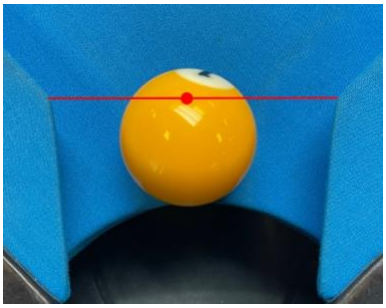
The Heart of the Pocket is NOT Where You Think!

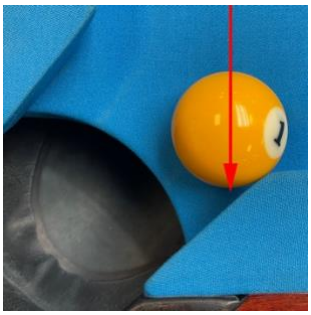
by Phil Panzera, PBIA Certified Instructor



The center of the corner pocket is the simplest thing in the world to find… or so we think. The true center of the pocket, as an aiming point, should be on the line midway between the two pocket points (the red dot), but this is not where most people focus. The shelf of the pocket extends almost 2" deeper, and people tend to focus on the center of that area (where the ball is positioned).

Players essentially envision driving the object ball to where this ball lies on the shelf. This is fine IF AND ONLY IF the object ball is on a 45° angle (coming from the foot spot). The closer the object ball gets to the long rail, the true center of the pocket shifts away from the long rail, and *an aiming adjustment becomes necessary* to find the HEART of the pocket.

The first thing to understand is "pocket acceptance," that is if we miss this shot a little to the left or right, what happens? In the photo at right the ball on the shelf is an *imaginary* ball, where the player is aiming in his mind. If the player hits the one-ball too fat, he will catch the rail or pocket point. With just the right speed the ball might go in, but on most tables extra speed, dirty balls or cloth, older cloth, or tables with sharp pocket cut angles, will cause the ball to rattle and hang up. This is the principal way this shot is missed, compounded by another reason discussed later.



If instead we hit the ball too thin, many players do not appreciate how far we can miss it on the other side and still have the ball go in. As we can see at left, the ball can enter the pocket almost on the point, and if not struck too hard, the pocket will accept it. In fact, if the object ball is a half-ball's width from the rail or closer, you can aim it straight parallel to the rail, and NOT angle it in to what you think of as the center of the pocket!

The takeaway here is that on many tables it is quite dangerous to hit the near rail, and that we have MUCH more leeway to miss on the other side. This brings us to the point of this article, which is to help players understand the MARGIN OF ERROR (or MOE) for undercutting or overcutting the ball.

The figure at right indicates what I consider a "hidden secret" of the game, since in decades of study I have never seen this MOE concept at right expressed or diagrammed elsewhere. If you set the imaginary target ball dead in the middle of the shelf, and get low and look back towards the object ball, you will notice instantly that there is very little MOE on the left, and much more on the right.

Of course the placement of the ball on the shelf matters, and this will vary depending on where the player visualizes this imaginary aiming point. If the ball is deep in the shelf, the MOE between the long rail evaporates away to almost nothing. When we add the realizations above (hitting the rail is *usually bad*, and overcutting a little is *not so bad*), we see the deck is stacked against us – it's almost a double-whammy.

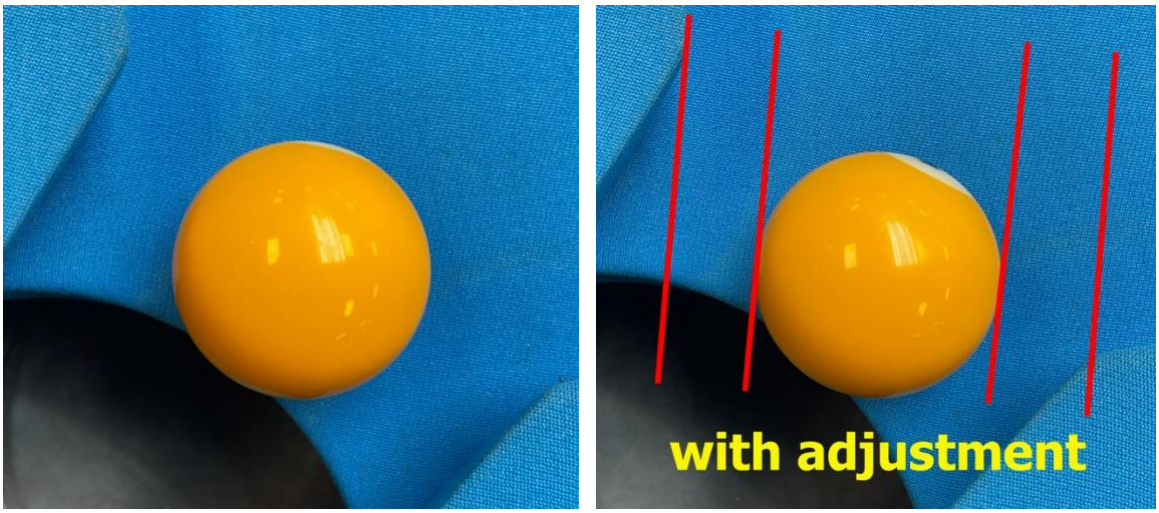
In actuality though, it's really a triple-whammy!! A third factor comes into play, since most all of these down-the-rail shots have some cut-angle to the left. That factor is cut-induced throw (CIT).

Two of the factors that increase CIT are slower speeds, and a medium cut angle. These two factors are very common on this specific shot (which is the main reason why this shot is so commonly missed, even by decent intermediate players who can hit where they aim, but they don't make a CIT adjustment). For this shot, just aiming at the ghost ball DOES NOT WORK.

CIT on this shot could easily throw the object ball a half-ball to a full ball into the long rail, and we see in the photo above that there is just not enough MOE for the ball to miss the pocket point. Two other factors may also increase throw. Hitting the object ball as a stun shot (with the cue ball sliding, or close to the object ball) can increase CIT greatly, and using English will also have an effect.

So how do we aim this shot? ***You must consider BOTH the MOE adjustment and the CIT adjustment!*** You may have both, or neither.

- Step 1: If closer to either long or short rail, then you DO need an MOE adjustment. The closer to the rail, the more the adjustment. The goal is to make the MOE the same on both sides. If you look at the ball on the left, it is clear there is much more MOE on the right side. So just shift this imaginary ball aiming point away from the long rail *until the MOE on both sides is the SAME*. It's a very small adjustment, but even if straight-in this tiny adjustment is nonetheless CRITICAL, especially when hitting with a firm speed!



- Step 2: Consider a CIT adjustment (especially since you already have that double-whammy working against you!). Remember the four factors that increase cut-throw: stun, slow speed, medium angle and transferred English. You may have none of these, or all four! Stun and slow speed increase CIT the most. Based on the mix of these four factors, decide on a S, M, L or XL adjustment. If using English, you will also have a squirt adjustment, and possibly adjustments for spin-induced throw or swerve.) Note that using English may increase, decrease or even cancel out CIT from the other factors.

Ok, this was pretty technical, and if you don't wish to remember the science of aiming this shot accurately, here's the cheat-sheet version. It's not perfect, and depends on the shot, but you'll definitely make more balls by following these two simple tips.

- If the ball is close to either rail, shift your aim SLIGHTLY away from that rail for a better MOE.
- If you're cutting the ball, be sure and OVERCUT it just a bit (in addition to the shift above).

Finally, be aware that these exact same principles apply to shots into the middle pocket as well. For example, if you're pocketing an object ball on the foot spot, the similar key principle is that you can NOT hit the near pocket point, and you have much more MOE to the other side. So favor your aim to that side, making sure NOT to hit the near pocket point. If you're also cutting the object ball to the left or right, then you must ALSO adjust for throw to the right or left. The key to progressing in this game, among many other things, is first to *understand* why these adjustments are necessary, and then to *practice them* on the table until you learn the right amount of adjustment. Good luck!