Reining is a sport where the ideal would be for both horse and rider to be ambidextrous—equally athletic both directions. However, NRHA Futurity scores seem to suggest that 3-year-olds do not demonstrate a distinct side preference, or what we think of as "handedness."

PHOTO ILLUSTRATION BY JOHN O'HARA

LEFT-Handed? RIGHT-Handed? AMBIDEXTROUS?

Horses don't have hands, of course, but do they naturally prefer to use one side of their bodies more than the other? The findings from a recent study may surprise you.

By Katie Navarra

PICK UP A PEN AND WRITE YOUR NAME.

Did you use your right hand or your left hand?

Studies suggest that 70-95 percent of the world-wide human population is right-handed, while 5-30 percent is left-handed. An undetermined minority is ambidextrous, meaning they are equally adept at using either hand.

Intuition suggests that horses, too, exhibit a natural tendency for "handedness" and thus perform maneuvers more easily in one direction than another.

Many animal groups do have a preference, like "handedness" in people. In some species, including song birds that sing with the left side of their brains, there is such a strong preference for performing activities with one side of the body that there is little or no variation between individuals. Scientifically, this is called "population asymmetry."

Since numerous animals display population asymmetry, it might not be surprising that horses do, too. And some horsemen and -women are convinced by their own experiences that this is true.

"Over the past 40 years of riding and training, I've consistently found that it's easier for horses to go left," says Tom McBeath, an AQHA Professional Horseman and judge from Union, Mississippi. He specializes in reining, a sport that requires horses to perform equally well in both directions.

Ian Q. Whishaw, a professor of neuroscience at the University of Lethbridge in Alberta, has yet to be convinced. From an evolutionary perspective, he believes "handedness" in horses doesn't quite parse.

"In the wild, a predator could attack from either direction, requiring the horse to be equally good at escape in either direction," the researcher observes. However, he wanted to take a look at the phenomenon from a more objective point of view, so he conducted a study in which he analyzed reining horse futurity scores.

Horses Aren't 'Handed'

THE DATA FROM THE 2015 STUDY CONCLUDES THAT HORSES ARE not "handed." They do not demonstrate population asymmetry. The study suggests that while individual horses may have an easier time performing maneuvers in one direction compared to the other, a broad generalization that there is "handedness" or "sidedness" in horses as an entire population cannot be made.

As a trainer and judge of reining events, Tom was surprised by the results.

"Without looking at my judging card from a recent event, I would think that the majority of horses would score better on maneuvers to the left than to the right," he says. In the heat of competition, judges are evaluating each maneuver as it comes in the pattern and don't look at symmetry as a whole.

"The numbers can sometimes surprise you," he says.

The Study

TO DETERMINE WHETHER OR NOT quarter horses are "handed," the Canadian research looked at the scores from the 2014 National Reining Horse Futurity in Oklahoma City. Compared with other disciplines, reining is an ideal event for the study: Exhibitors are expected to execute a specific set of maneuvers in both directions. Judges don't necessarily award points for symmetry of an entire pattern, but they do award points for individual maneuvers performed in both directions. Those horses and riders who can perform individual maneuvers equally well in both directions earn the highest scores.

In total, researchers analyzed 482 scores awarded to the 3-year-old horses under five judges in the both open and non-pro divisions. All five judges' scores were included in the study.

"Many riders have told me that they think their horse is handed, so I had no reason to believe otherwise," Ian says. "Also, previous studies with horses mostly claimed they were left-handed."

Despite the lack of evidence that all horses have a preference for "handedness," the study results show that only a minority of horses received the same score in both directions for a given maneuver. Thus, the horses showed a strong individual asymmetry. The study results found that only 16 percent of horses in the non-pro group and 14.3 percent in the open division earned scores that were equal on the left and right.

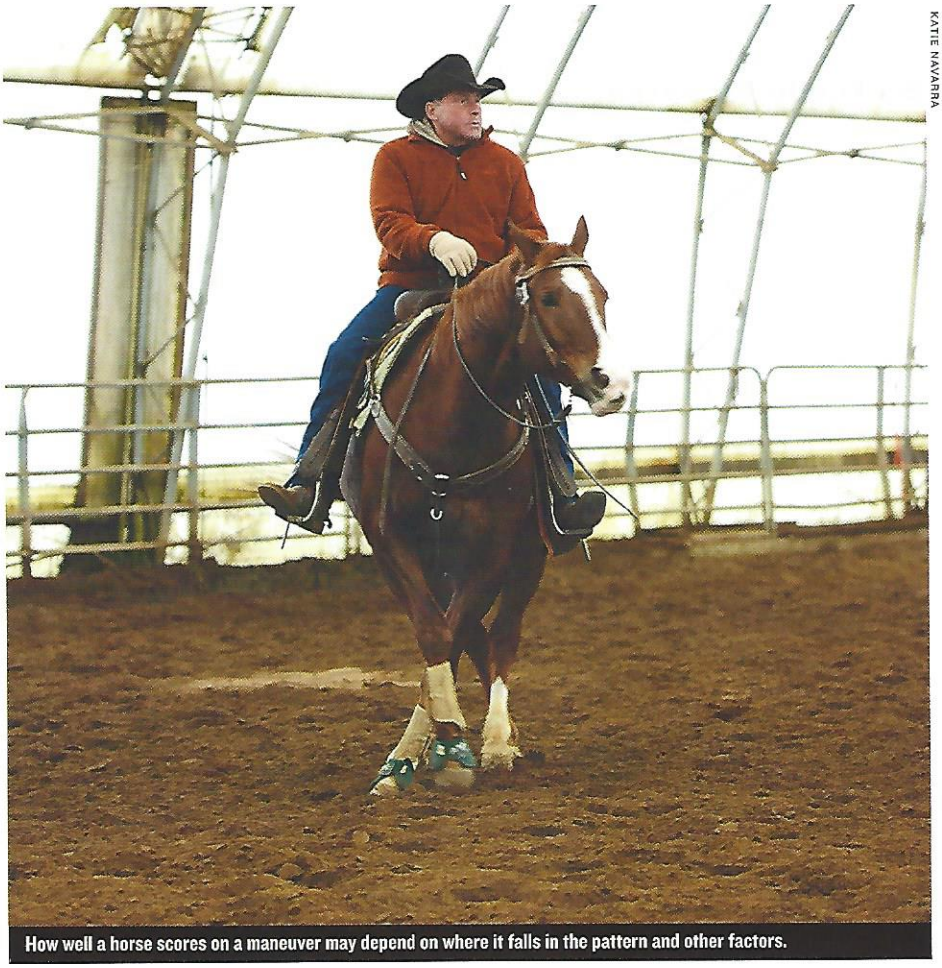
"There are multiple factors that can determine a different score for the same maneuver in both directions," Tom explains.

One explanation may be the order of maneuvers within a given pattern. For example, AQHA Pattern 10 requires an aggressive opening sequence.

The first three steps are:

1. Run past the center marker and do a sliding stop. Back up to the center of the arena or at least 10 feet (3 meters). Hesitate.
2. Complete four spins to the right. Hesitate.
3. Complete four and one-quarter spins to the left so that the horse is facing the left wall or fence. Hesitate.

Riders push their horses to run hard, stop hard and back up instantly.



KATIE NAVARRA

How well a horse scores on a maneuver may depend on where it falls in the pattern and other factors.

With only a slight hesitation to collect themselves, the horses are asked to step into four spins to the right.

"By the time the horse starts the first spin, it has exerted a lot of energy and may be a bit tired," Tom explains. "At the same time, the horse's motor is revved up, and he is not as relaxed as he would be stepping into the spin in other patterns."

Contrast Pattern 10 to the opening sequence of AQHA Pattern 6 and there is a big difference.

In Pattern 6, horses must walk or stop prior to starting the pattern. Beginning at the center of the arena facing the left wall or fence:

1. Complete four spins to the right. Hesitate.
2. Complete four spins to the left. Hesitate.

In this pattern, the horses are relaxed before stepping into the first spin. Mentally, they are more prepared and physically they aren't as tired, setting the stage for cleaner footwork in both spins.

"The horse may be more likely to perform equally well in both direction because he is crisper, fresher," Tom says.

Rider Influence

SINCE HUMANS ARE A SPECIES THAT HAS POPULATION ASYMMETRY, and since we do display strong preferences for one side of our bodies, it may be possible that a horse's rider is influencing the horse's "handedness."

"I always wonder why most of my horses prefer to go left," Tom says. "Are they born that way, or is it something I do with them?"

Every horse in Tom's program is started to the left. For the first few days of training, he tends to ask his horses to bend, circle and move to the left more than to the right.

"When I mount and dismount, especially on young, snorty colts, I tip their noses to the left to create a relaxed zone," he says.

KATIE NAVARRA

How does a rider's preference for his right or left hand affect a horse's training? Ian's Whishaw's study shows that population asymmetry is part of being human, but it does not appear to be part of being a horse. For a prey species, that makes sense.

The rider's dominant rein hand also might sway a horse's preference.

When riding one-handed, Tom holds his reins in his left hand so his right hand is free for other activities such as roping, and opening and closing gates. Even when riding two-handed, he has a preference for doing things with his left hand. Tom is acutely aware of how this tendency can spill over to his horses. He is diligent about working both sides of his horses' bodies equally.

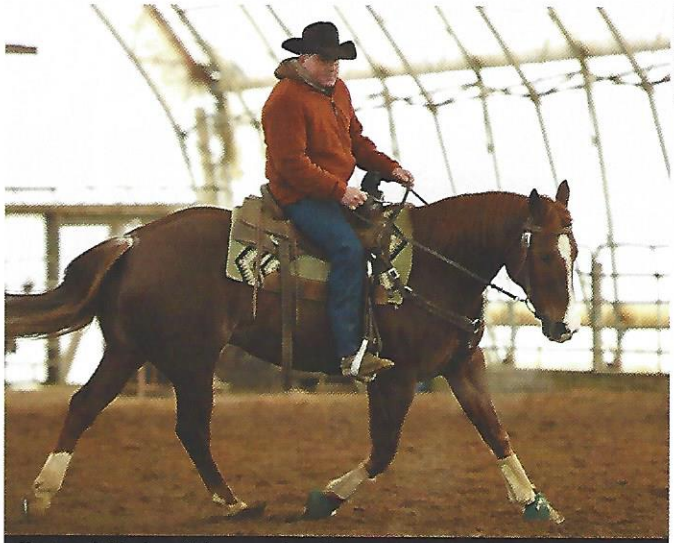
"The best riders read their horse especially well and adjust their training so that their horses are good both ways," Ian observes. "However, I think rider asymmetry could have a big impact with less skilled riders."

Back to Basics

THE BEST METHOD FOR DEVELOPING AMBIDEXTROUS HORSES – athletes that are equally good in both directions – is to revisit the basics. Regardless of whether the horse is a young prospect or a finished show horse, going back to the basics keeps the horse soft and supple to both the left and the right.

One balancing exercise that Tom recommends starts with creating a comfort zone. For young or green horses, he starts

KATIE NAVARRA



Horse and rider benefit from exercises that work both sides of their bodies. George Peters, owner of Win$um Ranch in Schuylerville, New York, asks Flippin Bad to give to the rein on his stiff side at a trot. Suppling exercises can equalize performance.

with one hand forward just in front of and slightly above the saddle horn. At the same time, he brings his opposite hand down toward his horse's shoulder and then back toward his hip. After the horse relaxes, he switches his hand position and works the other side.

"This encourages the horse to break at the poll and give to pressure," Tom explains.

His next step is to change his hand position while asking the horse to move forward on a small circle.

Tom picks up the right rein and keeps it an inch or less off the horse's neck.

He then brings his hands closer together in front of the pommel on the saddle. Then he asks the horse to tip his nose in one direction and then the other. As soon as the horse looks in the direction he's being asked, Tom releases the pressure.

He says the goal is to reach a point where the horse takes a deep breath, relaxes and looks to the right when the rider picks up the right rein.

Repeating the exercise equally in both directions is critical.

"You have to ask the horse to bend and give in both directions to maintain balance," Tom emphasizes.

After a horse is comfortable tipping his nose in both directions, he must also feel comfortable bending in a small circle. A horse that can't balance at the walk on a small circle won't be able to balance at the faster speeds.

JOHN O'HARA

It's tempting to believe it's the horse that has a good – and not-so-good – side. However, we know that most people do, and that may influence the horse's performance in reining.

"If I have a horse that's stiffer to the right, I tip his nose around to the right and encourage him to walk small circles until he relaxes," the Mississippi trainer says. "Once he gives, I'll allow him to go straight for several strides before asking him to go left."

The key is not obsessing over whether or not the horse's body position is absolutely correct. Instead, the focus should be on getting the horse to feel comfortable walking a circle in both directions.

"I've learned that a horse that isn't comfortable at the walk won't be comfortable trotting, loping or spinning," Tom says.

The fact that horses cannot verbalize why it may be easier to move in one direction than another makes training and riding more of an art than a science.

"Too many people don't realize when to back off and work on the small things," Tom says. "Once you address the small things, the big things work themselves out."

Other Findings

ASIDE FROM DISCOVERING THAT QUARTER HORSES AS A POPULATION don't seem to have a side preference, the Canadian study found that, in general, stallions ridden in the open division of the reining futurity consistently received higher scores than mares.

"This is probably because only the best horses get to stay stallions, and they are shown by the best riders," Ian speculates.

Even though mares have won the reining futurity, more often it's the stallions that finish in first place.

"Stallions mature earlier than mares and they have more physical body strength than mares, which allows them to run harder, stop harder and turn harder," Tom observes.

Further Investigation

WHILE THIS PARTICULAR STUDY DID NOT REVEAL A "HANDEDness" among this particular horse population, Ian suggests that it may be advantageous for the study of asymmetry in horses be applied to other physical features and the differences those features relay to performance.

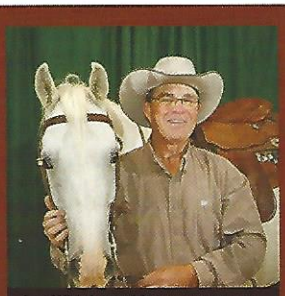
"For example, horses display a variety of patterns of hair color, whorls on their forehead and elsewhere, which horse people and horse lore suggest are related to disposition and trainability," he says. "The formal nature of reining competition and excellence in judging provide fertile ground for investigating such ideas."

The Canadian study, "Absence of population asymmetry in the American Quarter Horse (Equus ferus caballus) performing skilled left and right maneuvers in reining competition," was published in 2015 in *The Journal Laterality, Asymmetries of Body and Cognition.*

Katie Navarra is a special contributor to Performance Horse Journal. *To comment on this article, write to* aqhajrnl@aqha.org.

BIO

IAN Q. WHISHAW received his doctorate from the University of Western Ontario in 1971. He moved to the University of Lethbridge in 1970, where he is currently a professor of neuroscience. He has had visiting appointments at the University of Texas, the University of Michigan, Cambridge University and the University of Strasbourg, France. He is also a Fellow of Clair Hall, Cambridge. He is a Fellow of the Canadian Psychological Association, the American Psychological Association and the Royal Society of Canada.



Ian Whishaw rides western performance horses himself. His reining horse study coincides nicely with his profession in neuroscience.

TOM McBEATH has spent more than 40 years raising, training and judging American Quarter Horses. The AQHA Professional Horseman trains amateurs and youth clients from his facility in Union, Mississippi. Tom bred Topsail Whiz, a National Reining Horse Association Hall of Fame stallion, is featured on an NRHA video about reining and has judged the NRHA Futurity. He judged the AQHA World Championship Show in 2005 and the AQHA Select World Championship Show in 2008. He is an AQHA director for Mississippi, serving on the Hall of Fame selection committee, and the show, amateur and Professional Horsemen's committees.

Tom McBeath has been training and judging Quarter Horses for 40 years, and marks his score cards with his right hand.