



# THOMAS HERDING TECHNIQUE: PATTERNS OF MOTION ANALYSIS

## Herd Dynamic Rankings for 2015 Breeders' Cup Classic

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1. Beholder
2. American Pharoah
3. Honor Code
4. Smooth Roller
5. Gleneagles (Ire)
6. Tonalist
7. Keen Ice
8. Frosted
9. Effinex
10. Hard Aces

# ON THE TRAIL OF GREATNESS...

By Kerry Thomas

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I've made it my life's work: a passion for investigating what makes something great. It is something that has been even before I realized it, deeply ingrained in my psyche.

Growing up with an older brother who was a star high school then college pitcher who went on to become a professional baseball player, playing until an injury halted progress in the Atlanta Braves organization, I was very lucky in my youth to be surrounded by dogged perseverance. At 15 I did not know it, but what I was witness to and a part of by proxy, was mental toughness, grit, *heart*. My grandfather always instilled in us boys, "Think for yourself, make your own decisions and don't ask permission or seek acceptance for being who you are."

My late father delivered to his sons a relentless perseverance and taught us that by nature, we tend to select things in our lives that reflect ourselves in some form or another. Interestingly I have noted that we tend to do the same in our horses, very often an individual's point of reference in the process is a mirror of what/who we are or who see ourselves as being, without even knowing it. As emotional athletes, I have found that horses are quite often a reflection of their environment.

My father and mother are my heros, they instilled in their children a quiet dedication and passion for life and indeed for sport and competition. Not to win necessarily, this was not the focus, but the byproduct of effort. We never were scolded for losing a game of anything so long as we gave our best effort. The only shame ever experienced was in not trying.

I myself was a good but not great athlete, more the cerebral type when it came to athletics; loved coaching baseball for example, the challenge of finding the inner greatness in an individual, and creating an environment that will cultivate that latent ability. I realized very quickly that I was not only panning for gold to identify physical skill, but more importantly I was scouting the right mindset. The ability to manage stress, perform under pressure and handle unexpected chaos is to me *next-level* athletics. When I blended my passion for sports with my passion for animals and my then burgeoning love affair with horses, my approach to find the trail of greatness, did not change.

With the founding of [www.thtbloodstock.com](http://www.thtbloodstock.com) and the very fortunate teaming up with Pete Denk, we created a platform to offer what I feel are not only the world's most unique equine services but also some of the most vital aspects to the overall picture. Many years of research and study have gone and certainly still go into the services we offer. Some of the greatest advances for us have manifested themselves in scouting talent, *panning for gold*, in the sale environment, or studying new stallions and developing psychological profiles along with the study of their natural patterns of motion and scouting potential in progeny.

I would never foolishly argue this lessens the importance of an individuals' *physical genetics*, quite the contrary, adding *behavioral genetics*, the underlying and fundamental "other" part of the horses skill-set, is most advantageous. Just like with human athletes, the higher the level the competition, the more equal the physical abilities become, leaving mental fortitude as the deciding factor.

As an example of the effort to recognize high level markers in application, the juxtaposed elite physical and elite herd dynamics manifested in the individual, I refer to the identification of these as a yearling in Breeder's Cup Sprint contender; Runhappy.

When Super Saver went to the breeding shed he was among the new stallions that we were very interested in adding to our research of new stallion profiles. Pete and I had undertaken to build a data bank of both new and established stallions based upon their behavioral/mental traits. We are always looking for physical soundness and *body type* for athleticism handed down in family lines, but *physical soundness* isn't the only soundness of importance; *sensory soundness* is from my point of reference, every bit as important a consideration and every bit as "stamp-able" as the physical traits. The "personality" that endears us to our horses, also influences their athleticism; they are not machines, after all.

We spent a tremendous amount of time, effort and expense collecting data and building the reservoir of stallion information. We felt that its importance in both assisting in finding proper mares that fit the stallion and in identifying key herd dynamic markers in offspring was a yet untapped value. We tracked, catalogued, and still do, endless amounts of information to continue to build the foundation of our sire research so that we can find innovative ways to zero in on these key markers in progeny psychology. Armed with this burgeoning information in early 2013, we were eager to hit the sales grounds and start digging.

Fate has a way of stepping in when you're doing something, however difficult it seems, that has value even if it at first appears foreign to those outside looking in. As the saying goes, the first one through the wall always gets the bloodiest, and sometimes it takes an outside-the-box thinker, seeking the outlier, to turn you loose and give you the chance to put into practice all that you've been developing. Six months before a fine young colt by Super Saver out of Bella Jolie hit the Keeneland grounds for the September Sale in 2013, Pete and I were in Arizona evaluating a few horses when my phone rang. Our opportunity to truly put in to practice what we've been so long working toward, to *pan for gold*, was at hand when in walked Mattress Mac.

I will forever be grateful to Jim McIngvale for giving us the chance and for putting us to task with very high expectations. I am the kind of person who sets extremely high demands and goals upon and for myself. Having earned our opportunity, Pete and I drove forward in our customary tenacious manner. We struck out on the trail determined to unveil new ways to find the elite characteristics that are the particles of greatness. Greatness in athletics is not one singular thing but many singular things all working together, like pieces of a puzzle. I see the physical horse as the picture of all we hope to see, and the psychological horse as those puzzle pieces inside that allow it to be so. Our job, determining the nature and functionality, of those puzzle pieces.

With our investigative toolbox filled with new stallion profiles and our sale evaluation approach growing sharper with each horse the goal was not to just buy horses, it is never a game of numbers only in my view; our task was to identify elite potential. I can tell you that we dismiss far greater number of horses than we recommend. If you accept average while expecting greatness, you will be grossly disappointed more often than not. I hold to the belief that if you elevate the bottom tier, your top tier is not quite so far out of reach. As it was recently pointed out by a client, our culling out horses often right before the sale ring that are deemed to have average athletic potential mentally, *has likely saved me millions*.

Onward we went, sale after sale, learning every step of the way (a process that we all know, never ends nor should it), panning for gold, looking for elite markers of sensory and behavior (Herd Dynamics). We were given a Super Saver colt to evaluate from McIngvale's physical inspection team. It takes a team, and our job at that time was strictly focused on equine sensory, psychology, and behavioral traits. When we pulled the colt it was immediately clear, *this was the horse we were looking for*. The yearling who is now Runhappy had all of the earmarks of greatness in his patterns of behavior. His ability to interpret the world and manage emotional stress was off the charts. He had a very unique and well balanced sensory system. His feel and interpretation of his environment shined through in his early psychological rhythms.

The elite athlete is a symphony of both physical and mental efficiency and aptitude, the elite herd dynamic is the one you don't always notice first. Sometimes great potential is invisible when you're looking for it; Mother Nature is most savvy for she is very good at concealing leadership in open spaces. The physical horse is what we see but the psycho-sensory horse, leads the way. I like to say, the mental capacity of the equine controls the physical output of the athlete.

It is worth noting that elite herd dynamics are sustainable in action and repeatable by nature. This allows for a versatile psychology, efficient stress management and is the horse that does not depend on other horses to fill in any potholes for them to determine their actions. When a horse has holes mentally they naturally lean on other herd members to fill in the gaps. This makes some horses look great in certain circumstances and average in others.

\*When I say *psycho-sensory system* I am referring to an equation I developed to better understand and describe for myself, what was happening. The sensory system surveys and locates/ID's stimulus, the psyche interprets and translates, resulting in physical reactions deemed necessary. Little hitches or potholes in these sensory transitions earmark patterns of behavior and emotional tendencies; things that appear inconsequential in normal settings are often of great impact under times of emotional stress, add to this a high rate of physical speed and the reality of the mind staying ahead of the body becomes most apparent.

Like a blocker clearing a path for a running back, the sensory system clears the way for the body to follow. Herd dynamics, sensory soundness and the efficiency of the psycho-sensory system are all aspects of emotional intelligence in the horse. In the athlete, the swiftness of these things is a clue to stress management and the ability to utilize innate physical talent to its full capacity. In essence, the mind must stay ahead of the body for physical optimization because there is a difference between the way a horse experiences the environment and their movement within it. The ability to manage the physical environment and distance is based upon how athletic the body is, the ability to manage the stresses of outside stimuli during this process is based upon the psyche. There is a substantial difference between horses that are affected by their environment and horses who affect their environment.

Very often the smallest of sensory and herd dynamic differences have the largest impact on physical performance. While working on the performance profiles of this year's Breeder's Cup Classic contenders to come up with our herd dynamic rankings, it was nothing short of splitting hairs. The majority of these athletes are extremely high functioning and to separate them physically is

one thing, but to do so psychologically is quite another. We have to consider a multiplicity of circumstances and align them with their individual tendencies and physical strengths, consider where each horse was, where they appear to be and where they are likely to go; are they on a herd dynamic plateau, are they a tick down or a tick up? Among the more profound considerations has to be how each horse is likely to manage both the herd chaos and emotional stresses within the environment. Based on these and many other things, we developed the herd dynamic breakdown for this particular environment; who among them are most inclined to perform best in their moment.

Looking ahead for THT Bloodstock, we are excited to announce that coming in 2016 we are working toward creating partnership opportunities in both yearling and two year olds and I invite you to reach out to Pete Denk if you would like to consider being a part of the future with us. Our work and research is a personal journey for me indeed, a dream, and I shall pursue it relentlessly.

Many thanks once again to Brisnet for another chance to share our work and insight with this years' BC Classic, which to me has shaped up like horse racing's herd dynamic version of the O.K. Corral. As well, it would be nearly impossible to express just how much I appreciate the dedication and hard work of Pete Denk, or my appreciation for you, the purchaser of our efforts, that make doing this worthwhile.

Visit our website [www.thtbloodstock.com](http://www.thtbloodstock.com) and by all means, enjoy a dig around the various sections and let us know if there is anything we can do to help you, your horse, or your program.

Sincerely,  
Kerry M Thomas  
Founder THT Bloodstock

***"If you wish to get best from your horse, help your horse find the best in themselves; Nurture the horse, develop the athlete." KMT***





# BEHOLDER

2010 mare by Henny Hughes—Leslie's Lady, by Tricky Creek

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In the wild herd setting, a lead mare can sustain her herd dynamic level and maintain leadership status for much longer than colts, who are constantly defending or fighting for higher positions against rivals.

We believe there may be some parallels between this innate cycle and racetrack form.

Beholder, a five-year-old mare who earned championship honors in her two and three-year-old seasons, may have that natural sequence in her favor as she tries to become the second mare in history to win the Breeders' Cup Classic (G1).

After a disappointing 2014 campaign that saw her miss the Breeders' Cup, Beholder has achieved various degrees of Herd Dynamic perfection in her five wins from five starts in 2015.

If you are a devotee of speed figures, you will see up-and-down levels from Beholder this year, including a big spike when she defeated males in the Pacific Classic Stakes (G1). A primary reason for this seeming inconsistency is that Beholder – once an Individual Herd Dynamic speed type – is now running in Group Herd Dynamic mode for more than 60-70% of her races.

Her rider Gary Stevens hasn't been asking her to run hard until the final stages. How fast she is running for much of the race is entirely based on the herd she is running in. When she runs against fillies & mares, she runs fast enough to beat those fillies & mares. And when she ran against colts, Beholder stepped up her game. And regardless of the competition this year, she has been winning easily, often geared down late.

Whatever was bothering Beholder in 2014, causing her to make just three starts, it appears to be history. In her first start of 2015 in the Santa Lucia Stakes, Beholder again looked like the champion mare who won the 2013 Breeders' Cup Distaff.

She looked powerful but relaxed, and her emotional extension was back. She was no longer internalizing. Her release points were spot on. She was just plowing space in the stretch run. That was the easiest of wins.

We saw just a hint of Beholder's old IHD, run-and-gun speed tactics in the Adoration Stakes when she was floated very wide on the first turn and was between fillies who were trying to press the pace. Beholder was a little annoyed, but she and her rider did a great job of staying in Group Herd Dynamic mode.

In the stretch run of the Adoration, Warren's Veneda was close to Beholder physically but so far away on herd dynamics. Beholder released Warren's Veneda very early, and there was no more attempt to pass from the lower herd dynamic animal. This is one of those races that is so much more dominant than it looks on paper.

Following a 7-length win in the Clement L. Hirsch (G1) vs her own gender, Beholder finally faced open company in the Pacific Classic.

She was running on her own island early. She was not tempted to get tangled up in IHD battle with the boys until Stevens asked her. That is an extremely good sign for her chances in the classic. An IHD filly that tries to duke it out from the flag fall to finish with colts is usually going to get used up. A Group Herd Dynamic mare has a much better chance to conserve energy for the finish.

The Pacific Classic was over when Beholder dropped the hammer on the far turn. There was no stopping her as she drew away by 8 lengths.

Beholder has the ability to cover ground, running with the herd for as much time in motion as is required, before kicking into competing gear. It's like a fresh arm out of the bullpen that just overwhelms hitters. It is an application of her growth in emotional intelligence and Group Herd Dynamic.

In Beholder's final prep race for this Breeders' Cup, the Zenyatta Stakes (G1), she was so relaxed, even when head-bobbing with her competition on the turn. There was no herd dynamic challenge there whatsoever. She never went into her top competing mode while winning by 3 ¼ lengths. Beholder enters this race at her peak of efficiency and herd dynamic strength.

We prefer horses that don't need to take their track with them to be at their best, and much has been made about Beholder's 0-for-2 record when shipping outside of her home base of Southern California. But looking at those two losses – one was an excellent 2nd-place finish in the 2013 Kentucky Oaks (G1), and the other was a 4th in the Ogden Phipps (G1) at Belmont Park in 2014 when Beholder was off form – we are not overly concerned.

Beholder was still a pure IHD speed filly when she competed in the Oaks, and she ran huge in defeat. She put away a pair of strong IHD fillies in Midnight Lucky and Unlimited Budget and still showed a lot of heart trying to come back on the winner Princes of Sylmar, who enjoyed a perfect trip from the standpoint of pace dynamics. Beholder was beat but she wasn't beaten. She was still coming after Princess of Sylmar on the gallop-out. That was a growth race.

When we watched the '14 Phipps, we immediately did not like Beholder's emotional extension. It was so much more retracted. She was internalizing stress and did not look comfortable. Her stride looked choppy.

It took 3 ½ months for her to return in the Zenyatta Stakes. She won, but her emotional extension still was far below her peak level. When she opened up in the stretch, she did not release and extend forward. She was uncomfortable. She wasn't waiting on those other horses in the classic sense, but it was as if they were closer to her than they should have felt. She did not look good on the gallop-out. Something was still wrong, and now it makes perfect sense to us that she was withheld from last year's Breeders' Cup. Her trainer Richard Mandella knows his mare well, and that gives us faith in his decision to ship her and take on open company again in the toughest race of her life.

By nature, male horses are more likely to engage with other colts in early space battles. As a now GHD-shifted mare in a field of male horses, Beholder has a unique opportunity to be an aggressor from a tactical position.

Beholder has always had an elite Individual Herd Dynamic power. With maturity she has learned command of her Group Herd Dynamic. That is where she has improved, and it has made her more efficient and versatile.

If Beholder runs her race, we think she will win what looks like one of the best Breeders' Cup Classics in history.



# AMERICAN PHAROAH

2012 colt by Pioneerof the Nile—Littleprincessemma, by Yankee Gentleman

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A fact of the Herd Dynamic sequence in nature, especially with colts, is that the top horse is meant to be knocked off.

When he won the Belmont by 5 ½ widening lengths and clinched the Triple Crown, American Pharoah reached a height that no American horse has seen since Affirmed in 1978.

Pharoah's Belmont was a work of art, a horse at his Herd Dynamic peak. Taking the lead early through moderate fractions, Pharoah was projecting himself forward into space while showing a beautiful feel for what was behind him. American Pharoah is the rare front-runner with elite, 360-degree surveillance ability and no loss of forward efficiency.

The other horses – Materiality, Mubtaahij, Frosted -- were trying to drive into him from behind, but he did not show the least bit of urgency or worry. This was total Herd Dynamic dominance.

Moving confidently throughout, Pharoah finished strongly with a final quarter in :24-2. Energy distribution is one of Pharoah's greatest traits, and he proved it there going 1 ½ miles.

In the Haskell, American Pharoah showed he could deal with an entirely different pace scenario. He pressed stretching-out sprinter Competitive Edge through four furlongs in :46-1 and six furlongs in 1:09-3. Pharoah's ears were flopping as he displayed relaxed body language despite the fast fractions. He took over after a mile in 1:34-4 and was geared down at the finish.

In the Travers Stakes (G1), American Pharoah took the first step backward of his career.

He was a little lathered in the gate, but things looked ok after Pharoah led through a half mile in :48-1. But then Frosted and his rider got aggressive, pressing Pharoah through a third quarter in :23-1. Pharoah and jockey Victor Espinoza responded by turning up the heat, running another quarter in :23-3. Those were inadvisable energy expenditures for the middle portions of a 1 ¼-mile race.

Pharoah won the battle for the lead with Frosted, but he lost the war. His recognition of Keen Ice's approach came uncharacteristically late, as his emotional extension had been decreased by the pace battle. By the time Pharoah

knew Keen Ice was coming, he didn't have enough energy to hold him off. He certainly tried – this was the most urgency we have seen from him since the Kentucky Derby. Pharoah did not like being passed, and he absolutely did not acquiesce to Keen Ice.

American Pharoah has been running at an elite Herd Dynamic level since age two. There is no shame in hitting a pothole at some point, and he was game in defeat at Saratoga. But it was the first indication that his growth pattern had peaked, the wear and tear of a Triple Crown catching up to him.

If American Pharoah returns to his best form in the Classic, he is going to take some beating. Pharoah is one of the most efficient operating horses we have ever seen. He has multiple gears, and he is capable of taking it up a notch, then downshifting, conserving energy for the finish.

Keep in mind that while Pharoah was the king of his generation through the Triple Crown, he is facing older horses for the first time. We have absolutely no cross form to compare the Herd Dynamic of this year's three-year-old crop with the older horses in the Classic division.

In Pharoah's favor, there is not a lot of IHD speed in this race. We expect Beholder will stalk him, waiting until the far turn to put him to the test. Smooth Roller is an IHD horse, but he is the type to stay within himself and try to outlast you, not aggressively take you out early. On paper it looks like the IHD horses have an edge as long as no one gets too aggressive within that group.

Barring unforeseen tactics, we expect American Pharoah will go to the front and lead this herd through the early fractions. If that scenario unfolds and Pharoah can return to his top form, he is a threat to make history one more time. Win, lose or draw, we expect the Triple Crown winner to leave it all out there on the racetrack in his final career race.





# HONOR CODE

**2011 Ridgling, by A.P. Indy—Serena's Cat, by Storm Cat**

Honor Code runs a Group Herd Dynamic (GHD), stretch-running pattern of motion, but he is not your average closer. This is a very unique Herd Dynamic.

Honor Code is extremely intense for a GHD horse. He is not the prettiest, most efficient mover, but once he gets rolling, he is powerful. Honor Code always finishes with strong emotional energy, and when he can get close to horses who are emotionally or physically tired, he eats them up.

Honor Code's sweeping rally from 10th to 1st in this year's Metropolitan Handicap (G1) was one of the most dynamic runs we have seen from a GHD horse. After running his first quarter in :24-4, he ran his final 6 furlongs in about 1:08-2, just exploding by a field of good horses.

Honor Code is a GHD horse, but he has an elite, gritty Individual Herd Dynamic. Once the rider asks him to go, Honor Code can stay in IHD competing mode for a long time, and his emotional extension is excellent. That gives him a significant advantage over horses that have plateaued or are leaking emotional energy in the stretch.

Most of Honor Code's best runs have come when he shuts off or detaches from the field early. His win in a NW2X allowance race at Aqueduct on Nov 22, 2014, was a great example. Trailing by 11 lengths early, he weaved his way through the field, splitting horses late to win by a length. It might as well have been 10 lengths. He was so far above those horses on Herd Dynamics, they were just impediments in his way. He didn't interact with those horses, he ran through them like an obstacle course.

Honor Code's Group Herd Dynamic traits are an interesting mixture. He has above average space awareness and he can feel and interpret stimulus in all directions around his body without any loss of forward efficiency. Combine that oblique/rear efficiency with his gritty, forward IHD power, and you have a horse that is always coming forward in the lane. Honor Code is adept at running horses down while he himself is extremely difficult to pass. He has always been the hunter, not the hunted.

Honor Code often bobbles at the start, and it takes him a little time-in-motion to get body control. That is his mental intensity being expressed physically. His inefficient starts are a part of his natural pattern-of-motion. While they cause him to lose tactical position, a poor start can help him emotionally detach from the field and avoid burning energy early.

This pattern of motion is very good at taking advantage of environmental setups, and is the reason Honor Code has a better record in one-turn races than two turns. It is not necessarily about his distance aptitude – we think Honor Code might be able to run 1 ½ miles – it is the setup. One-turn dirt races usually are fast early and slower late. That matches well with Honor Code's specialty; he is a very strong finisher.

On the other hand, IHD pace horses that manage to save energy and are still intensifying in the stretch are much more difficult to approach. That has been the scenario in almost all of Honor Code's defeats (except the Champagne [G1], where he had Havana beat but just ran out of ground).

Looking at Honor Code's worst career finish – 5th in the Grade 2 Alysheba Stakes at Churchill Downs – we see that race featured a slow pace that lacked early herd dynamic battles. The pace horses conserved their energy and ran their final 5/16 in a sharp :29-2. Honor Code came home faster, in an excellent :28-4, but he didn't have a chance coming from 10 lengths behind.

If the horses in front of him are conserving their energy, Honor Code needs to get better tactical position or close the physical distance without expending too much energy. However, Honor Code has not been consistently adept at doing either of those things. He does not have a high, effortless cruise control gear. He is either biding time in GHD or he is in attack mode. And if the rider tries to take him too far out of his game in order to be more tactical early, he risks losing his late punch.

Honor Code finished a slightly disappointing third in his final prep for the Breeder's Cup in the Kelso H. (G2). It was not his top form, but he didn't get his preferred pattern-of-motion, and overall we liked his effort.

Ridden to keep up earlier than usual, Honor Code wasn't allowed to detach from the herd mentally. We saw too much urgency early on in this race, and it hurt his finishing move. Regardless, this was not a bad run at all. He never quit and he was still coming forward at the wire to get third. The same rider – Javier Castellano—rides him back in the Classic. Castellano is the best at getting a little tactical speed out of GHD horses, and having ridden Honor Code in nine consecutive starts, he should have a good idea of how much he can ask of him early.

Honor Code gets more ground to work with in the Classic, and although he has never run this far, we think he can go 10 furlongs efficiently. The pace setup is the question mark. There does not appear to be an abundance of IHD speed in this race, and these front-runners are elite horses who can finish strongly.

We love Honor Code's grit and how he forges into space and hunts down targets. We rate him as the best "closer" in this field. We think there is a very good chance he hits the board, and if things unfold right, or if he runs the race of his life, we think he can win.



# SMOOTH ROLLER

**2011 gelding by Hard Spun—Catch the Moment, by Unbridled**

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Smooth Roller might be the most lightly raced horse ever to start in the Breeders' Cup Classic (G1). But after reviewing his four career races, we are not taking him lightly.

Smooth Roller debuted in a maiden special weight race at Santa Anita on June 27 of this year at age four, gelded. The signs of an elite sensory system and a classic-distance herd dynamic profile were immediately apparent.

Smooth Roller broke from the gate efficiently and established his own methodical rhythm while in 7th place early. Although forced to check briefly on the turn, he lost little of his momentum thanks to his forward emotional extension.

Moving inside of a horse, Smooth Roller was up to 5th place as the field turned for home. He then took advantage of a gap and surged right through the middle of the pod of horses in front of him. He methodically rolled home a 2 ½-length winner, showing some very nice Group Herd Dynamic traits and space awareness. His transitions were smooth, and his balance of environmental awareness and body control was excellent.

Smooth Roller stepped up to face winners and stretched out to 1 1/16 miles at Del Mar in his second start. More forwardly placed and Individual Herd Dynamic-shifted here, he took the first turn three-wide while pressing the pace. Again he showed great natural sensory extension. He is so relaxed even while pressing the pace.

He dispatched the pacesetter and quickly won another herd dynamic battle vs the first stalker/pouncer. What happened next was the key to this performance. Perfect Set, a good horse who would win two allowance races in a row after this defeat, came up the rail and got his head in front of Smooth Roller.

Smooth Roller had to re-interpret his opponent, transitioning back into IHD very smoothly. He showed some good IHD fight there while maintaining body control and never losing forward efficiency on the transition. When a horse gets pounced on from behind immediately after completing a series of tasks, they often lose momentum as they interpret the new challenger. This is very hard to recover from. To get passed and then re-rally when the other horse is not stopping, takes a serious herd dynamic. There is a relentless, elite psychology under Smooth Roller's calm outward surface. This should have been a big Herd Dynamic growth race.

Smooth Roller threw an 'off' race in career start number three on August 26. He was sweated up and looked terrible in the lead-up. He had already burned a lot of energy as he unhappily entered the starting gate.

He took an awkward step, got away last and was gapped by the field early. He used up even more energy trying to catch up with the field while very wide all the way around the track. Smooth Roller had a bad day here, but he was only beaten 1 ¼ lengths, and there was nothing in the film that really made us doubt the profile, especially when viewed in light of his next start.

Off that race the connections showed tremendous confidence elevating him into the Awesome Again Stakes (G1). Even after getting sandwiched at the start, Smooth Roller did not lose his rhythm in the Awesome Again. He was in his sweet spot stalking last year's Breeders' Cup Classic (G1) winner Bayern. His forward focus was great and he was grinding up ground. This is a time-in-motion mental profile.

Smooth Roller's release point as he put Bayern away was pinpoint. This horse seamlessly multi-tasks while in motion. His mind is always ahead of his body.

Smooth Roller was ready for another challenge as soon as he dispatched Bayern. He can feel back with his ears at great depth.

Inside the final sixteenth he decided no one was coming. He looked extremely powerful when he released and directed all his energy forward. He was just bulldozing space as he ran through the wire. There was a lot of gas still left in his tank. Smooth Roller ran his final three furlongs in :35-4, an excellent closing time for a pace pressing performance in a dirt race.

This is a true distance psychology that should excel at 9 furlongs and beyond.

As long as whatever happened to him before his August 26 race does not happen again, we view Smooth Roller as a legitimate contender in this Breeders' Cup Classic.

Smooth Roller lost his only race without jockey Tyler Baze on board. Smooth Roller and Baze get along extremely well, so it is good news that he is back on board.

Try to get a look at Smooth Roller in the paddock or on the track before the Classic. If he is hot and showing uncontrolled body language, these waters will be too deep. But if he appears unaffected by his new surroundings – this will be his first race outside of Southern California and by far his toughest – that would be a great sign.

Smooth Roller is a methodical, efficient horse with an IHD edge. He is an elite prospect, climbing the herd dynamic ranks and still on the upswing.





## GLENEAGLES (IRE)

**2012 colt by Galileo—You'resothrilling, by Storm Cat**

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After watching Gleneagles' 10 overseas races – which saw him cross the finish line first eight times, including one disqualification – we came away very impressed with this three-year-old colt's Herd Dynamic.

Crossing the ocean, trying dirt for the first time and going 10 furlongs against America's best is a tall task that presents a lot of question marks. Although we don't think he is the most likely winner, we came away believing that Gleneagles could win this Breeders' Cup Classic.

One of our favorite ways to judge a horse's herd dynamic power is to look for reactions in the other horses. One of the first things we noticed watching his races is that Gleneagles affects other horses. In last year's National Stakes (Ire-G1) he completely disrupted the rhythm of the horse in front of him Hall of Fame (Ire) in the early and middle stages.

Less subtle and even more impressive was his victory in the Irish Two Thousand Guineas (Ire-G1). The way he came through traffic on the inside was very powerful. Gleneagles affected the motion of three other horses, pushing two out of the way with his Individual Herd Dynamic presence, then shutting down the momentum of runner-up Endless Drama. That was very powerful stuff.

Gleneagles is no turf plodder. His mind and body should have no trouble with the speed of American dirt racing. He has an efficient action and some good tactical gears. Racing at 7 and 8 furlongs in Europe, Gleneagles operates in a high-end Group Herd Dynamic cruising speed until the jockey says go.

When Gleneagles transitions into IHD, he really kicks the afterburners on. He has a furious kick, so intense that at times he loses a little bit of body control when he is digging hard. That was the case in the Grand Criterium (Fr-G1) when he crossed over in front of his rivals and was demoted from the win by the stewards.

Gleneagles has a very quick, forward mind that reaches far out in front of his body. He knows where he wants to go. Sometimes it almost looks like his body is chasing his mind.

When Gleneagles lights those afterburners he is all forward energy. That kind of intensity pulls from his sensory interpretations, making them less acute. That can lead to inefficiency, especially concerning footing interpretations on a foreign surface. When a turf horse tries to do too much on the dirt and doesn't adjust its way of moving, that inefficiency burns them out.

The more Gleneagles can mimic his European pattern of motion in the American environment, the better his chances. We think that means a mid-pack or better stalking trip, turning for home with the leaders in his sights and getting first run on the GHD horses.

Gleneagles is a very competitive, professional horse. We have absolutely no question about his Herd Dynamic strength – it is elite. This is a beast that can project a lot of power at his opponents. From the herd dynamic perspective, Gleneagles is four times the size of his body. How he handles his new environment – dirt and 1 ¼ miles – is a huge variable and will be the deciding factor in his result.



# TONALIST

**2011 colt by Tapit—Settling Mist, by Pleasant Colony**

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To wear blinkers or not? That is the question we wonder if trainer Christoph Clement struggled with as he prepared Tonalist for his second attempt in the Breeders' Cup Classic.

With blinkers on, Tonalist has a record of 8: 4-3-1, including wins in the Peter Pan (G2), Belmont Stakes (G1), and Westchester (G3).

Without blinkers his record is 6: 2-1-1, including victories in back-to-back runnings of the Jockey Club Gold Cup (G1).

His non-blinkered races also include a frustrating experience (for his backers) in last year's Breeders' Cup Classic. It was an excellent herd dynamic performance, but from a tactical standpoint it was a sour note on a track (Santa Anita) that rewards tactical positioning. Last of 14 early, 13 lengths back, Tonalist crossed the finish line in 5th place with an excellent energy but a non-threatening five lengths behind the winner.

Tonalist was as good or better than anyone in that field on Herd Dynamics, and if he would have had tactical position, we think he could have won. That of course is a huge 'if.'

Tonalist is a tall, methodical, grinding type of horse who does nothing in a hurry. He covers ground very matter-of-factly with his long stride. He is sturdy physically, and he can hold his rhythm for a long time.

Blinkers generally make horses more forward and speed up their energy distribution. The fact that Tonalist won the 12-furlong Belmont Stakes with blinkers on tells you that he never does anything too fast.

While he is less tactical without blinkers, Tonalist's space awareness, transitions and release points are much better without the head gear. He moves more freely without blinkers.

Tonalist was not wearing blinkers in his most recent race, when he dominated a slightly subpar field in the Jockey Club Gold Cup (G1). Running in the slop (2: 2-0-0) and at Belmont Park (7: 5-2-0) are definite strengths for Tonalist. Keep in mind the former stat if rain hits Lexington on Saturday; Tonalist's footing transitions are excellent. Tonalist was able to creep up the inside on a moderate pace and power home in the slop, winning by 4  $\frac{3}{4}$  lengths. He has never looked better.

The Metropolitan Handicap (G1) was the last time Tonalist wore blinkers. The head gear does compromise his response time to rear stimulus, and that was apparent when Honor Code blew his doors off in mid-stretch. Tonalist got pushed aside, then re-targeted Honor Code and ran at him through the wire. He was well beaten but he was not quitting. This race told us that Tonalist is better on the offensive (running at a horse) than defensive (defending the lead) especially with the blinkers on. It also suggested that Honor Code is a Herd Dynamic beast, as we haven't seen Tonalist pushed around like that previously.

The blinkers came off in the Suburban Handicap (G2). Tonalist looked tired after making a mid-race move into the pace. He finished second, beaten a head by Effinex, whom he was giving six pounds to. Tonalist was giving everything he had there. He didn't do anything wrong mentally. It just looked like physically he didn't have a whole lot left. Weight differential or not, we thought he should have closed the deal.

The Suburban loss made us doubt Tonalist's herd dynamic a little bit, as did his 3rd-place finish in the Whitney. Tonalist was far back of a fast pace in the Whitney. He ran a deep closing pattern of motion, and he was following in Honor Code's wake all the way to the wire.

Tonalist had plenty of emotional energy in reserve through the finish, but there was a Herd Dynamic hierarchy in place there. Honor Code was the clear leader of GHD horses in the second pack. On the gallop-out we saw a very clear indication that Tonalist was indeed attached to Honor Code, adjunct style.

To win this Classic, Tonalist will need to reverse his previous losses to Honor Code and run down some elite Individual Herd Dynamic horses up front.

In his favor, the losses to Honor Code did come in shorter races, and 1 ¼ miles is a threshold distance on the dirt – finishing positions in shorter races often do not transfer to classic distance. Tonalist is a true 1 ¼-mile dirt horse, and he is coming off a powerful victory.

We expect Tonalist to execute his pattern of motion and come running on the far turn, but we will be a little surprised if he proves best in this field.





## KEEN ICE

2012 colt, by Curlin—Medomak, by Awesome Again

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Ever since he ran a deceptively good 7th in this year's Kentucky Derby (G1), we have been big fans of Keen Ice.

This Group Herd Dynamic, time-in-motion specialist had a tough trip in the Derby, but he never stopped trying to advance and, to us, he proved his quality going a classic distance. We picked Keen Ice second in the Belmont, labelling him American Pharoah's most likely upsetter.

We were partly right. Keen Ice was not able to upend American Pharoah's Triple Crown bid at Belmont, but he did spring the upset two races later in the Travers Stakes (G1).

In the Belmont, Keen Ice was asked to run a little bit for early position, took the first turn 4-wide and was up in the scrum, just a couple lengths off of American Pharoah early. He was actually burning some Individual Herd Dynamic energy early, which is just not Keen Ice's natural pattern of motion.

Jockey Kent Desormeaux tried to stalk the pace, plateau and re-kick. It didn't work on this day. Keen Ice was uncomfortable, and Desormeaux was asking him to keep up more than a half mile out. There was a point on the far turn of the Belmont where Keen Ice looked like he was done, backing out of the race.

Keen Ice actually downshifted there, going back into Group Herd Dynamic, then working back through his gears as he re-rallied through the stretch. After losing ground in the turn and looking well beaten, Keen Ice finished with a lot of energy and grit for 3rd. He won his immediate space at the wire, getting the best of Mubtaahij.

His next race, the Haskell Invitational Stakes (G1), featured a faster pace and Keen Ice reverted to his natural GHD pattern of motion. He finished very strongly and was just gobbling up ground late on a geared down American Pharoah. Keen Ice's emotional energy was excellent through the lane. Had this race been longer, American Pharoah was in for a fight. Keen Ice was not afraid to approach the champ, and as we would find out in the Travers, pass him.

In the Travers Stakes (G1), trainer Dale Romans put a new rider on Keen Ice – Javier Castellano, and they attempted similar tactics to what Desormeaux tried in the Belmont – keeping Keen Ice a little closer to the pace.

This time it worked. Unlike the Belmont, the Travers featured a serious IHD battle up front between American Pharoah and Frosted.

Secondly, Castellano was able to get Keen Ice to emotionally rate from a fairly tactical position. He found a spot at the back of the front herd without taxing him emotionally or taking him out of GHD rating mode. This was an extremely savvy, almost perfect ride. Castellano took Keen Ice's strengths and put his own (tactical) spin on them.

Keen Ice's transitions under Castellano were smooth and fast. Keen Ice never looked out of rhythm or had to go backwards in his gears. Castellano adjusted Keen Ice's physical placement without messing with his psychology, showing tremendous feel for his mount. This is why Castellano is arguably the best rider in America.

As Keen Ice was charging at American Pharoah, his sensory extension was way out in front of his body. Instead of seeing Pharoah as a barrier, as some lower herd dynamic horses would, Keen Ice saw him as a target. That is a key difference between horses who run adjunct in late stretch ("hang") and horses that finish with authority.

American Pharoah was not afraid of Keen Ice either. There was no fear on either side, it was just that Keen Ice had the emotional and physical momentum on his side, and he closed the deal like a battle tank rolling downhill.

While 10 furlongs is a positive for Keen Ice, herd chaos and traffic are wild cards for him. Keen Ice is not the most agile horse, mentally or physically. While this field is relatively small at 10 horses, efficiency in the face of chaos could still play a difference, particularly among the GHD horses as they launch at the front herd.

In the Travers Keen Ice ran down a champion who had been diminished by expending too much energy in a protracted IHD pace battle. It was Keen Ice's best race to date, and the type of herd dynamic experience that leads to growth. Keen Ice should be at an all-time high in confidence.

To win this Breeders' Cup, Keen Ice will need to climb another rung on the herd dynamic ladder and execute his pattern of motion with a new rider on board (Castellano will be on Honor Code).

This will be a much tougher task than he has ever faced. In addition to multiple quality IHD speed horses, he will also have to get the best of some elite GHD types.

Keen Ice is a contender, and we think it is likely he comes with a solid run, but we are not predicting victory for him this time.



# FROSTED

**2012 colt by Tapit-Fast Cookie, by Deputy Minister**

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If you have seen our Kentucky Derby or Belmont Stakes reports from this year, then you know that we think Frosted is a physically talented horse who has some herd dynamic inefficiencies that make him prone to coming up short against top company going a classic distance.

Let's catch up on his progress, beginning with his Belmont Stakes (G1) performance. Frosted came out of the gate well and showed good forward energy. His emotional extension -- the mind efficiently clearing space for the body to move into -- was very good for much of this race.

Frosted is a very forward minded horse. Even when checked back out of tight quarters and asked to wait on the turn, he wanted to go. He was cycling fast for the Belmont distance.

After looking strong for 10 furlongs of the 12-furlong Belmont, Frosted came unglued when cut loose in the stretch. Alone in space, with American Pharoah as his only forward target, Frosted's head went up. His energy was all up-and-down and sideways. Frosted was cycling mentally at a different rate than his body was moving. The result was inefficient motion. He was not driving into American Pharoah's space. He did not complete the task.

In the Jim Dandy Stakes (G2), Frosted was up against a small field of just four horses. He looked great for 90% of this race. But the parts where he showed weakness were the first 5% and the last 5%. That is not unusual, as the start and the finish of a race are pressure spots where you can learn valuable clues about a horse's sensory system and Herd Dynamic.

Frosted was head-high early then settled into a high-revving, Group Herd Dynamic mode. He got a great trip here in third-place, stalking Texas Red, who in turn was stalking the pacesetter Japan.

Frosted was in the perfect position to attack Texas Red in the lane. He looked great on the approach, but when his head got up alongside Texas Red's body inside the final sixteenth, Frosted did not intensify. Frosted's best moment was the approach. He looked flat in the actual IHD fight.

We give Frosted and his team credit for at least having an aggressive game plan in the Travers Stakes (G1). They tried to take it to American Pharoah.

At the surface this looked like a battle, with the announcer even saying, “American Pharoah has lost the lead at the top of the stretch!” But at no time during this pace battle – which really intensified too early for the distance, during the third and fourth quarters – did Frosted look like he was going to run on.

Notice the difference between American Pharoah’s head carriage and ear articulation vs. Frosted’s. One horse was relaxed and in control of his motion. The other was pressing desperately.

Those fast middle fractions took their toll on both horses. Frosted had an opportunity there, but he failed to capitalize because he was mentally and emotionally spent.

American Pharoah was physically tired, but he still had good body control. As the Triple Crown winner soldiered on gamely, Frosted lost his forward momentum. The winner Keen Ice was rallying on his outside, and Frosted’s lack of oblique feel wearing blinkers was apparent. He got pin-balled by the top two, pushed back by Pharoah, drifted out and sucked into Keen Ice’s egg like an adjunct, then cut loose, he drifted back in. Frosted was wobbly late.

In Frosted’s final prep for the Breeder’s Cup, he found a little less distance and much softer company in the Pennsylvania Derby (G2). He won by two lengths and might have run his fastest race to date, but we don’t think he has corrected his Herd Dynamic deficiencies.

Frosted was moving head high as the jock pulled him back early. He is not comfortable in those tight spaces. When the jockey was asking him to back off, he came a little unhinged. That command does not always compute for Frosted.

As usual, the middle of the race was Frosted’s best work. He looked loaded with energy on the far turn. But when it came time to take control of the herd, his approach to the leader Iron Fist was poor. Even when Frosted has a big physical edge, he still struggles with herd dynamics. His action was up and down and he was not emotionally extending forward until very late when he finally broke free. He was almost surprised to find himself alone at the wire.

We think the fact Frosted has twice as many 2nd-place finishes as wins speaks volumes about his herd dynamic. We will continue to view him as a bridesmaid in top company at classic distance, until he proves otherwise.





## EFFINEX

**2011 colt by Mineshaft—What a Pear, by E Dubai**

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Effinex is a very good horse with a legitimate classic distance profile, but we have a hard time envisioning him beating this field.

First his strong points, Effinex is a beautiful mover when he is in Group Herd Dynamic mode. In the early and middle portions of most of his races, Effinex has a relaxed gate with excellent emotional extension.

Effinex has a good profile for the American classic distance of 1 ¼ miles on the dirt, and his career record at the distance of 4: 2-0-1 is solid.

The first time Effinex tried 1 ¼ miles was late in his three-year-old season in the 2014 Hawthorne Gold Cup Handicap (G2). Although he finished 4th, this was a very good performance on herd dynamics, especially considering it was his first race outside of New York and first outside of New York-bred company since a pair of disastrous runs in open stakes company earlier in the year.

The lateral move Effinex made to find room in the stretch could have been difficult for a horse wearing blinkers, but he showed a good sense of feel for herd chaos there. Rallying for 4th and still showing decent emotional extension at the wire, this was a growth race.

Moving forward to this year, Effinex was victorious in his next try at 10 furlongs in the Excelsior (G2) at Aqueduct. Effinex showed again that he is a beautiful mover when in GHD mode and produced a solid rally to run by Red Rifle and Wicked Strong. Effinex got the job done there, but his Individual Herd Dynamic power and transitions are not quite elite – we noted there are little tiny windups every time he transitions.

We won't hold his "eased" loss in the Brooklyn Handicap (G2) against him, as he appeared to be in distress, running with no forward extension and getting out on the turn. That was an out-of-character performance, and he rebounded to win the Suburban Handicap (G2) in his very next start.

In the Suburban, Effinex was checked on the turn but he actually pushed Tonalist back in order to secure his path. Tonalist came back on him, but Effinex was just a little better (albeit with a six-pound weight break) and scored a head victory. That was Effinex' best race to date, but he was unable to build on it.

In the Woodward Stakes (G1), his emotional extension and rhythm weren't quite right. He got through on the turn, found a lane, and put a run in. He battled with Wicked Strong, narrowly missing 3rd place, beaten 6 ½ lengths behind the quick Liam's Map. The fractions of this 1 1/8-mile race at Saratoga might have been a little bit sharp for his mind and body.

In Effinex' most recent race, he got back to 1 ¼ miles but surprisingly stalked the pace in the Jockey Club Gold Cup (G1). This was probably a little bit too much of an IHD burn for him. He hit his top gear too soon, and Tonalist blew by him on the inside. Effinex finished third, beaten 11 ½ lengths.

We think Effinex is a solid Group Herd Dynamic horse. He is ok in IHD battle but not on par with the elites in this field.

If he reverts to his best pattern of motion and runs to his very best form, we could see him contending for third or fourth place, but a lot of things will have to go right for him.



# HARD ACES

**2010 horse by Hard Spun—All in with Aces, by Quiet American**

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Had Hard Aces not won the Gold Cup at Santa Anita Stakes (G1) – a Breeder's Cup Win & You're In qualifier – we have a feeling he wouldn't be in this Breeder's Cup Classic (G1).

The Gold Cup did not attract a strong field and even then we thought Hard Aces was a little lucky to cross the line first. Not only did he get a great pace setup for his closing style, but he got a huge break when the rail opened turning for home. He was able to save ground and grind along, almost indifferent to the herd motion unfolding around him.

While Hard Aces scooted through on the inside, runner-up Hoppertunity spun for home out in the 5-path and was moving best, bearing down on Hard Aces in late stretch. Hard Aces held on by a slim nose.

If you watch that replay you will see Hard Aces did not change his rhythm in response to Hoppertunity's wide challenge. This is how Hard Aces runs – he rarely reacts to or communicates with the herd around him.

Hard Aces internalizes a lot. Psychologically speaking, he is usually on his own island.

We would love to do an inspection of Hard Aces. We wonder if he is a stubborn or lazy horse around the barn. He may not be the easiest horse to ride in terms of getting him to do anything differently than the way he wants to do it.

In the Californian (G2), trainer John Sadler added blinkers (Hard Aces had worn them for portions of his career when trained by Larry Jones). We guess they were trying to get him to be more tactical, as the rider was doing everything in his power to show speed early, but Hard Aces was having nothing to do with it. He ran a stretch running pattern of motion, rallying for a distant 3rd.

Hard Aces has worn blinkers in 10 of his 25 starts, including his most recent four runs. The blinkers do not affect Hard Aces' pattern of motion very much. He has a condensed surveillance field naturally, so you aren't really cutting much out. And it doesn't seem to affect his energy burn.

Hard Aces has been an extremely consistent horse from the mental/behavioral standpoint. When we watched his early races we initially thought he might have slow release points and sticky transitions. But the more races we watched, we eventually realized he was not sticking to other horses. He is just a grinder.

We definitely think there is some intensity underneath the calm exterior. We can see it at the start of many of his races -- Hard Aces does not pop out of the get very efficiently, and that excess energy has to go somewhere. The result is uncontrolled motion from a standing start.

Hard Aces usually executes a high-end GHD settle, closing pattern of motion. Yet he has a lot of characteristics of an IHD horse. We see a hint of competitive nature here and there.

Hard Aces generally runs with good forward efficiency once he finds his rhythm. He is comfortable in close-space scenarios or open space. His sensory system does not extend very far out in any direction. He is not running at the other horses or using them as targets to pull himself forward. He is just running through space or competing with a nearby horse.

When the pressure lets off after the wire, Hard Aces' ears pop up and he suddenly becomes aware of his surroundings again. That tells us how hard he is concentrating when moving at race speed.

We do not think Hard Aces has the Herd Dynamic to contend for any of the top spots against this field.



**About the authors:** Kerry M. Thomas is a pioneering researcher of equine athletic psychology. His work began with the study of wild horse social structures and communication, and how those areas affect herd motion. He is the founder of the Thomas Herding Technique (THT) and author of *Horse Profiling: The Secret to Motivating Equine Athletes*. Kerry co-founded THT Bloodstock with Pete Denk. For more information, visit [www.thomasherdingtechnique.com](http://www.thomasherdingtechnique.com) or follow Kerry on Twitter @thomasherding.

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## GLOSSARY

**Anticipatory Response:** A response that comes from anticipation, based on environmental circumstances. An anticipatory response precedes the actual stimulus. It is a learned response that becomes a habit. The anticipatory response mechanism can be used for learning and growth. However, an improperly functioning sequence can create aberrations and inefficiency.

**Behavioral Overcompensation:** Occurs when one sensory avenue either by physical limitation or psychological aberration overcompensates, resulting in body language eruption and/or loss of mental and physical efficiency.

**Buddying-Up:** Occurs when a mid-level herd horse seeks the comfort of movement with another horse. Buddy-up horses are dependent on another horse for safety, direction and rhythm of motion.

**Egg:** The horse's egg is the space around the horse, varying in actual foot-distance by the individual, that is its personal space and area of influence. Shaped much like an egg is shaped, it is the area where stimuli are efficiently interpreted. It is directly related to the herd dynamic of the horse; that area around the horse that it manages.

**Emotional conformation:** the mental and emotional psychology of a horse, that makes up who they are. It includes the way they communicate, interpret stimulus, and almost everything they do, including compete on the on the race-track.

**Emotional Conformation Profiling:** The study of a horse's Mental/Emotional Intelligence & Ability in three key areas; Trainability, Herd Dynamics, and Behavioral Genetic Traits.

**Group Herd Dynamic (GHD):** GHD is a horse's awareness of the environment, including the herd around them. GHD goes hand in hand with the ability to interpret stimuli. A horse with a good group dynamic can see/feel the big picture and where the horse itself fits into that picture. A healthy group dynamic usually is integral for a horse to consistently run well through traffic. Many horses with big group herd dynamics will prefer to be near the back of the field early in a race in order to read the other members of the groups' intentions. GHD horses literally feed off of the energy of herd motion and are comfortable letting it unfold over time and distance. GHD horses do not feel an urgency to take control of a herd immediately. Horses with high-functioning Group Herd Dynamics are usually multi-taskers, capable of taking in a number of stimuli at once without focusing too much on any one thing.

Horses with high-functioning GHDs usually have the ability to travel with a herd while rating/conserving energy. For this reason, horses with good GHDs tend to get the most out of their physical bodies in terms of distance aptitude.

**Herd dynamic:** a general term we use to describe a horse's overall herd level (its group and individual herd dynamics combined).

**Individual Herd Dynamic (IHD):** IHD is the dynamic that involves just the self and a singular target. IHD mode is one-on-one competing mode, hence it is very important in racing. A high individual herd dynamic is integral to being a

great racehorse. IHD is the ability to turn on the intensity, fight for space, and vanquish an opponent.

As important as IHD is, too much IHD energy or unwise usage of it can lead to inefficiency. For example: a horse engages in a pace duel with one other horse, not thinking about the rest of the field, the length of the race, or anything else but that one-on-one struggle, and he uses too much energy too soon.

Horses that rely too much on individual herd dynamic also can get lost/overwhelmed if they have too much stimuli to interpret. Front-running horses that only run their best races when they are near the front of the herd, where there are limited stimuli, are usually very high on individual herd dynamic.

Horses with a lot of IHD energy sometimes don't "turn it off" that easily. So while they possess more fighting energy, they also tend to burn emotional energy at a higher rate. This sometimes leads to inefficiency in their distance aptitude.

In some ways, IHD dominant horses are like bullies. They are very dependable in their ability to dominate weaker competition and assume herd leadership at the front of the pack. This works well, especially for American racing where front-end speed wins a lot of races. But there is a downside to being an imbalanced IHD bully -- when you're only operating on one dynamic, it's easier to have the rug pulled out from under you. And when things don't go their way, some individual dynamic horses tend to fall apart.

In nature, male horses tend to be Individual Herd Dynamic dominant.

**Mental Efficiency Zone (MEZ):** Mental distance aptitude, expressed in race distance. The amount of time/distance a horse is able to efficiently operate from a mental standpoint.

**Pattern Of Motion:** A naturally occurring or learned response to the stimulus of a horse race. A pattern of motion develops every time a horse engages in a workout or a race.

**Purposeful Motion:** Efficient, willful movement, including reactions and non-reactions to stimuli, based on proper interpretations by the sensory system. High-level herd dynamic horses move with purpose in response to situational chaos, never losing control of their reactions to the environmental stimuli of herd motion and chaos. Thus, physical speed and movement is purposely controlled to fit the circumstance, as a naturally occurring act of self-preservation.

**Sensory Dependency:** The use of one sensory avenue over another to interpret stimulus even when such stimuli could be more efficiently processed by another sensory avenue. Example: eye dependent

**Space infraction:** When one horse infringes upon another horse's space.