

POOL MYTHOLOGY

What you accept as truth just might deserve a second look.



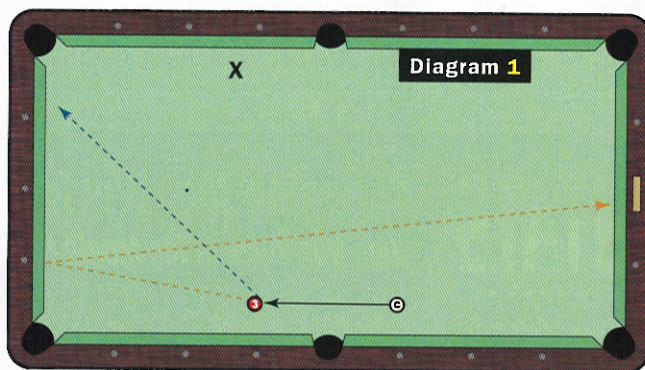
AS WE settle into an age where information moves continuously and instantaneously around the world, we must remember a couple considerations. Because the Internet does not discriminate, all available information comes to us with almost equal authority, regardless of its quality or truthfulness. And, because of the sheer daily volume of new information, there simply is not enough time to read even a small fraction of it, let alone investigate its veracity. So it all passes through our daily lives bundled in the same package, credible news alongside stories about kidney-theft rings or perfume salesmen waiting to knock us out with ether and abduct us. And like boy scouts sitting around a worldwide campfire, we love to trade our modern ghost stories. Fortunately, it only takes minimal effort to debunk the urban legends and assuage our fears. Exposing myths is just as easy as spreading them but significantly more beneficial.

With that idea in mind, I recently headed into a long-anticipated session of high-speed filming with fellow *BD* columnist Dr. Dave Alciatore, eager to participate in some genuine, scientific billiards investigation. The filming went splendidly, and I can't remember the last time I had that much fun around a pool table. We captured variations of nine distinct shots and uncovered, in super slow motion, the truth about what's occurring during the few milliseconds when the action unfolds. And then as a bonus, we shattered a myth.

I would love to report that I arrived with a piece of suspect information from a second-rate Web site and then designed an experiment to dismantle someone's false belief. That is sort of what happened, except for one small problem. The false belief was my own and one I had held for some time. Much worse, however, is the fact I had been

sharing the misinformation, spreading it widely over the past 10 years.

The problem in question was not something we set out to investigate, but one that arose in conversation after we finished. I made a casual reference to the "fact" that we produce different results with the cue ball by applying different strokes. Strangely, my remark was not received with a nod of agreement. So to clarify, I continued, explaining how the tip's acceleration as it meets the cue ball exerts great influence on the cue ball's behavior. Dave humbly responded with



a lovely piece of personification, "The cue ball only cares about speed and where it's hit." I disagreed and offered to show him.

When he said we should check it out, we returned to the table where I set up the shot in **Diagram 1**. After we agreed that the slight cut angle for this shot offers a wide range of possible cue-ball tracks, I told him that I would demonstrate how one can hit the cue ball in the same spot at the same speed and produce different position tracks by altering the stroke's acceleration. The orange line would be the path of the cue ball for a force-follow, executed with an above-center hit and a long, level stroke with constant acceleration. Since a sliding cue ball would stay on the tangent line and go across the table to the X, the blue-line track is also a follow shot but one with less top spin than the force-follow. That, of course, is achieved with

an above-center hit and snappy, rather than constant, acceleration.

Reliably I demonstrated how I could hit both tracks at the same speed by employing different strokes: the long, smooth stroke for the force-follow and the snappy, punch stroke for the wider, dotted-line follow shot. But to my dismay, I learned I could not hit the cue ball in the same place for both shots. After exhaustive repetition, and despite my best effort and obstinate certainty, careful investigation revealed every time that, previously unbeknown to me, my tip was dipping slightly when I wanted to widen the track. In other words, the different stroke I thought I was applying to alter the way my tip's acceleration met the cue ball was, in reality, producing the desired result by lowering the tip enough to move the cue ball onto the wider track. Of course there's nothing wrong with that, but I think it's better when we know exactly what we're doing.

While the prospect of facing and then changing a mistaken belief can be frightening — or at least embarrassing — Dave's good-natured spirit of investigation without judgment opened a wide clearing for me to make the transformation an empowering experience. He could have responded to my misguided assertion with a dogmatic dismissal and sent me on my way, but doing that would have only served to temper my resistance. In the end, we agreed that we can employ the idea of different strokes as a way of achieving the necessary speed and hit on the cue ball for a desired result. But ultimately, the cue ball only cares about speed and where it's hit. I still remain a little skeptical that those are its only concerns and look forward to our next session to test another belief. I know that the cue ball cares at least a little about how I'm dressed.