

Shattered Beliefs

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. And 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, and thanks to several reliable sites, 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. Going in, I knew for sure we would get to the bottom of what's truly happening on a few pool shots and, if the day went well, maybe debunk a myth or two. 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 suspect information from a second-rate website and then designed an experiment to dismantle someone's false belief with the help of Dr. Dave's high-tech gear. That is sort of what happened except for a couple details and 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 through teaching and writing about it over the past ten years.

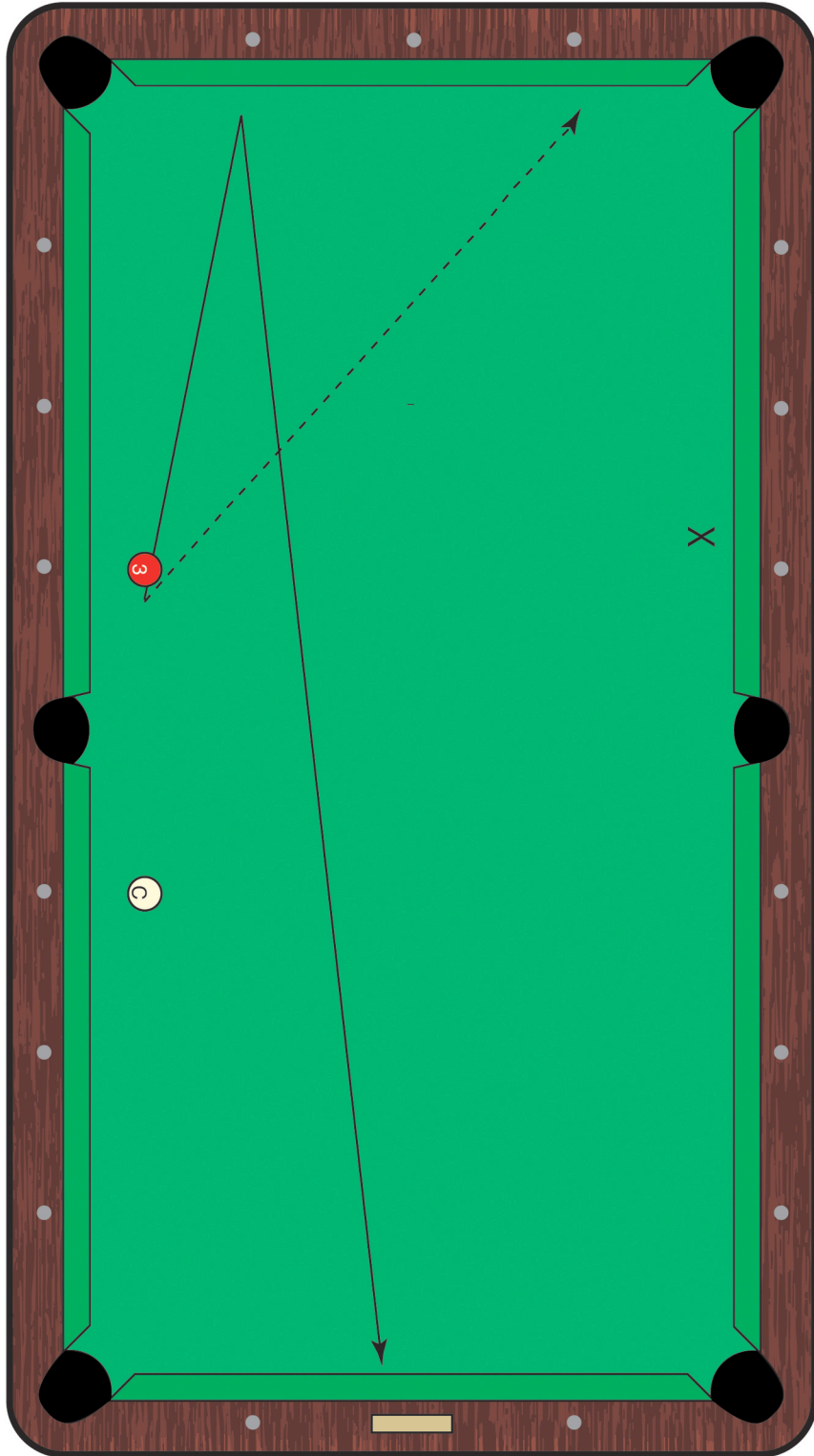
The problem in question was not something we set out to investigate, but one that arose in conversation after we finished and I made a casual reference to the "fact" that we produce different results with the cue ball by applying different strokes. Strangely, I thought, my remark was not received with 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 while he set up the camera gear. 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 solid-line would be 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 dotted-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.

I'm not the only player, or instructor, who subscribes to the notion of applying different strokes to produce various cue-ball effects. 3-Cushion Billiard legend, Allen Gilbert, comes to mind as someone who employed and taught the concept of different strokes for different results. 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 sans 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.



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