

The Myth of Center Ball

by Tom Simpson © January 2002

One of the things that makes pool challenging is that what the cueball is doing *changes* during the shot. While the cueball is moving, it's doing some combination of rolling, spinning, and sliding. Exactly what that combination is changes over the course of the shot, as the ball collides with rails and other balls, and as it slows and eventually comes to a stop.

Why is this important? Understanding what exactly the cueball is doing – and when – is critical to developing the shot planning knowledge and shooting finesse you need to play at a high level. If we're paying attention, and invest our attention in watching & shooting many thousands of shots, we gradually get a sense for cueball behavior, and what we see happening on the table begins to be what we expect. However, if we have clear knowledge of how things actually work, we can "get it" much more quickly.

Let's focus on the much misunderstood Stun Shot. Many instructors (myself included) consider the stun shot to be the most important shot in pool. Here's my definition: **A stun shot is any shot where the cueball is *sliding* at the moment of impact.** Sliding means skidding – not draw, not forward roll.

"Oh, stun is another name for the Stop Shot," players say. No, the stop shot is a stun shot that happens to be straight in. The key issue is – and this is my main point – **what matters is what the cueball is doing at the moment of impact.** Let me say it another way: What matters is not how you hit the ball (draw, center, follow, whatever). What matters is what it's doing at the Moment of Impact. How do we control that?

Continuing with the example of a stop shot, imagine two straight-in shots, one with the CB and OB a foot apart, and the other with the balls four feet apart. A lot of instructional material will tell you to 'Hit center ball.' Maybe, for the longer shot, they will tell you to 'Hit center ball, firmly.' While this might work if your stroke and idea of "firm" is the same as theirs, it doesn't reflect what really matters – Moment of Impact. Instead, if you clearly understand that your job on a stop shot (and *all* stun shots) is to deliver that CB to its target without any forward or backward spin, you can deal with it more effectively. In our example shots, for the short one, you can actually use center ball because, unless you hit it really softly, the CB will not have time to start rolling before it hits the OB. In other words, it will be skidding at the Moment of Impact. For the longer shot, you actually have to hit *below* center (draw) because as the ball travels toward its target, friction with the cloth gradually wears off the backspin. The general requirement for any Stun Shot is that you have to **shoot at a speed and with an amount of backspin that results in the backspin wearing off just at the Moment of Impact.**

There is a range of ways to accomplish this. **Cueball speed and draw *combine* to determine what the CB will be doing at any moment in its travel – spinning backwards, skidding, or rolling.** You can shoot a Drag Shot, which is maximum backspin and low speed. You can shoot a Clobber Shot, which is center ball and high speed. You can shoot any appropriate combination of speed and backspin in between. If it's *not* a straight-in shot, the speed will determine how far the CB moves after impact. Weigh the trade-offs and shoot whichever combination fits your purposes and your skill.

So why is the Stun Shot so important? It's the only shot in pool where we know for certain the direction the cueball will take after it strikes an object ball. If the CB is sliding at the Moment of Impact, it will run down the Stun Line (sometimes called the Tangent Line) every time, regardless of speed. The Stun Line is the line that's perpendicular (90 degrees) to the line through the centers of the two balls at impact. This is the key to position play. We know where stun shots will go, and if we want to adjust to make the CB go forward or back relative to the Stun Line, we can accomplish that with draw or follow – at the Moment of Impact.

So, when someone tells you to use Center Ball, they probably mean Stun, but it's hard to be certain. Consider the result you want. Consider what the cueball must be doing at the Moment of Impact to accomplish that result. Decide how you are going to make that happen and hit accordingly. Have I said "Moment of Impact" enough times?