

How Horses Think

by Howard Powers, longtime Marion horseman

Horses are very intelligent animals and all throughout history, have been associated with man. Our lives have been impacted more by horses than by any other animal. Specialists who concentrate their studies on the physical and mental limits of horses are probing new depths quite regularly and exploding some long-held beliefs.

Dr. Temple Grandin, an assistant professor of animal sciences at Colorado State University in Fort Collins, is one of the nation's top designers of livestock facilities. One third of the cattle and hogs in the United States are handled in equipment she has designed. She is also autistic. She thinks in pictures, which gives her an innate concept of how animals view their surroundings.

Grandin's ability to see things from the animal's standpoint and her visualizing things in pictures makes it possible for her to design complex facilities in her mind before the plans are ever put on paper or constructed. She visualizes things that cause fear and confusion to the animals; things which are not readily apparent to most people. In so doing, she designs facilities with the animal's safety and ease of handling as the prime consideration.

As an example, in Arizona where it is necessary to dip cattle to rid them of ticks, lice and other external parasites, a long, seven foot deep dipping vat had been designed with a slick, concrete slope leading into the deep part of the vat. Animals felt insecure on the slippery surface and would sometimes panic, flip over backwards and drown. When Dr. Grandin redesigned the slope so that there were cleats to provide secure footing for the cattle, the animals readily walked down the slope without fear, where they dropped into the pesticide. Grandin had seen it from the animal's point of view.

In addition to their intelligence, horses have a strong survival instinct that is hard for humans to understand and causes problems in training. They have a very limited understanding of "words" and most likely the words, "whOa, bAck, gEE, hAW and GETOFFMYFOOT," accompanied with appropriate punching or slapping, are the limit of their verbal

understanding. However, horses can read us like a book and figure out our personalities and character much quicker than we can theirs, simply by their ability to read body language. If we crouch and move toward a horse in a threatening manner, he perceives us as a threat. But if we turn our backs to the same horse, he sees us as non predatory and if he has had enough contact, will follow us like a pet dog.

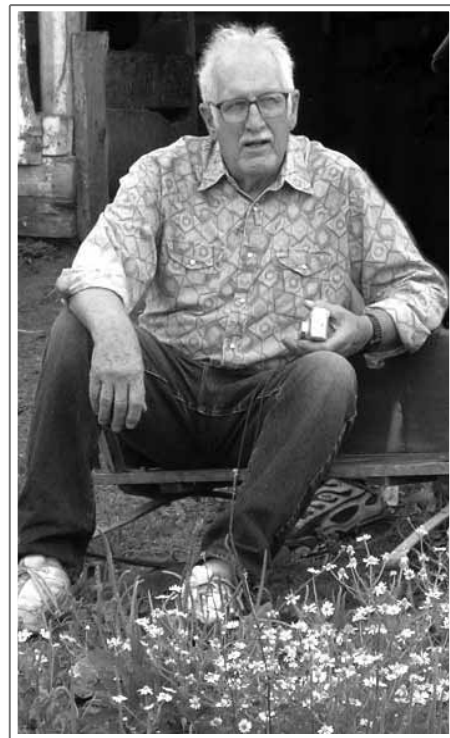
Abstract thinking is the product of a vocabulary, and since horses do not communicate verbally, it is doubtful that they engage in any abstract thoughts. It requires a visual or auditory stimulus to cause a horse to react and very little of either is required. Horses have extremely sensitive hearing and eyesight. A horse can be trained to respond to a signal as slight as the movement of a finger or a very soft sound.

Horses are also endowed with long term memory. We've all had this (or something like it) happen You are out on a trail ride when a pheasant explodes from a hiding place and scares your horse, producing an unwanted response. The next time you ride to that area he will be extremely reluctant to go past that spot, even though the cause of the fright is no longer there. Does the horse's brain project a picture of the pheasant suddenly appearing, or how does the horse remember that event? Only the horse knows the answer to that.

Communication amounts to presenting things in a manner that the horse understands. Ray Hunt, one of the greatest clinicians in the world, says that problem in communication is NEVER the horse's fault. But rather, problems are caused by our inability to present our wishes in a manner that the horse can understand.

It has been endlessly drilled into us that a horse has a divided brain, with each side getting information from one eye only. According to this belief, it is necessary for us to repeat each lesson to the opposite eye so the horse will be educated on both brain sides equally. Recent tests have introduced some doubt into that theory.

A horse has both monocular and binocular vision. He can see and process information seen with one eye and then he can turn his head and see an object with both eyes. He has good peripheral vision and only a small spot in front of his



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nose and a small area immediately behind him are hidden from his view. He can also recognize some colors but not in the range of human vision.

Dr. Evelyn Hanggi, president of the Equine Research Foundation in Aptos, California, has conducted tests regarding equine vision. In one such test, a horse had a blindfold over one eye and in the test, was to select a certain image to get a reward. When the blindfold was switched to the other eye, the horse had no problem selecting the same image. This does not necessarily change things for our training, because it is still a good idea to work with both sides to desensitize them equally, but it is nonetheless an interesting finding.

Horses see things that we cannot see, and hear things that we cannot hear, plus their inborn instincts make them a complex commodity to work with. But, they are amazingly forgiving animals and will tolerate the most inhumane abuses and still perform for us. We just have to get down and view things from the same level that they do and try to understand why they react as they do. We know that a trailer is a safe place but to a horse, it is a cave. We know the creek is ankle deep but to the horse, it could be bottomless. We know that that dog running toward us just wants to be friendly, but to the horse, it is a wolf attacking.

Understanding the mental and physical boundaries of a horse is a long term and fascinating project.

