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FROM THE HORSE'S POINT OF VIEW

Beyond Natural Horsemanship: Horse Training's New Frontier

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EBEC Pyramid Level 2

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Interspecies Communication as a Foundation

COMMUNICATION BETWEEN ANIMALS

Communication—the exchange or transfer of information—between animals is organized into several distinct types and can take place in different ways.

Proprioceptive Communication: Auto communication where a living creature is both the sender and the recipient of a message. An example of this is echolocation, seen in whales, dolphins, and bats.

Interspecies Communication: This takes place between animals of different species—for example, parasitism, mimicry, symbioses, as well as aggressive and defensive behavior. Interspecies communication also includes dialogue between people and horses.

Intraspecies Communication: *Intraspecies* communication is communication among animals of the same species. It can only take place when all participants use the same code and apply the same rules. Knowledge of the

code and rules can be an instinctive ability that is present from birth or an innate behavior that has been learned or trained.

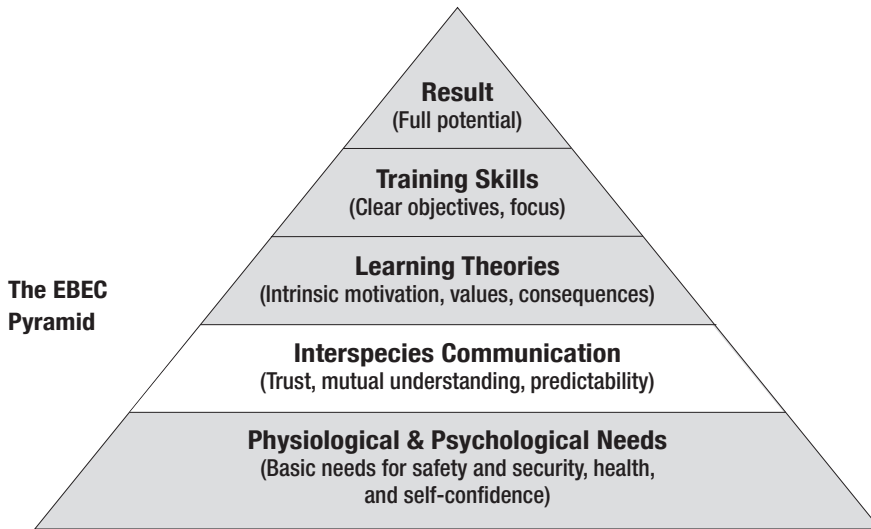
Unidirectional Communication: This is intraspecies communication in just one direction, from sender to recipient. Bees dance to tell other bees the location of a food source. The message conveyed through dance is unidirectional because the dance does not trigger a symbolic reaction in other bees, but a practical one.

Symmetrical Communication: Symmetrical communication, which has the potential for dialogue, is the opposite of unilateral communication. One example would be the behavior of dogs during the ritual of making contact.

The content of animal signals is often ambiguous and dependent on the context in which it takes place. For example, the position of the sun plays an important role for the information conveyed by bees about the distance and direction of a food source. The relative position of the interacting animals to each other or in the perceptual field can also be significant. So, distance to other animals of the same species, the food source, or the structure or the nest can influence the content of the message.

COMMUNICATION BETWEEN PEOPLE AND HORSES

Communication between people and horses is *interspecies communication*—communication with gestures between different species. It is very important to closely observe the horse's movements and gestures and to correctly decode the information that the horse gives us. We can only enter into a dialogue and control the horse's behavior in our interests if we know what his signals mean.



As horse people, we want our horses to be well and happy. Horses should also do what we want them to—behave calmly and dependably, be nice and friendly, and meet our needs. Then all is well with our and the horses' world.

This might seem rather egotistical at first, but that's okay given that we actually use horses for our purposes. I can support this view, because after all, I can make life good for my horses.

Horses have an excellent ability to learn, and they are adaptable, too. We have a lot to gain from realizing that horses remember almost everything that we teach them using classical or operant conditioning. We should therefore primarily concentrate on correctly decoding the horse's gestures so that we can respond to them meaningfully from the horse's point of view. As I've already mentioned, ethograms that apply to all horses, across all breeds, can help us with this (see p. 88).

In our attempts at communication, it is important that we don't imitate a

horse's body language and try to assume the role of the lead horse or alpha animal. Neither should we imitate predators. We are human and nothing can change that. If we use our own instinctive gestures, then we will be natural and authentic. We make gestures and see from his behavior how the horse responds and decodes them.

We have to make sure that we don't react to his responses with punishments that correspond to our strategic thought processes. Examples of this would be assumptions such as: "If you don't stand still next to me, I'll send you out onto a circle until you give up and show some respect!" or "You're not standing still so I'm going to smack you!" Assumptions and actions of this kind come from the human perspective and aren't comprehensible to horses.

The first of these methods—sending away—copies behavior that can be observed in horses in the wild. However, when a human sends a horse away, the horse doesn't have the chance to actually escape the "attacking" human through flight. There is a high risk of stress as a result, and it can be so great that it blocks the horse's ability to learn for hours.

In the second example—hitting—the human expects the horse to obey the words and "stand still." The horse experiences on a physical and emotional level that the actions he has offered so far to the request—maybe walking forward or circling around the trainer—trigger aggressive behavior in the human. The reason for this may be that the horse has not yet learned the behavior "stand still next to the human" that the human expects. However, it could also be that the external circumstances have made the horse feel so unsure that he is too stressed to stand still. It is therefore essential to make factual observations and not respond by getting angry and acting aggressively.

If some external factor has caused the horse concern, then that could be why he doesn't stand still as soon as the human does. His internal system has probably sounded the alarm. If the horse had been able to recognize standing still as the correct behavioral response and been able to do

it, he would have done it. Remember, horses do not have any strategic or planning capacity that would enable them to be deliberately disobedient or bad. External circumstances that prevent the horse from standing still could be simply an upturned bucket in the background that the horse cannot make out clearly so he can't understand what it is. We can help the horse by making the bucket stimulus recognizable for him.

Ethograms help us to understand whether the horse has caught sight of something worrying in front of or behind him. If we correctly interpret this from the horse's gestures, then it is helpful to bring this information into the equation (see p. 96).

For example, if the horse's ear position signals that there is something behind him, then we can walk in a little circle, following the angle of the horse's vision. As per his field of vision (see p. 101), moving in a circle will enable the horse to make out or decode the stimulus "bucket," and his concern will immediately subside. An aggressive response to not standing still, in the form of a smack or a shout, is never as effective as positive or negative reinforcement applied in accordance with learning theory. (We will discuss learning theories in Level 3 of the EBEC Pyramid—see p. 122.) The horse is not able to process the punishment. All we do is create uncertainty in him, and we have to accept the side effects of our actions in the form of additional stress. Our next lesson will be less focused and positive. Not because our horse is unwilling but because of the hormones circulating in him due to our actions.

ACOUSTIC COMMUNICATION IN HORSES

Our verbal language can be confusing for horses because they have no idea what our words mean. Horses can be conditioned to words, or certain sounds or tones, but we must always be aware that our strategic thoughts don't mean anything to them.

A horse won't decode "Stand still!" if he isn't able to stand still. Speech is consequently rather secondary in training horses. However, it can have beneficial side effects, for example, when the horse is fully focused on a stimulus that is worrying him. A shout or a sound from a different direction can distract him and change his focus. Horses are distractable animals and that can sometimes be useful.

When we give verbal expression to our happiness, our tone, a smile, or body language that radiates happiness can convey positive feelings to the horse. We just have to be aware that the words we speak are usually directly connected to our physical stimuli, such as stroking, kissing, or patting. However, there is so far no scientific proof that the horse "understands" that our words and our happiness are a response to the dressage test he just nailed.

A horse's acoustic language—the sounds that are audible to us—have been examined scientifically and consist of just a few different sounds. There are sounds that are produced via the horse's larynx and sounds that are produced without the larynx. Vocalizations are important information that is communicated to other herd members.

Acoustic signals are sometimes used in attack and defense rituals, but also to warn of danger or in friendly, playful exchange, as a greeting signal or for recognition. Three vocalizations are very important in EBEC training—the *blow* through the nostrils, the *snort*, and the *snore*. These three vocalizations give us important information about the inner state of the horse in training.

Blow

The *blow* is a non-pulsating broadband-level sound that results from a short, powerful expulsion of air from the nostrils. Blows can reach an audible range of 98 feet and are an expression of alarm. When a horse blows,

it signals danger to all horses within that distance, perhaps, for example, because the horse concerned has discovered an unusual object a few yards away from him.

The average duration of a blow is half a second. It warns all the other horses in the immediate vicinity and informs them that something unknown has been discovered. It triggers an instinctive, unlearned alert in all other horses.

The nostrils dilate fully during this short blow, the mouth is closed, and a brief inability to move during and immediately after the sound is typical. Longer expulsions of air of between 0.6 and 1.3 seconds are often emitted afterward, and the olfactory investigation of the unfamiliar object will then follow.

When a horse who is being ridden in the indoor arena hears a blow from a horse who is being led past, outside the arena, he will immediately become nervous. His behavioral response will be directly controlled by his brain, without any of his own cognitive thought processes. He will immediately express his fear physically, maybe by lifting his head and speeding up. He will try to find out what is going on outside and whether there is any reason to take action in the form of fight or flight.

If we punish the horse in this scenario with a sharp tug on the reins, a smack with the whip, or other aggressive consequences, he will still do all he can to find out what is going on outside. He can't just imagine the worry isn't there and say, "Oh, sorry, I'm a little distracted at the moment. I totally forgot that we are in the arena and the doors are closed. Even if there is a bear outside, I should still pay attention to you! Sorry I messed up your lateral movement across the diagonal!"

Although they might seem logical from our human perspective, punitive measures in situations like these will not be effective, and the chances of achieving a positive training experience for the rest of the session after using them are low. Stress in horses is a combined psychological and

biological behavioral response to either an old, stored experience that has already happened, or new, threatening circumstances.

The physiological behavioral response to stress is an extremely complex topic that has not yet been fully explored, but scientists agree that there are two types of stressors:

- First, *physical stressors*. These are physical injuries, strains, exhaustion, and changes in the environment.
- Second, *psychological stressors*. These include situations that cause the horse anxiety, worry, or fear. Science defines uncertainty and fear of the unknown as the two main psychological stressors for horses.

In the situation just described, the horse experiences the latter, a situation of psychological fear, triggered by the blow from the other horse. The horse expresses himself using interspecies communication. Those are the facts.

We as riders can use this scientific knowledge to stay calm and understand the situation from the horse's point of view. We can then behave in an empathetic and understanding way as we sit on the horse's back and consider how the horse is expressing himself physically. The positive effect of this is that the horse experiences support, instead of the rider adding even more stress to the already upsetting situation. If the horse's head and neck are being flexed with the rein contact, the rider could perhaps give forward slightly to make the horse feel that he is in control, and to prevent a conflict caused by the use of force.

When the horse gets too fast, it can be useful to divert his speed onto a circle. The horse is less likely to buck if he can still move forward, because he feels that he can escape the situation. He increases the distance to the blow with his own actions, which gives him a feeling of safety. Either way, the horse will only come back under control and start concentrating again when he can categorize the blow from the other horse.

This behavior is instinctive. The job of the rider is to remain understanding and redirect the horse's urge to move in as controlled a way as possible until, from the horse's point of view, the danger is no longer present. As soon as the horse's focus is back on the rider, work can resume. The rider will be able to feel this as soon as the horse accepts the rein aids again and bends and flexes as he normally does in focused work.

For the few seconds after the blow, the horse is able to perceive neither positive nor negative stimuli. The rider has to accept that she must abandon focused riding at this moment, since "sawing down" the horse's head, changing to a stronger bit, or using draw-reins or side-reins will not help. It is an unalterable reality that stress hormones in the bloodstream do not allow horses to be receptive to training or instructions.

Snort

The snort vocalization is important because it is often related to our actions. The snort is a broadband-level sound produced by forced exhalation through the nostrils and differs from the blow by an audible, fluttering pulsation of the nostrils that is visible to the rider. The horse's mouth remains closed during the snort. The average duration of a snort is 0.8 to 0.9 seconds, and it is audible up to a distance of 165 feet.

Snorts occur when the horse's nose is irritated, for example, by excessive dust in the arena, but also after high physical exertion or when the horse is restless and people are impeding his movement. This happens with excessive bending and flexing during ridden work or when the horse is contained behind a fence or barrier that he wants to but can't escape. Scientists emphasize that the snort is a "psychological displacement" whereby the horse attempts to express his unease. At this moment, he is unable or not allowed to give physical expression to his unease through movement. As trainers, we have to make sure that we notice the horse's

snort when we cause him distress. If possible, we should release the horse from the situation so that he can relax and then give us his attention again.

If the horse snorts when he is being ridden or when he is alone in the field, Level 1 of the EBEC Pyramid is not being guaranteed. At that moment, we should notice that the horse has not understood an exercise or isn't able to cope with it. We should either remove the pressurizing stimulus caused by the rider or (as an example) take the horse turned out in the field back to his friends in the stable. In effect, we let the horse "get away with it," since he has limited capacity for learning in this situation. The same goes for us when a situation makes us nervous.

We must then use our ability to think strategically to create a training plan for the horse with the help of the EBEC Pyramid: In the next day's lesson, we will make sure that the horse's needs are fulfilled (Level 1—see p. 34). Then we check whether we are decoding the horse's gestures correctly. We think about how we can apply the learning theories and which rewarding or punitive stimuli will work best. And, in just a few training sessions, we can teach our horse how to behave while turned out by himself or how to deal with whatever triggered the snort when he was being ridden.

When you train the horse well, you will hear the snort less and less frequently. The older and better trained the horse is, and the better we have filled his "personal map" with positive experiences, the fewer conflicts will arise. Horses are extremely willing to learn and adapt.

Snore

The snore is another important signal that we should pay attention to in interspecies communication with horses. It is a broadband-level sound that is like a scratchy inhalation or an in-breath that just happens to be louder than usual. It lasts for around 1.0 to 1.8 seconds. We hear the snore under two circumstances: It is the preliminary sound, the advance

warning of an alert blow (see p. 73) and can also be emitted when the horse is lying down.

The snore is important because, when we use EBEC, we concentrate on noticing reactions in the horse *before* situations escalate—that is, before horses spook or start bucking or rearing, and before stress hormones are released. This is what makes EBEC such an amazing tool; it is quick, safe, effective, and almost invisible. The sooner we recognize things that are unfamiliar or frightening to the horse, the more effectively we can immediately draw up a training plan that reinforces and then builds on the foundations of learning. We can enable the horse to develop his full potential.

Note, the aim is to correctly observe and classify the horse's gestures as early as possible, but *without judging them*. We want to take the right actions for the horse, before conflicts, problems, and misunderstandings escalate. This requires self-reflective action. If we notice a snore in training, we know that it is related to a moment of anxiety that we need to diffuse as quickly as possible. For example, we have to improve the horse's ability to see if there is something he doesn't recognize in the distance or in his blind spot. Or we may have applied the anxiety-causing stimulus ourselves and need to remove it. When this is the case, we may need to use the EBEC Pyramid to make the unfamiliar, frightening stimulus a familiar, accepted stimulus through appropriate training. If, however, we ignore the horse's behavior and the anxiety-producing stimulus appears again in the future, in the same or a different form, the horse's next behavioral response will come sooner and stronger. We want to avoid allowing such an issue to become established, because with good training, the horse should only be afraid of a few, totally unfamiliar, unpredictable things.

The chapter on applying the learning theories from the horse's perspective (see p. 122) explains how to trace the triggering stimulus that causes

the horse to blow, snort, or snore, and then create a corresponding training plan to change how the horse behaves the next time a similar scenario is encountered.

PRINCIPLES OF TRAINING WITH EBEC

When we train with EBEC, we learn to create training plans that cover, as broadly as possible, the range of things that the horse has to learn, whatever his discipline.

At AKA we have drawn up a comprehensive catalog of skills that helps us and the horse feel calm and in control, because the horse learns the exercises he needs at the right times, and is then extremely well-prepared for whatever comes next.

A show jumper needs to be able to do different things than a dressage horse; a pleasure horse must have different skills than either of them. The focus for a pleasure horse would perhaps be more on remaining calm when ridden alone on roads and trails and accepting unfamiliar objects and scenes, while the competitive arena has very different and potentially frightening scenarios in store for a dressage horse. Meanwhile, the fences the course builders have deliberately tried to make as difficult as possible for the horse, in order to guarantee an exciting competition, pose other challenges. If a horse is prepared with the right set of skills, we minimize sources of errors and increase the horse's focus on the job in all these situations, a victory for us both.

That's the great thing about using a science-based training method. It can be applied in all situations and to all training goals and avoids producing problem horses, because it doesn't create potential for conflict.