

# A Teacher's Lesson

By Barry Meadow

What's your reaction when a 12-1 shot wins?

If you had the 12-1 shot, you might think you're one smart fella. If you didn't, you're likely to think that maybe you missed something in the handicapping, or maybe the infamous "they" put one over for a score.

The reality is much more prosaic. Sometimes 12-1 shots win. Usually, they don't. But just because something doesn't *usually* happen doesn't mean it *never* happens.

Let's say you think some particular thing happens to only one person in a million. Seems rare, doesn't it? But there are seven billion people on earth. That means that supposedly rare event happens to 7,000 people. Doesn't seem so unusual now, does it?

Let us visit an elementary school classroom to see the most probable explanation for the victory by the 12-1 shot. And it has nothing to do with brilliant handicapping, or bad handicapping, or insider scores.

The teacher puts 10 socks in a paper bag:

4 black

3 white

2 red

1 blue

She has each child reach into the bag and pull out a sock, record the color, then put the sock back in the bag for the next kid to try. After all 30 kids get a turn, the teacher asks for a show of hands--how many picked a black sock, how many a red, etc. Thus we learn the heart of probability theory: Every sock has some chance to be picked,

but the black socks will be picked more often than the blue sock. If we tried this experiment 10,000 times, we'd get something close to the theoretical ratios: Black would get picked roughly twice as often as red, and approximately four times as often as blue.

Even so, sometimes three kids in a row will pick blue. That doesn't mean that blue is "hot," or the kids have some special insight. It simply means that if you do something often enough, unusual results will take place.

Thus the importance of lengthy trials to determine if a handicapping belief is true. Check only a hundred races and just about anything can happen—two 75-1 shots might score, favorites might win only 22 percent, some jockey might snag four races in a row. Some players are just a bit too quick to draw conclusions from limited evidence—evidence which, with further testing, regresses to the mean.

This doesn't mean that you have to check every result of every race ever run to draw conclusions. For instance, on the first day of a new meet, a certain trainer enters four horses and they all finish first or second. It's not a stretch to guess that the guy has his horses ready to roll, and when he enters three horses the next day, they rate a serious look. The converse is true as well—if a trainer is going poorly, expect more of the same until his results turn.

But back to our main point. Due to the classification system at the racetrack--\$10,000 claimers face \$10,000 claimers and horses with Beyers around 75 generally face other horses with Beyers hovering around the same numbers--in every race, most entrants have at least some chance to win. Maybe not a big chance, but some chance nonetheless. The question then becomes not *who is going to win the race*--since in a hundred scenarios, many different winners may emerge--but *what should the odds be for each horse?*

In other words, which is the black sock and which is the blue sock? All our work should be devoted to figuring out the chances of each horse, not simply who is most likely to win the race. This could make a longshot a better bet than a favorite—or vice

versa. What is each horse (or combination) worth?

That isn't so easy. We can calculate with certainty the odds of anything in a fixed-odds game. Take a roulette wheel with 36 numbers and a zero and a double zero, or 38 spots where a ball can land. A single number pays off at 35-1 for a 5.26% house edge. But if the payoff were 40-1, life would be sweet.

In horse racing, though, we can never know the true odds on a particular horse, though we can make estimates. Because our estimates will never be quite as good as the public's, we have to allow some wiggle room. Thus if we think a horse has one chance in five of winning (true odds of 4-1 without a takeout), we'd better get at least 6-1 or higher if we want to make money long-term.

Making things more difficult are two problems—our estimates could be off (the horse really has only one chance in eight of winning, so if we bet him at 6-1 we're guaranteed to lose long term), and late odds changes sometimes convert a supposed overlay into an underlay. But who said the game was easy?

Let's finish this discussion by returning to our old friends, the socks. When we dip into the bag and pull out the blue sock, it usually doesn't mean that we are incredibly gifted sock pickers who should turn pro. Nor did we fail to understand all the socks. Nor was the bag rigged.

No, something that figured to happen one time in ten did happen. There may be no lesson to be learned at all, other than that sometimes you reach into a bag and pull out a blue sock.

The quest for us as handicappers is to find horses that are overlays. All our work should be geared towards trying to estimate what the true odds should be. If we can do that with some accuracy, all we need do is wait until that blue sock is not offered at its true odds of 9-1, but 15-1 or 25-1. Or maybe till that black sock is not the 3-2 odds it really should be, but 2-1 or 5-2.

If we can do that, and we can wait, we can win.

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