Introduction

Any horseplayer must perform the following to be a winner:

Develop and maintain a winning attitude
Practice a sound and prudent money management scheme
Access and effectively utilize superior information

Cultivating a winning attitude is a necessity for any endeavor, especially betting on horses, where the roller coaster ride can rattle the faith of even the most devout believer. Volumes have been written on the benefits of a positive attitude and the power of positive thinking. The bottom line is if you see yourself as a loser at betting horses, you'll lose. On the other hand, if you see yourself as winner (even if you're not one now), you'll find a way to win. It sounds simple. But often, the simplest truths are the most profound. If you see yourself as a losing player now, hopefully we can show you how to be a winner with ***EQUIFORM***.

If you have a positive attitude and master the skills necessary to be a winning player, you won't be a BIG winner unless you manage your money properly. This should be the easiest part of the game, but in real time, it is probably the most difficult. The discipline required is sometimes taxing to the most seasoned professionals. They just get "steamed" or go "on tilt" much less frequently than the average player.

Even if you have a winning attitude and understand the nuances of money management, you won't win unless you are able to *significantly* outperform the public in your decision making. ***EQUIFORM*** provides the value added information that will enable you to predict performance in a superior manner.

Many variables affect the outcome of a horse race. As all races are *unique* events, any one variable may dominate in certain situations. A horse's ability to handle a muddy track may be powerful in one situation. In another, a trainer may be on a tear "first off the claim". Pace, distance, class, weight, surface, trainer and bias all contribute to the dynamics of a horse race. But one factor is paramount in the majority of cases, and that factor is *form*, or as we prefer to name it, **CONDITION**.

Quite simply, well conditioned racehorses, ready to make a forward move, will usually beat inherently faster horses who are not in shape to deliver a good effort.

The trick is to be able to identify these situations when they are concealed from the public.

The handicapping landscape has recently been inundated with all types of information. Whether it is trainer studies, bias information, or trip notes, large quantities of data can be easily accessed, especially by computer. The ability to manage so much information has become burdensome for all but the most dedicated players. Our leading product, ***The XTRAS***, strives to distill as much *pertinent* information as possible, while keeping the focus on **CONDITION** *and* **FORM CYCLE ANALYSIS**.

EQUIFORM not only produces premium final time numbers, but also introduces our unique, **velocity based pace numbers**. The inter-relationship of these two numbers (pace and final) and subsequent pattern analysis has enabled us to develop a superior methodology for analyzing condition and form cycles and predicting performance.

Our opinion is that services focusing on final time have seen their best days. We are research oriented and continually seek innovative approaches that provide positive wagering value. We truly believe our pioneering work will keep you ahead of the crowd.

Thoroughbred Condition

Having been bred *exclusively* for racing for some time, the thoroughbred is a bit of a prima donna. However, the breed still shows many of the same traits as its ancestors. Like other members of the family *equus cabullus*, the thoroughbred is basically a herd animal. This characteristic is most probably a result of the horse's natural habitat. On the ancient grassy plains, where predators lurked everywhere, safety was found by staying close to the pack. If a horse moved ahead of the pack or strayed too far behind, it became easy prey. It is interesting to note that several keen buyers of thoroughbreds will not make a major purchase until viewing a yearling in the field with its peers. These buyers desire to see a youngster who is unafraid to lead the pack, as they consider this trait both a sign of courage and a will to dominate.

The average thoroughbred weighs around 1,000 pounds, and has an almost rigid back. It propels itself on four spindly legs, which must carry weight over a distance of ground while approaching a rate of forty miles an hour. One must realize that the thoroughbred has been shaped by humans to perform in ways for which it was not equipped by nature.

For many thoroughbreds, the start of a race is the most stressful event they encounter. Several have to be schooled over and over again on getting in and then leaving the gate. From a standing position, the horse's hind feet drive backward and downward, while the horse's front end rises off the ground. This initial backward thrust enables it to propel itself forward out of the gate. Should the horse lose its balance or the ground break beneath its feet, an injury is likely.

Assuming a clean break, horse and rider must now navigate their way through a herd of other animals also looking to establish position. For these reasons, horses which are not in good physical **CONDITION**, often hurt themselves in the starting gate or in the early portion of a race. We are reluctant to excuse poor performances out of the gate. Although some animals are perennially slow starters (this may be due to an early negative experience), horses in proper **CONDITION** should be able to handle the rigors of the start.

Horses that are feeling good and properly **CONDITIONED** most often exhibit their improved form in **dirt** races in the *early* segments. The ability to run faster in the most stressful part of the race is usually a signal of an improved effort in the *near* future. How big an improvement is forthcoming depends on a variety

of factors, with the major one being the acumen of the *trainer* and his ability to place the improving horse in a spot where it has a legitimate chance to win. **Turf** racing involves a different set of dynamics, in which an improvement in finishing ability is often a sign of readiness.

If the horse is placed in a contest where the dynamics of the race allow it to distribute its newfound energy reserves effectively, it will deliver a superior performance, often a lifetime best. Even when the dynamics of the race don't really suit the horse, an improved effort is probably in the cards, often at a generous price.

Velocity

Velocity is the rate per unit of time at which an object moves in a specified direction. In the old days baseball fans would say a pitcher had good speed. Today, he has good velocity. When a state trooper gives you a speeding ticket, it could just as well be called a velocity ticket. Velocity simply measures distance over time, whether it be seventy miles per hour, sixty kilometers per day or fifty-five feet per second.

Feet per second (ft/sec) is the **velocity** measure we use in constructing our figures. Let's go back to the first quarter of our imaginary race (see Inside Track article on Pace in the left sidebar) where the early leader (Horse A) ran the first quarter in 22.7 seconds. His first quarter velocity in feet per second equals 1320 ft (the distance of a quarter mile) divided by 22.7 seconds which equals 58.150 ft/sec. Remember that this is his *average* velocity during the first quarter. At certain points in the quarter, he is running faster than this and at other times, slower. As he leaps out of the gate from a standing start, the horse first overcomes inertia and then accelerates dramatically to reach full racing speed after about an eighth of mile.

For those of you with a mathematical bent, we could calculate his speed at any given point in the quarter (instantaneous velocity) by using differential calculus, if this acceleration were constant. But the acceleration is **not** constant. Sooner or later the horse levels off, and usually begins to decelerate later in the race. When the horse hits the turn, new factors come into play. How tight is the turn? How steeply is it banked? Does the animal's normal motion and physique allow it to negotiate different types of turns with the same agility? These are all difficult variables to accurately quantify, and anyone who tells you they can reduce all of this to one perfect "energy number", probably has some swamp land in Florida for sale.

What we can do is use the available data to produce reliable figures that allow us to make valid judgements concerning a horse's current *condition*. We know that chart-callers have a tough job and sometimes make mistakes. For that reason, our data is confirmed by *multiple sources*, including personal observation at some tracks.

These raw velocity figures are the building blocks for our numbers, which are also adjusted for wind, turns and daily track variant. The ***key difference*** between Equiform's pace figures and most of the others is that our figures are

based on actual velocity, not fractional par times or projected fractional par times.

Pace

Much ado has been made about pace handicapping in the last few years. From the Sartin Methodology and its proponents (Brohmaer, Hambleton, etc.), to Bloodstock Research, to Thoroughbred Sports Network, to Henry Kuck, and Dick Mitchell, pace numbers are sprouting up like wildflowers. In our opinion, only the Sartin people have made significant discoveries. Although velocity based pace numbers have been around awhile, the Sartin crowd did some original work by creating and analyzing several types of pace ratings, studying energy distribution, developing track models (which show what types of running styles and energy patterns typify the winners at different distances at a particular track), and bringing the whole process together with a well defined decision model.

The problem with the Sartin approach is that the user is required to select a "representative" pace line for each horse in the race, *before* proceeding with the steps of the decision model. This appears to be a shaky foundation, and the **Sartin** people themselves admit that selecting the right pace lines takes a lot of practice. They go on to say that "when the difficulties involved have sorted themselves out, the correct pace lines will LOOM off the page." We wonder. A more **serious flaw** is their rationale of using **one** isolated performance to predict a future outcome. This disregard for the current form cycle (or the form cycle from which the paceline is selected), does not allow for a complete evaluation of the horse's expected performance TODAY. Only by looking at the animal's *overall development*, can a true model of **CONDITION** be created.

When each horse is loaded into the starting gate, it has a certain amount of energy available to distribute during the race. This amount of energy will depend on the trainer's ability to have his horse healthy, happy and racing fit. The better conditioned the animal, the more energy will be available. Assuming the animal has not dissipated an excess of energy in the paddock or post parade, its gas tank will be full.

Thoroughbreds are bred to run, and it is not as easy as one might think to ration their energy. To begin with, all horses are individuals, and in the early stages of their racing careers, they are usually required to adapt to a variety of situations (dirt, grass, sprints, routes, off tracks, etc.). As human runners have distinct preferences (Carl Lewis liked sprints and Jim Ryan preferred routes), so do the majority of racehorses. In fact, certain sprinters may handle seven furlongs better than six, or a router might love a mile and an eighth but just can't get ten

furlongs. Conformation, pedigree and other individual nuances all play a role in determining these preferences. Trainers continually experiment with their younger stock in an effort to discover what distance and surface is most suitable for each individual. Rare indeed is the animal who can handle all distances and surfaces with equal aplomb.

We are now ready to commence our discussion of **pace**. Before we analyze the effects of pace on a horse race, let's first think of the idea in terms of our own daily activity. We've probably all said at one time or another "I've got to pace myself" or "I'm burning the candle at both ends." When we try to do too much work too quickly or work around the clock without resting, our energy becomes depleted. Both our physical and mental apparatus begin to feel the strain, and until replenished, our performance will suffer. Thoroughbreds react to the same physical and anatomical forces, and once we become cognizant of this, we will see them for the living, breathing creatures they are, and not just a bunch of numbers in the Racing Form. Ask a horse to expend too much energy early in a race, and it won't have much left for the finish (it didn't pace itself). Make a horse run at peak capacity a couple of times without the proper rest and recovery period, and you'll likely end up with an unhappy animal, often subject to injury (burning the candle at both ends). Racehorses aren't as stupid as some humans think. One of the reasons older geldings are relatively consistent performers is they know how fast they can run without hurting themselves. Younger animals, unaware of their capabilities and limitations, and not fully developed, are more prone to serious mishaps.

Most dirt races in North America, especially sprints, are experiences in deceleration. Next time you see a horse closing three lengths in the stretch, remember he is most likely just slowing down more slowly than the rest of the field. His "stretch move" is somewhat of an illusion. Consider the leader's normal fractions for a six furlong race at your local track. They probably look something like this:

22.7 46.3 1:11.7 (71.7 seconds)

(Throughout this article, we will use tenths of a second in our examples. Although most racetracks now time to the nearest hundredth of a second, and we use this data when available, tenths are sufficient for purposes of this discussion.)

Let's assume the winner (Horse A) went wire to wire and look at the individual quarter times. He went the first quarter in 22.7, the second quarter in 23.6 (46.3 - 22.7), and the final quarter in 25.4. Each subsequent quarter was run more slowly than the opening quarter, with the last quarter being almost three seconds slower than the opening quarter. Now, let's assume another animal

(Horse B) is three lengths back after the first quarter, still three back at the half mile call, and rallies off the pace for a dead heat with our front runner. Using the crude approximation of one length equals a fifth of a second (the time value of one length varies at different rates of speed), the closer's quarterly splits would be 23.3, 23.6 and 24.8. So even though he gained three lengths in the final quarter, he still was traveling significantly slower than he was during the opening segment. He just decelerated at a slower rate than the leader. How about a big closer, you say. Well, let's say a third animal (Horse C) was twelve lengths back after a quarter, still eight back after a half, and rallied for a triple dead heat with the other two horses. His first quarter would be 25.1, his second quarter 22.8, and his final quarter 23.8. This animal gained eight lengths in the final quarter, but still ran that segment a full second slower than the middle quarter. This type of *deceleration* at some point in the race is the norm in almost all sprints run on the dirt.

Equiform.

Arts & Sciences

A unique feature of the Equiform product is our proprietary internal fraction calculations. We find these figures extraordinarily useful. Why? Well, just as one inning cannot create a baseball game or one color a painting (except for maybe at the Guggenheim), we have found that one number is usually inadequate in evaluating the events of an entire race. The internal fractions are meaningful--the challenge is to effectively use these often ignored times as part of your overall handicapping analysis.

During a racing season, top thoroughbreds may run only six to ten times. Less valuable stock may race anywhere from ten to thirty times (or fifty, in the case of our old New York pal Murray Garren). In its entire career an animal may log only an hour or so of actual racing time. As an analogy, a single race might equate to one or two years "on the job" for a human being working 40 years. Most humans have good years and bad years or, in the case of our friends in the financial markets, great minutes and horrible minutes. Generally, one year of performance does not represent our overall abilities. And yet in racing we are often given one number to judge a critical 2 minutes in the life of the thoroughbred. At Equiform we have long viewed this as shortsighted, but this is something on which we have capitalized and are aiming to change. The minimal amount of track time a horse accumulates makes every race important.. Our research has shown that valuable insights are gained by analyzing specific segments of a race (the race within the race), and this information adds tremendous value to our own understanding of a horse's current CONDITION.

Our *final number* encompasses several key variables, and yet it is does not tell the whole story. Our *internal numbers* help you paint a more colorful portrayal of a horse's racing experience. We will go into more detail in later articles, but, for starters, our figures help you recognize how the animals energy was distributed over the entire race. This assists the player in deciphering the horse's true condition and potential.

We realize that all the nuances of horse racing cannot be reduced solely to numbers (see Introduction), and, importantly, we recognize that one number cannot tell the complete quantitative or "scientific" side of the handicapping equation. There is most definitely a qualitative or "artistic" aspect to the handicapping puzzle that you, as serious participants, welcome. By providing data our research indicates is pertinent, we build a unique and innovative "canvas" to which you add color.

This blending of art and science is unattainable with selection sheets and single number analysis. At Equiform our numbers are rigorously scrutinized for validity, but we never underestimate the players ability to add a personal "artistic" flourish.

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