

Swirlology, The Study of Hair Swirls or Whorls in Horses

by Charlotte Cannon

Updated 1/14/18

From the most ancient times, man has studied the world around him for signs and clues. Horses have been a huge fascination since 30,000 BC when they were first drawn on the walls of caves. Ancient students of the horse may have studied things and made conclusions that we find foolish today. But as with everything that is old and becomes new again, the study of swirls, although rarely shared insights, experiences and knowledge, has always had its believers. Here we will uncover some of the ideas and help you better understand how they work and influence who and what your horse is and who and what he may become.

I have studied everything about horses in great detail from conformation - form to function; to horse personalities - which jobs suit which personality. Thinking horsemen are always striving to understand and maximize their horses more fully. Studying the swirls or whorls (trichoglyphs) of hair on a horse's face, head and body can offer many important clues to both personality and performance. Swirls and their placement give us a greater understanding of the energy flow through the horse. By accurately reading the swirls, one can choose the horse partner that is best suited to his or her goals, or reject an unsuitable horse before time, money and emotion are invested. Swirls can lead us to a deeper understanding and acceptance of our horses.

I understand now my understanding of swirls was meant to bring happiness and realistic expectations for the human partners. But I realize now the words and judgements I was putting on certain swirls, I perceived as 'bad', were the wrong words. Understanding is meant to make things better for all, not label some horses (or their humans) as crazy or bad. After going out and taking pictures of swirls on horses I know and respect, I see patterns in trainers. I see trainers who really do excel with a group of horses with swirls indicating 'challenging' not 'bad'. Maybe before completely rejecting a horse because of its swirls, look through your barn (and your trainer's barn) at the common swirl patterns. Make sure a new horse you plan to introduce will be warmly accepted. If there is ANYTHING (swirls, color, size, conformation, etc) that will cause your horse to be rejected, maybe consider another avenue (trainer, event, competition level, etc) where the horse can be better embraced and appreciated, or choose a different horse. There are special people (owners, trainers, riders, etc) who do set out to smash rules and boundaries. If you have a horse with a very 'unique' swirl or combination of swirls, you may need to seek out that same unique rider/trainer to help your horse achieve his greatest success.

*A **hair swirl/whorl** is a patch of hair growing in the opposite direction of the rest of the hair. Hair whorls or swirls can occur on animals with hairy coats, and are often found on horses and cows. Locations where whorls are found in equines include the stomach area, the face, poll, neck, chest, flanks and sometimes randomly found in odd places on the body. Hair whorls in horses are also known as crowns, swirls, trichoglyphs, or cowlicks and can be either clockwise or counterclockwise in direction of growth. One study has found that horses can be shown to have left- or right-footed lateral motion from the direction of growth (clockwise or counterclockwise) of their cowlicks.*

My Swirl History

The first exposure to the existence of swirls was at childhood. I grew up in Virginia with lots of TB horses. When the babies were to be registered, the Jockey Club application asks for all swirls to be marked with an 'x'. With so many horses of nearly identical coloring another method had to be used for identification (before lip tatoos were applied at the racetrack). Swirls were the perfect answer since they are evident at birth and never change or move.

I never gave them another thought. I never used them as a way to choose or not choose a horse. I noticed an odd one here and there but mostly because the hair grew 'strangely' or the mane was difficult to braid or band. But it wasn't until a fateful day in the summer of 2002 when NSBA Hall of Fame Horseman Jerry Stanford took a look at a challenging 3 yr old filly of mine that I truly understood the potential power of understanding swirls.

Jerry Stanford is a true pioneer, educator, leader and legend in the Western Pleasure industry. A bit of an outlaw himself, he took in numerous rowdy teenage boys like Cleve Wells and Shane Dowdy, and made them the horsemen to lead the next generation. Jerry was from the school of trial and error, and Jerry's theories were formed from intense study of successful western pleasure horses. He studied conformation, herd behavior, grazing and movement posture, swirls and more before choosing the horses in which to invest his time. Jerry painted me the picture of him sitting under a shade tree in a pasture full of yearlings. He watched, studied and compared everything before making his choice or choices. By careful evaluation he could choose the colt or filly most likely to train up into the winning 2 year old (and beyond) western pleasure horse. He felt certain babies were destined for greatness and if one was particular enough, he could find that baby and develop him. Through his excellent eye and mind, Jerry made the AQHA stallion, The Investor, famous. In fact one year Jerry and his wife Marty were first and third and seven or eight of the top ten winners in the AQHA Congress 2 yr old Western Pleasure were by The Investor.

At the time (2002) Jerry was traveling the country helping horsetrainers improve their skills and programs. I met him in Jackson, Mississippi at the Dixie Nationals and was blown away by his innovative mind and unique training style. He gave me his card and I called him to see if he would come to South Carolina from Arkansas to help me. He literally changed my life by deepening my understanding of the performance horse. And changing forever, the way I looked at and evaluated performance horses.

That first sunny morning I took out my best horse, Skip (Skip N Ol Paint, multi World and Reserve World APHA Champion now, but not yet then) for Jerry to evaluate. He loved him. He showed me how his body shape, type, muscling, posture was perfect for a western pleasure horse. He showed me how the balance and symmetry in every part of his body (hooves, joints, etc) even when standing still, he was in perfect position for his job. He explained 'a monkey could be World Champion with this horse, so many things are lined up right.' Although I was taken back by my comparison to a monkey, I was thrilled he liked my favorite boy so much; or was he just really kind and nice about every horse?

I quickly found out this was not the case when I brought out my 3 yr old filly. She had been quite a challenge and the reason remained a mystery. I had bought the pretty sorrel overo filly when she was a foal still on her mother. I had brought her home and raised her myself. She had the square frame, matching feet, low set knees and hocks Jerry spoke so highly of, and she had the 'look' and movement of a fancy western pleasure horse. Her 'hole' seemed to be in her ability to appropriately respond to pressure (physical and mental) and follow cues (I now test and develop horses on/in their ability to solve 'puzzles' to see/teach them how to search and find the correct answers). Whenever she felt stressed or pressured, instead of thinking and responding, she would explode, flip over and slam herself to the ground. She could do this numerous times in a session or not for a few months. But when she blew it was fast with no read-able warning signs. I had (with help) gotten her where I could walk/jog/lope with her head naturally in a pretty good spot. Most days I could subtly 'body' her onto the correct leads, but I could never force or insist on anything. Through sheer natural ability she looked almost ready to show (at home), but I knew there was no speed control, no body control and no true steering or brake if she needed to be directed or shut down.

The filly was neat enough my dear friend D John Deas offered to keep her and work on her for me. My son Will and I had taken our two 2 yr olds over to ride one Sunday with D John and he had seen her potential too. After several months he told me, he didn't get it. 'Crazy Charlotte', as he called her, just wouldn't develop. He had been kind to her, he had tried to 'kill' her, but nothing worked. He said, "Honey this is the fanciest horse either of us will ever own, but she won't take the training. I don't know what else to do." I brought her home and rode her a couple days per week, just sneaking around any issues and doing my best to make my ideas become her ideas. She had really gotten no more 'trained'. I thought the great Jerry Stanford would have my key! He would have the answer to this frustrating puzzle! He did....

Jerry was sitting in a white plastic chair right across from my crossties when I led her in and hooked her up. I was all smiles, excited to show off my fancy filly and to hear how smart I was for choosing such a pretty thing. Jerry's eyes were six feet from her nose when he reared back in that plastic chair and asked, "Have you ever really looked at this horse?" I mumbled something incoherent as he emphatically said, "This horse is the Devil!"

My face fell and I was stunned. I started in on how fancy she moved but he cut me off, "Look at that swirl on her nose. It is down so low your caveson (noseband) would cover it. The only thing with a swirl like that is a mule. You will never train this horse and she will hurt you very badly one day. Get rid of her immediately for whatever you can get. I will not touch her with my hands."

I had gone from immense pride one minute in Skip, to despair the next being told to send this filly to the killers because she was dangerous. I was reeling so hard I could not speak. He continued, "I bet the swirls are messed up all over her body. Swirls are formed at the same time the learning centers of the brain are formed. About 80% of horses have a nearly identical swirl pattern and learn normally. Anything that deviates from that 'normal' swirl pattern will be more challenging at best, to deadly at worst."

As we looked over her body, she was like a trainwreck of swirls. The left side of her neck had the

swirl which belongs up on the crest by the mane, down low nearly to the jugular groove with the hair swirling out in every direction over her neck from her throatlatch to her shoulder. The other side of her neck had no swirl (swirls must be balanced from right to left, so a big swirl on one side and none on the other was disastrous by itself). Her flank swirls did not line up with her flanks, they were leaning and one broke twice and restarted, the other broke 3 times and restarted. The rest he spared telling me. I could see she was undeniably a huge mess. I decided to disclose her behavior, which had been a secret up to that point. Of course he was not even phased, her swirls could have predicted she was nothing but heartache the day she was born. He just told me to never get on her again. I actually listened, and sold her at a very cheap price to a horsetrader friend who had a 'double swirl' son, determined to prove Jerry wrong. He never did.

I became fascinated in the clues hidden in swirls and I talked to everyone I could find to learn more. I studied countless horses and their swirl patterns, comparing the patterns to their performance. Jerry's theories were right on the money every time! I even started to seek out world champions from all different areas, jumping, cutting, reining, eventing, etc. I observed those 'perfect' swirl patterns time and time again. I also studied the unpredictable, bad actors that never fulfilled their 'potential' and found commonalities with them as well. I braid and band hundreds of horses each year and have gotten to observe tremendous numbers of horses and their swirl patterns. Successful horses are as shockingly consistent, as the poor performers are predictable. Every stall I approach with a saddled horse (for the night bc it was riding so badly) has a group of swirls that predict it will be as tough as it is.

Not everyone is eager to learn and embrace this idea. I have experienced many violent outbursts from the owner of a "double swirl, long wheat" horse. Although this horse has already hurt them or had several close calls, they are certain it will become their perfect dream partner with the right trainer or training program.

One evening after a Craig Johnson Reining Clinic, I joined Craig and several other clinic participants and spouses for dinner at a local restaurant. The conversation was dull and everyone was putting on fake and 'perfect' facades for Craig who appeared to see right through them. I decided to shake the party up a bit by bringing up swirls. I asked Craig if he believed in the 'Swirl Theory'? It made one woman explode with anger, she in fact, had a "double swirl, long wheat" horse. I knew at least one other person at the table did too. The table erupted in heated discussion attacking me and 'my' ideas, I didn't mind, it was certainly more interesting than the previous conversation.

Craig Johnson is one of the finest horsemen of our time and one of the smoothest speakers I know, I couldn't wait to hear what HE had to say! I knew Craig comes from horsemen, but I knew Craig does his own thinking and follows his own path to success paved with strong foundation horsemanship, unwavering ethics and incredible talent and timing. Craig's answer was classic,

"My daddy believed in swirls and put value in what they mean. I, however, do not. I believe with quality horsetraining, every horse should reach his or her potential regardless of their swirl pattern. I would never turn down a training horse because it has 'bad swirls'. I do pay attention to swirls when I purchase a horse I plan to sell later. Although I do not believe in swirls, enough

other people do, that a horse with 'bad swirls' may not make it out of the stall when a client comes to look at him. I do not believe in buying any horse that has an issue real or imagined, that would stop a client from even taking him out of the stall to ride."

"I have personally attempted to disprove the Theory of the Swirls for over 20 years, so far I am unsuccessful."

The table that was humming as he spoke went silent for a moment, disbelief all over the faces of those poo-pooing 'my' idea. I said nothing else, Craig said nothing else and the subject immediately changed.

You would be in shock at the number of successful people who do believe. Most people won't talk about it or admit it, but in a group of successful horsemen, I bet at least half have knowledge of at least the basics. If you have never even considered this type of idea, get **Linda Tellington-Jones book, Understand Your Horse's Personality** (or something like that). It is a fascinating and different way to look at and consider horses. I was surprised how uncannily accurate her observations were when I took them to my own horses. It has a nice beginner's section on swirls too.

My Swirl Theory



Swirls are hair rooted in brain cells; the rest of the hair is developed from hair follicles in the skin. The forehead swirl hair is the most influential because it is the first hair to develop and grow on the body in the embryonic fetus.

To fully understand swirls and their affect on your horse, one must understand the way that energy moves through the horse's body. Energy is created in the hindquarter of the horse (the engine). The further under the hind foot reaches and the stronger it grabs the ground and pulls/pushes on/off of it, the more energy that is created and sent forward to his nose. The energy starts in the hind foot on each side (independently), it travels up the hind leg, over the point of buttock, over the hindquarter, over/through the loin then the back, to the wither. At the wither ideally the energy continues over the top of the neck, through the poll, down the front of the face to the nose. Depending upon the direction the nose is pointing, the energy will either recirculate (if the head is on or

at the vertical) or it will shoot out the end of the nose (nose pointing straight up or out) or something mixed or in between.

We can use the nose to help us control how much energy is continuing to cycle through the body.

Nose out = less energy/power; nose in = more energy/power

Swirls can have a profound effect on the way energy flows through the body. Swirls are basically a stopping/slowing down of energy in that spot. They either focus or muddle of energy. That depends upon the type of swirl at the given spot. Types of possible swirls are Simple, Tufted, Linear, Crested and Feathered. Energy flows exactly as the swirl appears.

If we picture energy like water it is easier to comprehend. Focused energy can be very powerful, like water cutting through rock. Muddled or dissipated energy can become stagnant and rot everything around it. Smooth flowing energy is clean, pure, easy to predict and control; but just like a beaver dam can stop up the flow of your creek and cause the water to start cutting new routes through the surrounding land, so can a swirl affect the flow of the energy you expect to flow smoothly through your horse.

As we know some horses have much more energy (water) flowing through them (Arabs, TBs, etc), while others have but a trickle (drafts, some older style stock breeds, etc). A high energy horse with challenging swirls can be like the white rapids that cut through rock out west. They can get 'stuck' and dig deep 'holes' that end in huge explosions. But that low energy (water) horse with challenging swirls can spook or explode when enough energy bogs down in its swirls too. Understanding the balance of energy in the body will really help you understand why swirls (other than on the forehead) are best in pairs.

Each swirl on one side should have a matching swirl on the opposite side of the body. Because swirls stop or slow down energy, it is very important that they be balanced and equal on both sides of the body for the horse to feel (energetically) balanced or straight. Energy flows from the back forward, if swirls are out of balance/uneven energy will 'hang up' on one side and not the other. I have seen beautiful horses with an odd swirl (usually on the neck) on one side and not the other. Low energy horses may just stay bent toward the swirl and resist turning the other way and picking up both leads. A high energy horse can be super explosive and buck or bolt because they feel one side quite energized and the other side quite dead. This lack of harmony in ones own body can be intensely frustrating and cause the horse to act out in grumpy all the way to violent behaviors. Many times the horse will become lame in the foot closest to the odd swirl because energy, weight and pounding pool there.

A more subtle 'out of balance' issue occurs in most horses (few have perfectly

balanced swirls). One of the swirls on the flank, crest or poll won't be the exact size and placement of the swirl on the opposite side. The horse will usually bend or turn more easily in the direction of the furthest back or longer swirl (since energy flows from the back of the horse forward, and the first or bigger swirl will stop the energy first). A good rider/trainer can help these horses stretch and seem perfectly even. Obviously the closer to even the better, but awareness can help you help your horse become balanced (energetically).

'Reading' swirls will give you a blueprint to the way energy is most likely to flow through the horse. Talented riders and trainers can feel this energy when they 'interface' (ride, do groundwork, observe) with a horse. A rider/trainer who has developed this sense of feeling energy and directing it, can overcome tremendous issues! I have seen trainers so tuned into this feeling, that a 'normal' swirl horse is just plain boring. Giving this rider/trainer knowledge and understanding of swirls, could open the door to many more horses becoming better understood, better developed and better balanced to reach higher goals than ever before!

Specific Swirls:

Face

- The forehead swirl hair is the most influential because it is the first hair to develop and grow on the body in the embryonic fetus.
- A swirl directly between the eyes is normal. High swirls usually go with a more active mind; lower swirls are little less active mind.
- The more focused the swirl, the more possible focus in the mind. The less focused the swirl, the less focused in the mind.
- Single swirls usually have a pretty consistent single personality, might be calm, might be crazy, but usually one predictable personality.
- Double or triple swirls can indicate multiple personalities. They certainly indicate a horse that can go easily from the right side of their brain to the left and back, faster and more easily than a single swirled horse. Horses with multiple face swirls can be more complicated and can be more difficult to initially read and address appropriately. Multiple swirls will usually come out somewhere, might be difficult to clip or trailer; might be petrified of 'unreasonable' specific things; might be fine several days/times in a row, then explode/spook out of the blue (most common); might be accident prone. They may require more patience, time, skill and understanding to train/develop. They may surprise/let you down at an important moment by switching personalities,

especially by going from confident to unconfident in the blink of an eye. Confidence must be diligently developed in every horse, but these especially.

- For the high achieving professional multiple face swirls can be an asset. Many high level dressage horses, eventers and jumpers do have multiple swirls. They seem to have more access to more areas of the brain at the same time than other horses do. As stated above, it can be more than a novice wishes to take on, but for the savvy horseman, that can be channeled in positive ways. See below:

- Double swirls usually come in 3 varieties: side by side, on top of each other and 'Z' shaped.

- Many Grand Prix horses in both dressage and jumping, and successful eventers have very high, side-by-side double swirls. This type of double swirl seems to give the ability to hyper focus. These horses are challenging and gritty, like most double swirl horses, but the ability to hyper focus and not back down from a challenge can be an asset in professional hands. The side-by-side swirls do give the horse access to both sides of its brain in a flash, 'wickedly fast thinker' is a description often given to them.

- Double swirls on top of each other are tougher because their 2 personalities are many times extreme. Some of the words given are untrustworthy, unreliable, accident prone. They may be the horses that never realize their potential because something always seems to happen at a high pressure critical moment. We have worked with some very nice horses with this swirl pattern but I must say each did have at least one of the challenging qualities in a heavy dose. The exception to this is the horse with double vertical swirls more that 4-6" apart. They almost act like single swirl horses in many ways. Usually they have that one funny thing about them, you can live with it, but its there.

- I know two lovely horses with double swirls on top of each other that one would say are those exceptions. But the first would manage to get hurt or tangled in something all the time, as if for attention. The other is a super fancy horse that was slated to be a multiple world champion western pleasure horse. I have watched him twice come all but 'unhooked' in the finals at the world show after being beautifully prepared. Both times he still got big prizes (once reserve world champion), but that #1 spot just eludes him.

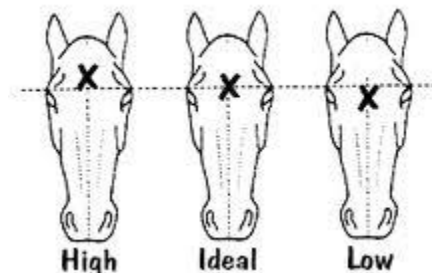
- Double swirls in a 'Z' shape can be a dangerous cat! I have known several horses with this face swirl pattern and they were 'the horse your momma warned you about'. Usually an extreme 'Z' swirl horse will have other 'bad' swirls elsewhere on his body. This is the most dangerous. One must be an excellent leader with this horse, but one

must never be brutal or unfair. He will calculate and hurt you before you hurt him. Grouchy about food and their personal space, best to pick your battles and accept it if you have chosen one that he will not surrender. Not loving pets but will tolerate a specific job and do it well if he agrees it is reasonable. We have been most successful when we got in, got the job done and got back out, this horse is prone to attack if pestered. Check for body pain issues (as a root to grumpy mood) before dismissing as bad minded, these horses have a very high tolerance for pain and will attack before showing weakness/pain.

- Double (or more) swirls will not take the pounding and criticism that many single swirl horses will accept/endure. One must be fair and just in all requests. Single middle swirl horses are more predictable for riders who are first learning and need a more forgiving attitude. Leave the complicated swirls to more experienced riders.

- After much recent study, I have discovered the 'Double and Triple Swirl horse' has an uncanny ability to 'mirror' its rider to a degree most single swirl horses do not. Many single swirl horses will essentially block out their riders in particularly stressful situations; the double or triple swirl horse will actually mirror and amplify the body position and emotions of the rider. Experienced, relaxed riders can relax and lead these horses through challenging situations; experienced, focused riders can bring these horses to a new level of hyper focus; where tight, nervous riders will create a wreck with them. Body position of the rider and mind/emotional control of the rider is of utmost importance, these horses can change in a moment, much faster than their single swirl friends. This is why your trainer can often get amazing rides out of your double or triple swirl horse, and for you the horse is all over the place. Now I can see for the rider/trainer who functions at a higher level of physical and emotional fitness, these horses can be amazing.

Determine if a Face Swirl is High, Middle or Low:



Pretty close to Ideal Face Swirls:



High Face Swirls:



Low Face Swirls:





Double Face Swirls - on top of each other:



Double Face Swirls - side by side:





Z-shaped Face Swirls:



Triple Face Swirls:



Really unusual Face Swirls:



<- Perfect center swirl right between the eyes, plus 3 super high backward Z-shape swirls. Amazing swirl pattern!

Mouth

- Additional swirls around the mouth and on the cheeks can add complexity and complication to your horse. Many horses with odd mouth swirls will hold their mouths stiffly or stick their tongues out while riding.

Cheek

- In the olden days, a swirl on the cheek was a bad sign of debt and ruin.

Ears

- A swirl (or a pair of swirls) on a ear really focuses energy to hearing. Interesting this occurs usually in mules. Sounds will be big factors in performance.



Temples

- A swirl (or pair of swirls) on a temple will heighten thinking on the side with the swirl. Horse will be a fast thinker and great puzzle solver for better or worse.
- Horse may overthink a problem, or he/she may figure things out and just take the rider with them and finish the puzzle with flash and pizzaz.



Mustaches

- Mustaches are an oddity only to believed once seen. These horses command the center of attention everywhere they go. They can be the total class clown!
- Confident horses with mustaches are usually outgoing, friendly and curious individuals.
- But unconfident horses with mustaches can become severely co-dependant on pasture or stall mates



Poll

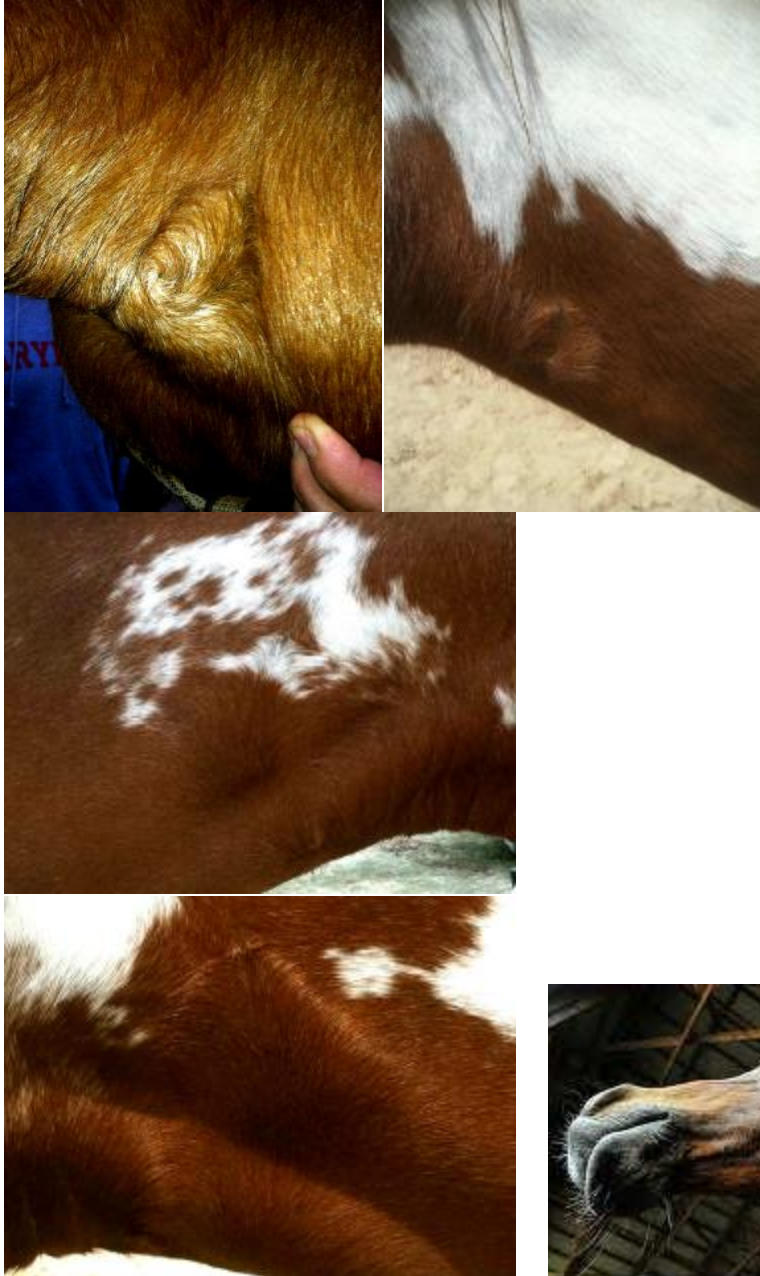
- Swirls at or close to the poll with determine where the head and neck easily and naturally break. Perfectly even swirls right behind each ear will cause the horse to evenly break right at the poll.
- The further back the swirls are, the more odd hump in the neck your horse may have when trying to give vertical flexion.
- When these swirls are uneven, the neck will have a tendency to want to turn toward the first swirl. The more out of balance, the more difficult it is to get the head to smoothly turn the other way.
- Horses with no poll swirls often have a difficult time giving any vertical flexion. Nose tends to stick straight out forward.

Below - 1) pretty even, 2) left ahead of right, 3&4) right ahead of left, 5) no poll or crest swirls



Throatlatch

- Swirls under the throatlatch seem to draw the head up. They can help keep a horse from getting the head too low if they have good poll swirls.
- Swirls under the throatlatch without poll swirls may create a high head carriage, and/or a lack of flexibility in the throatlatch and/or poll.
- It is preferred these swirls be evenly spaced under the throatlatch and not all off to one side.



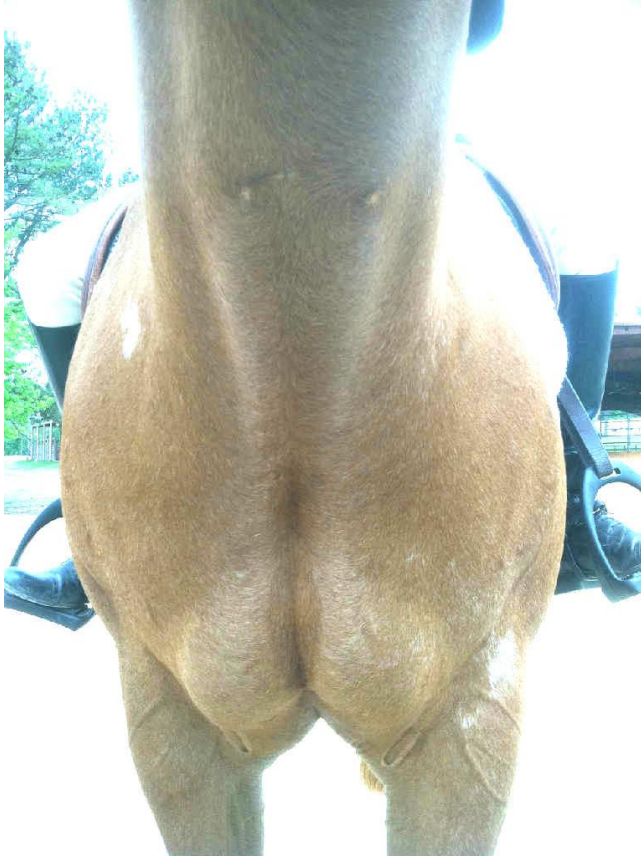
Windpipe

- Swirls located on the trachea or underside of the windpipe were seen as a sign of prosperity and good fortune in olden days.
- These are entirely different from the long 'wheat' coming out of the chest extending almost to the throatlatch.



Chest

- Normal chest swirls are a good sign, olden days were believed to be a sign of prosperity.
- Swirls along the windpipe are also a positive sign, olden days they meant love and prosperity. The more focused and tight the swirl, the better the luck.
- But a long Wheat starting between the chest muscles and extending nearly to the throatlatch is a very bad sign. A long Wheat combined with double face swirls is a VERY bad sign. These horses are VERY difficult to train, if you ever really get them trained! Not recommended for high level showing!
- In the 1800's a horse with double swirls and a long wheat was believed to have been marked by the devil. Although that does sound extreme, do not pick this horse for high pressure/level goals. Keep it simple and hopefully this horse can find a place to be loved and appreciated.
- Many roughstock rodeo horses have this combo. We have had 3 horses that we know of that have had this combo. All three would really buck with a snug girth. One never learned to go forward and steer. One would be going forward, slam on the brakes and threaten to flip over (and did once so hard, he broke the saddle horn off the saddle). The third would charge people (esp little children) in the pasture and wheel around and kick at them. The second two are no longer on earth. The first has been sold at least 6 times in 12 years (bc buyers keep calling us with big dreams for her), she has never learned to even trot and steer with many, many professional horsetrainers trying on her over the years.



Very unusual extended chest swirl. This is a highly talented horse who is sometimes unbeatable, sometimes not sound. Funny how focused these two swirl heads are. She also has double face swirls.

Crest

- Most horses have swirls around the center of the neck on both sides. Ideally these will be directly across from each other. Energy will slow down in swirls and cause the neck to 'break' or develop a high spot that corresponds with the swirls.
- Large crest swirls may create so much slowing of energy, that the neck will thicken/hump up/become 'cresty'.
- Horses with no crest swirls will have energy smoothly flowing up both sides of the neck to the poll. These necks stay cleaner/thinner and have a tendency to be carried flatter/longer/straighter than a neck with crest swirls.



Neck Swirls

- Won't let go of neck
- Horse will lean into the swirls
- Won't steer well
- Horses hold tension and emotions in these swirls. Necks will get sore and horse will seem fine, then explode if pushed. Although I have seen some great talents with odd neck swirls, they took serious patience, skill and grit to develop and keep 'hooked'. Keep a halter and lunge line close, you may need it at the most random times.



This particular horse doesn't like to pick up his right lead or jump under pressure.

Wither

- Wither swirls cause energy to stop and flow straight down into the front leg under the swirl.
- Usually these cause horse to be heavier on the forehand and shorter strided than one would expect.
- The horse may tend to stop on their forehand instead of their haunches.
- Horses with only one wither swirl on one side tend to be randomly explosive.

Spooking is often worse on that side.

- Their bodies also tend to curl around that one wither swirl, making it nearly impossible to straighten them.

- This swirl was also known as the 'Coffin Swirl' because it is said these horses' riders would die in the saddle. I have had (and seen) horses with this swirl flip and appear to try to 'kill' their riders.



This horse has the ominous Coffin Swirl and has seriously hurt 3 of his owners by suddenly bucking them off or suddenly spooking and running over them. He also has double Z-shape face swirls.

Back Swirls

- Back stays sore
- Horse can buck or react badly to sore back
- Nearly impossible to get energy to flow through, back usually drops unevenly.



Girth

- Horses with girth swirls do tend to be more sensitive to someone jerking the girth tight too fast. These can become horses that pull back and won't tie when saddled if not treated kindly and girthed up slowly.
- In the olden days, a girth swirl was a sign of good luck and fortune.



Belly

- Horses with big belly swirls can tend to have bigger bellies. Energy pools in belly and so can fat.
- They may also have a little lazier back. It might take a bit more effort to get them to lift their back.



Flank

- Ideally each flank will have one long straight up swirl extending from the point of the hip into the soft loose flank skin.
- If the swirl tips energy is disrupted. If the top is tipped forward, the horse will tend to have the hind feet slightly behind him and must stay 'bridled' and 'pushed up' to use the hind legs effectively. If the top is tipped back, the horse will tend to have 'sickle hocks', weak, rounded, bent, ineffective hocks that don't work and push effectively.
- After studying flank swirls in more detail, I have found 'S' curve flank swirls more common than perfect straight up and down flank swirls. These 'S' shape swirls belong to horses who are fast sometimes, super slow and lazy at other times. Strongly influenced by the rider's energy and nerves.
- If the swirl ends high, the hind leg will be 'lazy' and not want to track up strongly underneath.
- If the swirl breaks and starts again, you will have some weird bad energy stuff on that side.



Front Leg

- Swirls on the backs or sides of front legs will tighten them and can shorten the the stride.
- If you have on one leg, best to have on both legs, or one leg will move freely and the other won't.
- Would be interesting to see if a front leg swirl corresponds at all with an 'upper' foot.



Fetlock

- It is unusual to have an actual swirl within the fetlock, but it will effectively slow that foot and ankle down.
- The joints below seem to get less energy so they tend to be slow (slower) to bend. Nice in western pleasure horses, not as nice in jumping horses who need quick folding feet. May trip more on uneven ground because feet will travel a bit slower and closer

to the ground.



Back of Hindquarter (between point of buttock and gaskin)

- Swirls on the backs of the hind legs will make the movement of that leg up and back easier than forward and under.
- Stretching can really help horses with these swirls before riding.
- If one leg has a swirl and the other doesn't, many times the leg with the swirl will tend to take a shorter tighter step.

Below- Right hind leg has swirl, left does not, this horse can be very fast and challenging



Tail Swirls

- Emotions come out in the tail. Negative emotions can get 'stuck' in these swirls and horse will be horribly active with tail. Swishing, ringing, shaking will no stop and they ruin the picture.
- Tail may end up crooked and high set.

Weird Swirls:

Any weird out of place swirls usually correspond with a tough or explosive spot in the horse. These spots will tighten and the horse may twist or explode. Best to stay away from horses with swirls in these places:

Neck (below crest and above windpipe)

Back

Wither

Research Information on Swirls/Whorls

Classification:

Different cultures and breeds have different beliefs about the meaning of whorls, with theories based on location and direction of the whorl.

There are many different types of whorls:

Simple: hairs draw into a single point from all directions

Tufted: hairs converges and piles up into a tuft

Linear: hair growing in opposite directions meet along the same line vertically

Crested: hair growing in opposite directions meet to form a crest

Feathered: hair meets along a line but at an angle to form a feathered pattern

About 78% of horses have one of the above facial whorls, while 16% have double whorls and only 6% having three or more.

History:

The theories that hair whorls could describe various physical and personality characteristics in horses have been around for thousands of years. There is little scientific verification for any of these theories and the field is largely considered [pseudoscience](#).

[Bedouin](#) horsemen used whorls to determine the value of horses for sale. One [Arabian](#) has been recorded with 40 whorls on his body, although the average horse has around six. Bedouins looked for whorls between the horses ears as a sign of swiftness, and if there was any on either side of the neck, they were known as the 'finger of the Prophet'.

One legend of whorls is the 'Prophet's Thumbmark', a small indentation in the horse's neck. The legend is told thus: "Prophet Mohammed tested his horses by depriving them of water for several days. He then released them near a waterhole but before they reached it, he sounded his trumpet to summon them. Only five mares responded and returned to him, and these were kept for breeding. He pressed his thumb into their necks, leaving an indentation which they passed onto their offspring." It has been said that if you ever have a horse that has the marking, they are blessed, and if that person's thumb fits exactly in the indentation then you are the horse's true owner.

Other Bedouin beliefs include:

- A whorl on the chest meant prosperity.
 - A whorl on the [girth](#) was a sign of good fortune, and an increase in flocks
 - A whorl on the flank was known as 'spur whorls' and if curved up meant safety in battle; if inclined downwards it meant prosperity. The [Byerley Turk](#), a founding [sire](#) of the [Thoroughbred](#) breed, was said to have spur whorls and was never hurt in battle.
 - The Whorl of the Sultan was located on the windpipe, and meant love and prosperity.
 - Whorls above the eyes meant the master was to die of a head injury
 - The whorl of the coffin was located close to the withers. If sloping downwards towards the shoulder it meant the rider would die in the saddle, probably in battle or from a gunshot.^[3]
- A whorl on the horse's cheek meant debt and ruin.
 - A whorl on one side of the tail means misery and famine.

In the Indian Marwari breed, few will consider buying a horse with a whorl positioned below the horse's eyes as it's considered a bad omen, however a long whorl down the neck is known as a 'Devman' and believed to be lucky.

Modern Swirl Readers and their Predictions:

Whorls are individual to every horse (like our fingerprints) and many breed registries use them as identification as they can never be brushed or clipped out. Trainer **Linda Tellington-Jones** believes whorls can indicate a horse's temperament;

- A whorl positioned above the eyes is the most common and indicates a horse with an uncomplicated nature.
- Horses with whorls below the eyes usually have above average intelligence and like to make a nuisance of themselves by opening gates etc.
- Whorls positioned on the left of the face indicate a complicated but trustworthy horse, while horses with whorls on the right can be uncooperative.
- Horses with one long whorl line (also called a 'feather mark' and is the equivalent of a human hair part) are people-friendly and Linda says that a horse with this type of whorl who isn't friendly should be investigated as it's likely they are in pain or being abused.
- Horses with two adjoining whorls can be emotional and difficult to handle and do not make good mounts for inexperienced riders.

- Three whorls on the forehead is extremely rare and can indicate an unpredictable horse or, if a stallion, dangerous to handle.

Tellington-Jones has consistently stressed that the best use of swirl analysis is in discovering how best to approach a particular horse's training.

“If a horse's swirls tell you he's the more temperamental type, then you know not to get after him for ‘attitude,’ as that will just upset him more,” she says. “Many of my top horses had two swirls. Nowadays we have so many more ways to deal with such horses—to teach them to think instead of react.”

Chris Irwin explains that the average swirl is right between the eyes and if tight and conformed indicates a normal to average temperament. He also points out that if the swirls/whorls are higher above the eyes the horse is open minded and able to take in instructions and maintain them. If the swirls/whorls are below eye level this indicates a closed mind and strong willed/stubborn horse.

There are many different types of swirls/whorls found on the heads of horses and it can take a great deal of study to actually read these swirls/whorls. For example if the swirl/whorl is geometric the horse is believed to have the ability to focus, muddled in pattern the horse is not able to focus and becomes distracted easily, if the swirl/whorl is high and muddled then the horse is completely unable to focus but is hyperactive and Chris calls this the ADHD horse.

Learning to read the swirls/whorls on a horse can be fun and quite interesting. Keep in mind that it will take a professional who has been trained to read the swirls/whorls on horses to actually give you an appropriate reading of your horse.

Michael Powell of Mike Powell Horsemanship* has been studying and researching forehead swirls and body whorls for at least 10 years. There has been research done at CSU that shows the forehead swirl hair is the **first hair to develop and grow on the body in the embryonic fetus and that this hair is rooted in the brain, actually brain cells, as where the rest of the hair is developed from hair follicles out of the skin.** His experience with swirls comes from personal experience and his interactions with horses on a daily basis. There are by no means a veterinary diagnosis of the horse's behavior.

So the question is, how do you read swirls, and is there a relationship between swirls and genetic behavior and tendency? There are of a lot of ways to read swirls; but, through personal experience, Michael has come up with a few basics to help you understand your horse's personality.

As the swirl rises above the eye, you have a horse much more aware of his surroundings and his environment, then as the swirl drops down below the eye you get a much more close-minded attitude. But there's also the symmetry of the swirl, when the swirl is nice and tightly shaped and geometric, it's an indication of the ability to focus. A muddled swirl, a swirl splayed out all over the place is an indication of the inability to focus. Now we have to start adding up these signs to come up with general tendencies.

- ***Above the eye, splayed pattern:*** Hyper-alert, inability to focus, easily stressed. The horse is aware of everything around him, but he has a hard time staying focused to analyze and to learn. That would be like the equivalent of an ADHD person. The biggest struggle the owner is going to have with this horse is attention deficit disorder and how stressed they can become with new environments and with his constant need to look around or lack of focus. This awareness of the environment is important because the horse needs information to learn, figure out what's being asked and solve the puzzle.
- ***Below the eye, splayed pattern:*** Not very alert, not very interested in his surroundings, stubborn. Though very stubborn, these horses typically these are the "bomb proof" horses. They make excellent trail horses! Nothing fazes them, these are also the really good kids' horses because they're not trying to outthink or outwit the rider. The down side is that they can take longer to train because they have a hard time focusing and they're not taking in as much information. When this horse is working against you it's called stubborn, thick headed, mindless, but once he starts working for you, now you have a horse you might consider brave, big hearted, reliable.
- ***Above the eye, tight pattern:*** Very focused, very active, very intelligent and likes to figure things out. This is the equivalent of the equine "rocket scientist". This is the horse that excels at trick training, he will watch you tie him up to the stall door and figure out in a short time how to untie himself, he'll also spends hours trying to figure out how to open a stall latch. These are the horses that know what you're going to do before you do it. This is the kind of horse that would be a dream come true for a top notch trainer but a nightmare for a beginner trainer. These are the horses that will outsmart you! This horse will know what you're going to do and already have his evasive maneuver in place before you even ask him to do it. These horses do not make good trail riding horses.
- ***Below the eye, with a tight pattern:*** Gets bored quickly, but once he gets it he doesn't forget easily. This horse doesn't take in a lot of information, but can figure things out pretty quickly. This is the type of horse that can't stay focused for extended periods of training, he gets bored quickly and wants to move on to something else. You must be provocative in his training and mix things up to keep him thinking. Think of this horse as saying... "alright already I get it, lets do something else".
- ***Multiple swirls side-by-side:*** Requires patience, very focused, great work ethic. Horses with multiple swirls are the bipolars or the schizophrenics of the horse world, with each swirl representing a separate personality. When the swirls are side by side the temperaments seem to be similar, kind of a Jekyll and Jekyll. The majority of Grand Prix horses will have side by side swirls very high on the forehead with extremely tight symmetry. These horses tend to have impeccable focus or work ethic if you have the patience to work with them.
- ***Multiple swirls on top of each other:*** Untrustworthy, unreliable. This is the kind of horse that when you ride by the mailbox five days in a row with no problem, but on the sixth day she freaks out as if it's the first time she's seen it. You're dealing with two very opposite and contradictory personalities, and you never know who's going to show up at

the gate. These tend to be accident-prone and very untrustworthy horses. If you're up to the challenge, this is your type of horse!

Study:

Although the field of linking whorls to behavior is generally considered a [pseudoscience](#), one study of 219 horses that [race](#), [show jump](#), or [event](#) the following results have been found, "104 left-footed horses, researchers found 78 or 75 percent has anticlockwise hair whorls. And out of 95 that favored their right side, 64 or 67 percent had clockwise whorls." This information has since been applied to breeding racehorses to run straighter.

A study was done by Poland Scientists involving [Konik](#) horses, and they discovered a link between the location and the shape of hair whorls adjacent to the eyes of a horse with how it responds to handling and unfamiliar objects. From recorded observations horses that had a single whorl located above their eyes were more difficult to handle. Then the horses that also had a single whorl but located below or right in between their eyes were easier to handle. Whorls that were found to be elongated or doubled acted the most cautious when coming up to a unfamiliar object. They looked longer and were slower to approaching then the single whorled horses.^[1]

On June 23, 2008, Irish researchers also found the same outcome when it came to horse whorls. Right-footed horses were more likely to have whorls growing in clockwise circles and left-handed horses more likely to have their whorls growing counterclockwise.^[2]

Facial hair whorls and the incidence of motor laterality in the horse:

Whether a horse's whorl (the hair that swirls on his forehead) swirls clockwise or counterclockwise can tell you whether he is right- or left-hoofed, according to a November 24 article published in Nature News.

According to the article, veterinarians Jack Murphy and Sean Arkins of the University of Limerick, Ireland, recently authored a research paper titled "Facial hair whorls and the incidence of motor laterality in the horse." In the paper they "classified a total of 219 racehorses, show-jumpers and eventers as left- or right- hoofed based on the judgment of expert riders as well as on tests such as which hoof they led with when beginning to walk, and which side they chose to go round an obstacle. Of 104 left-hoofed horses, the researchers found that 78 or 75 percent had anticlockwise hair whorls. And out of 95 that favored their right side, 64 or 67 percent had clockwise whorls."

The article makes the point that which direction a horse favors could help trainers produce stock that runs straighter and wins more races. "That is a strong enough link to be a useful tip to trainers," Murphy told Nature News. "A horse's handedness or 'motor laterality' translates into a tendency to drift in one direction, which can make a big difference to a horse's competitive chances. The earlier you can spot biases, the easier it is to correct them, by, for example, getting horses to work on their weaker side using longeing."

More Swirl Studies

The validity of swirl analysis took a huge step forward early in this decade with the work of animal scientist Temple Grandin, PhD, of Colorado State University. She became interested in swirls when her assistant, Mark Deesing, who trains and shoes horses, shared his casual observation that horses with swirls high on the forehead, or two swirls, tended in general to be more reactive and “high strung.”

Grandin and Deesing decided to see if these correlations held up under scrutiny. They opted to work with cattle, as they needed a large number of animals without extensive handling so the results wouldn't be influenced by training. (Cattle also have whorl patterns similar to horses'.) Working at a Colorado feedlot, they observed 1,500 cattle as they were restrained, one at a time, in a hydraulic squeeze chute for vaccinations. One person noted the animal's whorl patterns while the other, positioned so the facial swirls weren't visible (to avoid bias), ranked the animal's temperament using a standardized scale.

“We found there was definitely a relationship between the position of whorls and the temperament of the cattle,” reports Grandin. “Those with swirls high on the forehead were more likely to fight and move around in the chute. And we've definitely observed enough of the same sort of correlation in horses to know it's a factor for them, as well.

“With horses, I think sometimes people read too much into it in terms of personality,” she adds. “How easily the animal gets scared—that's how I prefer to put it.”

However you put it, it begs the question: Why should hair swirls and temperament be connected in *any* way? As it turns out, **hair swirl patterns form in the developing fetus at the same time the brain is forming.**

“The nervous system and the skin, which contains the whorl patterns, come from the same embryonic layer,” explains Grandin. “This may explain the apparent relationships between body traits and temperament.” (See “Beyond Horses: Humans, Rats, & Foxes,” page 53.) **“Children and adults with developmental disabilities have a high incidence of abnormal hair whorl patterns.”**

Like Tellington-Jones, Grandin stresses that the most important use of swirl analysis in horses is as a guide in training.

“I'm not a fan of rough training methods in general, but if you use them on a high-whorl individual, you'll probably traumatize and wreck that animal,” she says. “You also need to be especially careful not to frighten a horse with high whorls. That's the key in horse training, anyway—to avoid traumatizing the animal in the first place.”

Modern Horsemen who use Swirls for Evaluation:

Moreover, the anecdotal information on swirls is to be found everywhere once you start asking around.

Ask **Doug Carpenter**, whose reputation for picking future winners is well established in the performance horse world (see “Shop A Horse Auction Like A Pro,” February ’07). The Sulphur, Oklahoma, horseman has bought or sold such standout individuals as Boomernic, 1992 National Reining Horse Association Futurity champion; Smart Zanolena, 1999 National Reined Cow Horse Association Futurity champion; and Chics Magic Potion, 2003 NRCHA Futurity champion. His client list includes the likes of Clinton Anderson, Bob Avila, Shawn Florida, Benny Guitron, Dell Hendricks, and Tim McQuay.

He’s clearly the real deal, and one of his criteria for evaluating prospects is hair swirl patterns.

“I started looking at them years ago out of curiosity, then narrowed it down to a system that works for me,” he says, noting that his ideal combination—in terms of indicating the likelihood of a willing, trainable prospect—is one swirl centered on the forehead between the eyes, and two matching swirls on either side of the bridle path, “not extending beyond the length of the ears when they’re folded back.”

He adds that in some lines of horses, a single swirl centered below the level of the eyes is also a positive indication, and two swirls close together can be OK—“though not in all instances,” he cautions. “It’s like every other theory—not 100 percent.”

By contrast, if a horse has two or more swirls that are relatively spread apart on the face, “I’m a little concerned,” he says. Though swirls are an important consideration in Carpenter’s evaluations, they’re not necessarily a make-or-break proposition. “If I really like a horse but his swirls don’t line up the way I prefer, it’s not a crucial deal,” he explains. “But if a horse is already questionable, and I haven’t really locked in and committed to him mentally, and his swirls are all out of line, it pretty much rules that horse out.” That’s how one modern and highly successful horseman makes use of swirls, and though he’s tailored his method for his own purposes, he’s following in a well-established tradition.

Anne Marie “Bubbles” Hiller coached riders on the open Western circuit on the West Coast in the 1970s; today she’s a well-respected judge for the United States Equestrian Federation in the open Western and Arabian horse divisions. She’s convinced swirls are linked to behavior.

“I first started noticing swirls after a trainer friend mentioned them about eight to 10 years ago, when we were both at a show in Reno,” she recounts. “She told me she’d observed that the horses that were nutty—flighty and hard to clip—were the ones with cowlicks all over.

“Since I started paying attention, I’ve found that horses with swirls dead-centered on the forehead or just slightly below—plus not a lot of cowlicks over the rest of the body—just seem to be easiest to work with. It pretty much holds up. People tend not to notice until you point it out to them, but once you do...”

What About My Horse?

If you would like Charlotte to evaluate your horse's swirl pattern, please send clear photos of:

- face
- both sides of the face with no halter
- poll from above, clearly showing the placement of the swirls (or lack of swirls hind the ears)
- both sides of the neck with mane flipped to the opposite side to reveal swirls long the crest
- chest and underside of neck from directly in front of the horse
- both flanks showing the entire vertical swirl
- any girth area or belly swirls
- backside of both hindquarters from above the hocks to the top of the rump taken from directly behind
- any front or hind leg swirls, plus a photo of the other leg in the same area
- any other odd or misplaced swirls, especially those on the sides of the neck, shoulders, withers or back

Submit these photos to my email at charlottec@comporium.net

Cost is \$25/horse.

These Swirl Evaluations are fast and can give you a good window into the usefulness of the horse you have, the horse you are training and/or the horse you want to buy. Swirl Evaluation is an excellent tool to avoid frustration, aid in training and to set realistic goals for your horse. Try it today!



Charlotte Cannon is a multi-World Champion trainer and exhibitor who learned the study of Swirlology from NSBA Hall of Fame trainer Jerry Stanford. She has since studied horses from all over the world to test and develop her theories. She is currently working on a book and does Swirl Analysis for others. She is the world authority on swirls and their effect on the horse's thinking and performance.