

Getting a Little On the Side

by Tom Simpson © November 2000 (revised October 2004)

Sidespin. English. It's the magic that makes extraordinary shots and great position play. It's also the cause of many badly missed shots and much humiliation. This month we'll take a look at the various effects associated with trying to use sidespin. Subsequent columns will talk about how to deal with those effects intelligently.

Like most instructors, I try to convince players to use english only when necessary, and then, only as much as necessary. It's way too hard on beginners to learn to compensate for sidespin before they have the basics of center ball down. You can hit the cueball anywhere on the vertical axis – low, middle, or high – without having to deal with sidespin's extra requirements.

Many intermediate and advanced players use english on almost every shot, whether there is a justifying reason or not. This is a practice I hope to discourage. This game is difficult enough already. Let's not add unnecessary complications.

Sidespin results when you strike to the left or right of the vertical axis line of the cueball. The cueball (CB) spins as it rolls or slides. It's helpful to think of spin and forward motion as two different things – let's call them "Rotational Force" and "Forward Force." **Forward Force** is the energy the ball has in the direction it's traveling (what you would feel if it hit you in the face). Forward Force is transmitted to whatever the ball hits, and is split according to the angle of the hit. **Rotational Force**, on the other hand, mostly stays in the cueball. Rotational Force includes sidespin, draw, follow, and natural roll. Let's focus on sidespin.

The main reason sidespin is useful for position play is *sidespin stays in the CB and affects rebound angles and speed coming off the cushions.*

The main reason *not* to use sidespin is it increases the difficulty of pocketing the ball. Position doesn't matter if you miss the shot. *With sidespin, the CB does not go where you aim.* There are three factors that affect the path the CB takes when it's hit with sidespin, and unfortunately, we have to consider all three of them when deciding how to play a shot:

- **Squirt** – Some writers still call this deflection. Technically, the stick deflects, while the CB squirts. A helpful way to get a sense for this is to imagine that the stick "wants" to get out of the way of the CB, so it bends (deflects) off the side of the CB. Meanwhile, the CB "wants" to get out of the way of the stick, so it squirts off the side of the cue tip.

So, if you hit a shot with left english, the stick deflects to the left, while the CB squirts to the right. Squirt is not a curve – it's a change in the angle the CB will travel, and it happens instantly, at impact with the cue tip. You get more squirt as you apply more english. It is suspected that hitting harder produces more squirt, but this is not yet known for certain. Some shafts squirt more than others. You can get up to about 6° of angle change from squirt.

To compensate, you have to aim a little further in the direction opposite the squirt (aim further to the left to adjust for left english, etc.).

- **Swerve** – Sidespin shots curve in the direction of the english (a left english shot curves left). This can cancel out the squirt effect. The more you elevate the butt of the cue, and the more english you apply, and the softer you hit, the more swerve you get. As you elevate toward vertical, this becomes masse. To reduce swerve, keep your stick as close to flat as possible.
- **Spin-Induced Throw** – When a spinning ball contacts another ball, the spin throws the second ball a little extra in the direction of the spin. For example, a CB with left english cuts the object ball a little further to the right. This can be used to "spin a ball in", meaning to cut a ball more (or less) sharply than the hit angle allows. The more english you apply, and the slower the CB travels, and the more friction there is between the balls (dirty or unpolished balls have more friction), and the closer you are to straight in, the more spin-induced throw.

Here's the overview. Squirt makes the CB deviate from where you aimed it. Swerve makes it curve back the other way. Spin-induced throw changes the cut angle on the object ball. English mostly remains in the CB and affects the rebound angles off of the cushions.

It's quite complicated. It's a miracle we ever sink a ball. But knowing all this, we can maximize our chances for success. When it comes to english, less is better.