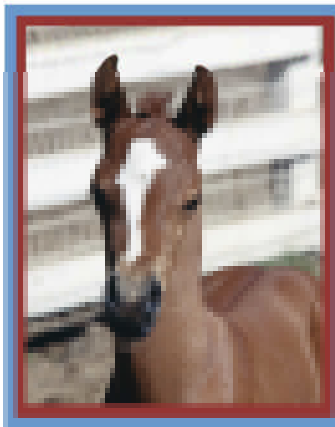


Simple   
 Schooling

The Science  
of

Horses



By J. Anne Huss

# **The Science of Horses**

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## Unit Nine - Social and Learning Behavior

Horses are social animals and they desire to live with other animals, preferably another horse, donkey, or mule. We know this because wild horses display this behavior, so it is **instinctual**.

Horses live in **social groups** or bands. Herds can consist of 2 or more bands and individuals. Most bands of horses have less than 10 animals but 4 is the average number.

**Solitary animals** are abnormal in the horse world and are typically only the result of survival. For example - disease or other abnormality could wipe out a herd and leave a lone individual horse. Horses in captivity that show solitary tendencies in captivity present management problems for their owners.

Horses bond with other horses, animals, and humans. For example:

- Foals will bond with other foals
- Mares will bond to other mares
- Stallions will bond to certain mares

The strength of these bonds depends on life stage. Young horses bond easily to each other but they do not all bond in the same way. Filly-filly bonding and filly-colt bonding will result in playful tendencies. While colt-colt bonding will result in rough play, much like human boys.

These early bonds may stay strong until adulthood and if they are too strong they might disrupt weaning behavior.

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Horses that are housed with no other horses will bond to:

- Goats
- Chickens/ducks/geese
- Dogs
- Humans

Regardless of who the horse bonds with, there will always be a **"pecking order"**. Every horse wants (and needs) to know who is in charge.

This is called **"social dominance"**.

The #1 ranking horse will always be first and the bottom ranking animals will always be on the bottom. Ranking at these two positions will almost never change. The horses in the middle of the pecking order will change - some will go up in rank and some will go down.

Social rank is always established by gender/maturity:

- Stallions
- Mares
- Geldings
- Weanlings - male first then female
- Foals - male first then female

Stallion behavior is unique in the horse world. They will typically display the following behaviors when confronted with other stallions:

- Staring
- Body posturing
- Smelling as an investigative tool
- Squealing

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- Striking
- Defecating to mark territory

At this point they will either flee or fight! If they fight one horse will typically charge the other. Stallions must always be approached with caution - they can be very dangerous and aggressive by nature.

While horses are capable of remembering and learning, they fall short in brain power when compared to other animals. When looking at how big a certain animal's brain is as compared to its body weight the horse falls between the goat and the pig.

- A human brain is 2% of the average body weight
- A cat's brain is 1%
- A dog's brain is 0.5%
- A rat's brain is 0.3%
- A goat's brain is 0.3%
- A horse is 0.1%
- A pig is 0.05%

Horses are not great problem solvers and when presented with a problem they will display typical stress behaviors such as weaving and pawing. However, when given an opportunity to escape pain or discomfort the horse displays the capacity for learning only second to dogs.

That tells us that pain, anxiety, and discomfort will drive a horse, but not in a good way. Horses that have experienced significant pain or abuse will remember that pain for years and this will dictate their behavior when placed in similar situations.

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Positive experiences help the horse in learning new things.  
Reward behavior, when training, works best for horses.

Learning is critical for survival because instinctual abilities are not enough to get by. Horses, like most other animals, must learn to adapt and modify to survive. This adaptability was what allowed them to be domesticated successfully and horses are now able to be very highly trained under the right circumstances.

There are several ways in which horses learn:

**Habituation** - this means that a horse is exposed to something over and over until it becomes accepted. The first time a horse is exposed to a fluttering plastic bag in the wind they might rear up in fright - they might even take off. If this same horse is exposed to the fluttering plastic bag daily for several weeks, eventually the horse will come to ignore it.

**Conditioning** is an essential part of learning. There are three types of conditioning:

**Classical conditioning** - When the horse associates one thing with another. If every morning the horse is greeted by a human with a flake of hay, then the horse starts to associate the human with the hay. When the horse sees the human in the afternoon, they think of hay, even if the human is not going to feed them at that time.

**Instrumental conditioning** - This is a reward or punishment type of situation. IF the horse responds to cues or signals when riding they are given a pat on the neck and a kind word. If the horse does not respond they are given a stern warning, the tap of the crop, or the pressure of a leg.

**Operant conditioning** - this is trial and error learning. If a horse wants out of the pasture they might bump the gate a few times to see if it will open. If that doesn't work maybe they will push on the fence with their body to test its strength. Eventually they might learn that the only way to get out of the pasture is to be led by a human and give up. Or, maybe they will learn that jumping the fence is the only way out. This is operant conditioning.

Horses are not very good learners if you expect them to learn by example. Human girls, when watching their mothers put on make-up, will learn to put on make-up. Horses will not typically learn this way - though several bad habits, such as cribbing, can be learned this way.



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## Unit Nine Exercises

- 1) The normal social behavior for horses is to live as solitary animals.
  - a) True
  - b) False
  
- 2) Horses can bond with other horses, other animals, or humans.
  - a) True
  - b) False
  
- 3) Horses that are not housed with other horses will not bond to:
  - Goats
  - Chickens/ducks/geese
  - Dogs
  - Humans
  - a) True
  - b) False
  
- 4) Mares are at the top of the pecking order.
  - a) True
  - b) False
  
- 5) Stallions are gentle animals.
  - a) True
  - b) False

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- 6) A horse's brain is as big as a dog's brain and they can learn things just as easily.
- a) True
  - b) False
- 7) Horses are excellent problem solvers.
- a) True
  - b) False
- 8) The best way to train a horse is to use punishment or pain.
- a) True
  - b) False
- 9) Horses do not learn well by example.
- a) True
  - b) False
- 10) Describe the difference between herd or social animals and solitary animals:

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11) Name few behaviors that stallions will typically display:

12) Name and describe the three types of conditioning:

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