteria. If your horse is unhappy or tense, it is pointless to even think about it!
- I advise you to begin practicing one-tempi changes at a slower pace so your aids will get through to your horse much more precisely and your horse will not take too large a stride when changing leads. Wait until the two of you have become familiar with the exercise until you ask for larger, more impulsive strides.
- Once the first three one-tempi changes turn out successfully, you can slowly increase the number of changes. In the beginning, always establish the changes from the “better” or “stronger” lead first before you start with the “weaker” one. Be aware that progress does not happen over night and that there might be situations in which your horse seems overburdened. If that is the case, take a few steps back and work on easier preparatory exercises.
- Keep increasing the number of changes until you have reached

fifteen, as required in recognized tests. Depending on your horse, you can practice parallel to the wall or on the diagonal.

- Once your horse is able to do the changes on the diagonal, you can start refining the exercise and see to it that the eighth flying change is positioned exactly on X in the middle of the diagonal.

## 8. Developing piaffe

What?

Piaffe is defined as a trot-like movement on the spot. The horse increases the flexion of his haunches and is suspended in the air for a short moment when the diagonal pairs of legs switch their supporting role. This way, the hindquarters are lowered and carry more weight while the back muscles work like elastic springs. The poll is the highest point in the horse.

He lifts his forearms until they are parallel to the ground (horizontal) and sets them down vertically. He energetically lifts his hind leg until the respective hoof is in line with the fetlock of the other hind leg.

In Grand Prix tests, the horse is supposed to show twelve to fifteen trot steps on the spot while a slight forward tendency is desired. Intermediaire II tests require fewer trot steps (eight to ten) and allow the horse to move forward one meter during the process.

Gustav Steinbrecht described the “absolutely perfect” piaffe as follows: “... the foreleg is supposed to be lifted in a way that elevates the hoof as high as the middle of the front cannon bone. All the while, the trunk moves up and down in a soft yet energetic manner. At the same time, the horse is supposed to chew on the bit and yield to the reins during every single step he takes while elevating his neck and yielding in the poll. Despite his obvious urge to go forward, the horse must obey the slightest rein aid and remain on the spot.”

Why?

Piaffe and passage are the most difficult exercises required on Grand Prix Level. They are part of every Grand Prix, S\*\*\* and S\*\*\*\* test.

Piaffe is usually taught before passage because it is easier that way. Piaffe requires carrying power and elasticity, while passage adds forward thrust. If you teach your horse passage first, you run the risk of his starting to do passage on the spot instead of piaffe. Once he has learned piaffe, it is easier to develop passage.

How?

The aids for piaffe are the following:

- Tense the muscles in your abdomen and lower back without sitting down too heavily.
- Your legs apply forward-driving aids, i.e., your horse applies the aids himself simply by swinging his trunk from one side to the other.
- The steps you are asking for with your legs need to be reined in immediately by half-halts and turned into a forward movement on the spot.
- Your rein aids need to stay soft and elastic without interfering with your horse's motion.

Maintaining the two-beat rhythm is of utmost importance. You have to flexibly follow the up and down movement of your horse and sit balanced as not to interfere with his motion sequence. If you take your upper body just a little bit forward (a slight forward tendency) and keep applying forward-driving leg aids, you can support the vivacity of the hind legs and the forward tendency of the motion. There are various ways in which to learn piaffe: working in-hand without a rider, working in-hand with a rider, and work under saddle.

In-hand work with and without rider is considered preparatory training, but it is not

mandatory. It is helpful when you are dealing with stolid and unmotivated horses or those that cause problems during training. It is also a good way for inexperienced riders to learn piaffe. Unfortunately, it would go beyond the scope of this article to describe in-hand work in detail, which is why I will be concentrating on work under saddle. Before you can start working on piaffe, you have to not only make sure your horse is absolutely supple and collected but also mentally and physically (with regard to muscles) prepared. Asking for this strenuous exercise before your horse is ready will lower or even inhibit success.

1. Start by shortening your horse's strides to a minimum of forward movement ("half steps") while maintaining the diagonal sequence of hoof beats. In collected trot, apply half-halts to shorten your horse's strides for short periods of time while maintaining rhythm before transitioning back to collected trot. Repeat frequently until confidence has been established.
2. You have to ride lots of transitions between collected trot and shortened strides in order to get your horse to show quick reactions to your non-yielding and forward-driving aids.
3. Shorten the already shortened steps even more until you can try asking for the first one or two piaffe steps. Afterwards, push your horse forward in order to maintain his willingness to go forward.
4. Depending on the success of step 3, you can increase the number of piaffe steps if you make sure that you maintain momentum. It is better to move forward too much than to move backwards at all.
5. For a long time, allow your horse to move forward during the exercise before you slowly progress to piaffe on the spot. His drive to reach forward into steady contact must be your top priority.
6. For reasons of balance, you should start practicing along a wall and make use of its supporting function. Only once gross form has been consolidated, move away from the walls in order to familiarize your horse with the

exercise as required in tests. Piaffe is usually asked for on or crossing center line.

Another way to develop piaffe is starting in walk: during collected walk, encourage the hind legs to lift off and strike down more energetically until your horse switches to the diagonal, two-beat rhythm of trot and shows shortened trot steps. The other method of training piaffe is usually easier for the horse to learn as he does not have to change from a four-beat to a two-beat rhythm. He just maintains the momentum and impulsion of the shortened trot steps when changing to piaffe.

With regard to piaffe, there are a few basic aspects that have to be considered:

- Learning piaffe will take your horse a few months as he first has to develop the carrying power necessary to fulfill your request. You must not overburden your horse and ask for small steps only.
- Your horse must never be forced to do piaffe.
- A whip might be a useful auxiliary aid to encourage your horse and/or help him maintain his rhythm. You must never use it to hurt your horse – you are supposed to guide your horse towards piaffe, not force it on him.
- You have to concentrate on sitting completely balanced in order to support your horse in a positive way.
- It should feel like you could send your horse forward at any time. “Having your horse in front of your aids” is a statement that should be your guiding light with regard to piaffe!
- Right from the beginning, your horse has to learn to use his back muscles during this exercise. This is the only way he will carry his own weight and use his entire body. Ideally, he will slightly move his trunk up and down.

- The quality of the piaffe not only depends on your horse’s talent but to a significant degree on his level of training. He will need a lot of time to learn and fine-tune the motion sequence of piaffe. As a rider, you just have to take the time without demanding perfection from the start. Developing piaffe is a long process.
- With regard to piaffe, it is helpful to think of the hindquarters as an engine running in first gear, which pushes the horse’s body forward and elevates the forehand.

Most mistakes appear in cases where the horse shows a tendency to go backwards instead of forwards, where riders use the reins too much or where the horse is no longer straight and relaxed. Many horses do not come forward towards the bit anymore, which causes problems with regard to contact and makes piaffe impossible. In order to correct this mistake, you have to return to the basics and the Training Scale!

If you are able to coordinate the application of forward-driving and guarding aids, piaffe will not be a problem!

## 9. Developing passage

What?

The German Principles of Riding define passage as “an elegant trot motion during which the horse covers little ground but pushes himself off into a clear moment of suspension.” The diagonal pairs of legs remain suspended longer than they would in collected trot, which creates the impression of elegance and elevation. Similar to piaffe, the horse lifts his forearms until they are horizontal. The hind legs act like springs and cushion the load in a rhythmic and eager way that is directed straight forward-upwards. The hindquarters are lowered and develop carrying power and forward thrust to the highest degree possible, while the hind legs are flexed and drawn forward underneath the horse’s body.

Steinbrecht described this form of movement as a “soaring gait”, which underlines the fact that passage becomes all the more beautiful and expressive, the more energetically the horse pushes himself off the ground, the more elegantly he lifts his legs, and the more reliably he maintains his rhythm. During passage, the horse’s direction and frame depend on his degree of collection and the amount of ground he covers.

Why?

During passage, the horse reaches the highest degree of collection and expression of leg movement. It is a climax in the lives of all riders when they experience themselves and their horses become one and when they can feel every movement of every muscle. At this point, you and your horse have reached the goal and last step of the Training Scale.

How?

You have to apply the following aids:

- After you have caught your horse’s attention by applying half-halts, tense up the muscles in your abdomen and lower back a little more than usual in order to guide your horse into passage.
  - Both your legs have to keep pushing your horse forward while remaining in a guarding position. Your horse will receive a forward-driving aid every time a hind leg pushes off the ground. I do not advise to apply alternating leg aids (left – right) as this may lead your horse to sway.
  - All depends on your sitting balanced so you are able to apply aids when and where they are needed and at the appropriate intensity. Do not overaid. You may use a whip as an auxiliary aid to help your horse maintain rhythm. Touch him lightly on the croup. In order to encourage your horse’s hind leg, touch it with the whip between fetlock and hock. Do never ever use the whip to punish your horse!
- Bit by bit, I try to increase the number of passage steps I want to ask for. Horses usually need a long time to understand passage and to develop strength and expressiveness. First of all, just focus on getting your horse to understand the basic concept of the exercise; rhythm and a rounded back (in which the back muscles work correctly) are your measuring stick for the success of your training method and essential for the correctness of the exercise (gross form). Relaxed back muscles and a rounded back are closely connected to active hind legs and the fact that your horse is loose and moves without being forced to.
  - Only after you have completed the familiarization phase and consolidated the exercise’s gross form, you can start improving your horse’s expression, i.e., encourage the hind legs to be more active and the hindquarters to lower even more so the forehead is elevated, the front legs can reach out more elegantly and the forearms can be lifted into a position parallel to the ground. You can further improve your horse’s movements by asking for exercises that strengthen his hind legs (gymnasticizing, transitions, climbing up and down hills if possible, etc.) or have another person touch your horse’s hind legs with a whip. Do not try to increase collection at the expense of looseness!
  - Less significant problems can be resolved by working on curved lines with a lower degree of collection. If the problems become truly serious, however, you have to return to establishing looseness and rhythm or maybe even stop practicing the exercise if you cannot get your horse to relax. Any form of force or coerced motion is prohibited because you want your horse to become a gymnasticized back mover (a horse that uses his entire body and shows elastic movements) instead of a leg

mover who mechanically executes the motion. Only under this condition, you can achieve true passage!

## 10. Piaffe-passage transitions

### What?

Transitions, in this case, means that your horse has to come out of piaffe forward into passage and back into piaffe. As a result, there are always two transitions receiving a score whenever a test requires one passage-piaffe sequence. Moreover, you will also have to face transitions from passage into extended trot or collected trot, respectively, and from collected walk into passage. All of these transitions have to be schooled and practiced in the same way as any other transition.

The biggest challenge with regard to transitions from or into passage is to maintain the two-beat rhythm of the gait, i.e., maintaining the flow of motion. The slightest irregularity is a mistake and will result in low scores that are based on the severity of the irregularity.

### Why?

If piaffe and passage are required in a test, it is logical that we need transitions in between them. Without transitions, you cannot come from passage into piaffe. In Grand Prix tests, they are awarded their own multiple scores, which is why they have great significance and are important to the success of your performance. Therefore, I pay special attention to them in this article.

### How?

Transitions cannot be trained isolated from other exercises or developed from scratch because they are an inevitable result of schooling piaffe and passage. Learning how to ride piaffe and passage automatically entails several types of transitions, which are practiced in passing: passage is either transitioned into from collected trot or directly from piaffe, while piaffe requires a

transition from shortened trot steps (“half-steps”) or from walk, as described above.

With regard to transitioning into passage, start by practicing from collected trot first to make it easier for your horse as he already moves at a two-beat rhythm and can channel the impulsion he had developed in trot. Transitions from walk into passage have to wait until your horse’s hindquarters are strong enough and his technique has improved. This is more challenging because your horse has to transition from a four-beat to a two-beat rhythm directly and without disruption. He has to show some initiative and react to your aids in a reliable and sensitive manner.

The aids for piaffe-passage transitions are the following:

- Apply your non-yielding rein aids a little more pronounced and your forward-driving leg aids a little less than usual for piaffe so that you create a difference between the aids for piaffe and passage. Your hands still have to be very sensitive and not restrict your horse’s forward tendency.
- Use your legs simultaneously in order to prevent swaying, but do not grip. Instead, use them to apply soft impulses, the intensity of which depends on the sensitivity of your horse. At this point, you will realize why it is so important to keep your horse sensitive to your aids and school him that way right from the beginning. The more sensitively you school your horse, the easier it will be to succeed in difficult exercises and the less energy you need.
- In order to transition from passage to piaffe, you have to rein in your horse with the help of half-halts, slightly decrease the elevation of his head and neck, and then start to apply the aids for piaffe. It can be helpful to use your whip on top of his croup as a support. As a rider, you need to have an excellent feel for rhythm in order to

successfully transition into piaffe. If you are a musical person, you will have an advantage in this regard.

The following method has been proven useful:

- always start practicing transitions from passage to piaffe first, not the other way around, because the horse already moves rhythmically and shows the impulsion he needs in piaffe. After only a few steps, I already ask my horse to depart from piaffe into collected trot.
- Keep practicing transitions into piaffe while asking for only a few piaffe steps afterwards until your horse is familiar with the exercise. As a result, the transitions will become smoother and more relaxed.
- Only after the first two steps have been consolidated, you may increase the duration of piaffe and passage sequences. The point is not to tire out your horse but to build up his strength and to patiently familiarize him with this exercise.
- As a next step, you can start practicing transitions from piaffe into passage. In order to do this, you have to apply yielding rein aids to ask your horse to come forward before you start applying half-halts as part of passage. You really need to take your time when practicing this exercise as asking your horse to move forward too suddenly will result in irregularities. It is okay to allow your horse to sort of “crawl” out of piaffe if this means that you are preserving his rhythm. Imagine you are asking for piaffe in which your horse moves forward just a little too much until he has developed the suspension phases of passage. The better you and your horse are at piaffe, the easier it will be to depart from it and ride a transition.

## 11. Grand Prix

What?

Grand Prix tests consist of the most difficult exercises possible (cf. above). The current FEI Grand Prix test (2009) includes 33 exercises and 37 individual scores (including final score) and is evaluated by five judges if the competition is held internationally (national tests require three to five judges). Grand Prix Special consists of 36 exercises and 40 individual scores. A Grand Prix test takes about six minutes to complete, Grand Prix Special almost seven. You can see how incredibly strenuous it is, how many years of training it takes and how much horse and rider have to concentrate in order to succeed. There is a reason why it is the most difficult dressage test in the world and is used in championships and Olympic Games to decide who wins gold, silver or bronze medals.

Why?

To ride at Grand Prix Level is the big goal and dream of many riders. It is the result and touchstone of respectable, good-quality training based on the Training Scale.

How?

I am not going to discuss the individual exercises at this point as this has been the object of my series of articles. Important to me is to give you some advice on how to ride the test:

If you are planning on competing at dressage or any other discipline, make sure you and your horse are prepared and ready before you step in front of the judges. This means that you have to practice the test at home several times, know it by heart and be able to do the exercises! If you cannot do it at home, you will not be able to do it at a competition either; disappointment is for sure. No one benefits from this scenario, and the judges are always grateful if they have to evaluate contestants who are prepared and qualified. This is true for all levels, from Training Level to Fourth.

Preparation includes basic gymnasticizing and general fitness training for your horse,

practice of technique and individual exercises as well as training for a competition. The latter includes figuring out how much time you need to warm up your horse before the competition, practice in a standardized arena, familiarizing your horse with the atmosphere at a competition without actually competing as well as making sure that your horse goes into a trailer without a problem. All of the criteria just mentioned (which deserve an article all to themselves) will make your first and all subsequent competitions much easier, increase your chances to succeed and decrease the risk of injuries since horses are creatures of habit and love routines. Unpredictable events will be easier to handle if you fulfill the prerequisites.

In order to compete at Grand Prix Level, you need years of experience participating in tests, you need to know about your horse's fitness and state of health, and you need to be able to concentrate perfectly and be mentally strong.

#### Conclusion

In the course of this series, I have discussed the horse's training from beginning all the way to the most advanced level. My goal was to

help you – dear reader – understand the phenomenon that is the Training Scale. Rhythm, looseness, contact, impulsion, straightness and collection are the six pillars of horse training. If you use them as guidance and work your horse accordingly, you will always be on the right tack – in the best interest of riding and your horse. Paul Stecken, the famous retired major, once said (before it became the slogan of “Xenophon e.V.”, an association in favor of correct training):

“All it takes is to ride correctly!”

<Pictures p. 94>

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