

Up the Pyramid (Breakpoint Management) by Charley Wilson

In our climb up the Smartbowler pyramid, we have seen how a mastery of fundamentals is necessary for consistency and power; how you must choose the right equipment to match up with your bowling style and with lane conditions; and how you must constantly be alert for the need for adjustments to keep your ball in play. The purpose of the entire exercise is to get your ball to the pocket with the right speed, angle, and rolling performance. The connection between all those processes and that great pocket hit is the **breakpoint**. “Breakpoint Management” is based on the theory that there is one point (and area around it) on each side of every lane that will give you the best percentage possibility of a strike. The most successful professional and high-average amateur bowlers have for years spent their pre-squad times watching where the bowlers ahead of them are scoring best, and tried to get their shots into the same area. If you can find that spot/area with the right ball reaction, you stand the best chance of scoring. To quote the late Bob Summerville, founder of Bowling This Month magazine, even the best “can’t beat a monkey in a red jacket” if they are playing the lane wrong and the monkey is playing the lane correctly.

Of course, there is really no real **point** at which the ball **breaks**. A point would require an immediate change of direction, like banking a billiard ball off a cushion, but that’s not what happens. Actually, the friction between the lane and the skidding, revolving ball slows the ball’s revolutions. Those revolutions, with increasing friction acting at an angle different from the direction of travel, gradually change the skid into a roll in the direction of the revolutions. The resulting curve is the “hook” part of the ball path. Whether this happens in a long, smooth arc or a more sudden, dramatic one depends on the ball (the core, coverstock, and layout), the bowler (axis rotation, axis tilt, and revolution rate), and the lane condition (lane surface and oil pattern). Regardless of how angular the change looks from the bowler’s perspective, the break is still a curve, not a point.

So how do we define breakpoint in a useful way? For me, it is the place on the lane at which, from the bowler’s perspective, the ball begins its hook toward the pocket. The emphasis on those two phrases is because, if you stand at a different place than the bowler who released the ball, the ball may appear to hook at a different spot. In extreme crossing angles, it may appear to be the closest to the gutter that the ball gets; in more direct lines, it may simply be when the hook is first obvious. Figure 1 shows several examples.

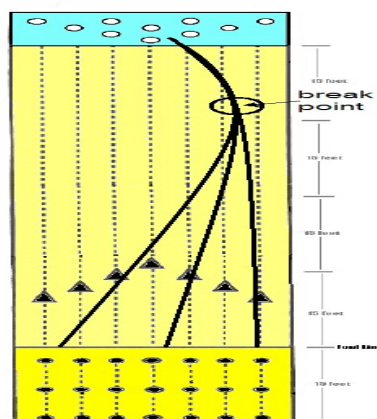


Figure 1

You can see that, viewed from the extreme inside (left) line, the breakpoint appears to be the furthest right the ball travels on the way to the pins. From the middle track, a smoother arc, it is less obvious where the ball stops getting closer to the gutter. In the outside line, the ball is furthest right at release, so the breakpoint is where the major portion of the hook begins. Both of these “points” are really areas, so we have to be somewhat flexible in how we use the terms. Having said that, these three bowlers are using essentially the same breakpoint on the lane.

The optimum breakpoint on any given lane is determined by many factors: topography of the lane, lane surface, oil pattern, the set of the pins, etc. There is no way to accurately predict exactly where it will be, but there are clues. The length of the oil pattern is a place to start, but that is a long discussion, and will be dealt with in later articles. In the meantime, let’s assume that the further from that optimum “point” your ball breaks, the lower your chances of a strike. Figure 2 below shows bowler 1’s breakpoint target on a hypothetical lane where the optimum breakpoint is the 8 board at, let’s say, 45 feet from the foul line. The strike possibilities are shown as concentric circles, with the highest (90% - nothing is ever 100%) on the 8 board, 80% on the 6 and 10 boards, and 70% on the 4 and 12 boards. These hypothetical boards and percentages are only approximations, simply to demonstrate the concept. Figure 3 shows bowler 2 targeting a deeper breakpoint on the 12 board, not this lane’s optimum spot. The center of bowler 2’s target offers him only a 70% chance of a strike, with lower percentages inside his target and further from the 8 board. Note that if bowler 2 misses outside, closer to bowler 1’s target, his percentages increase. Most of us have experienced this, the “area-check” shot that comes roaring back into the pocket for a perfect strike.

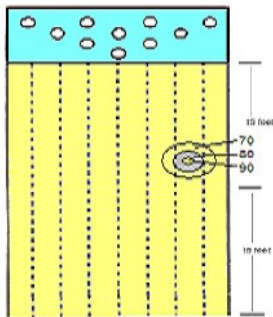


Figure 2

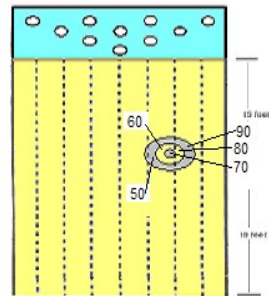


Figure 3

Future discussions of breakpoint management will center on the following:

- 1) There is an optimum breakpoint on any lane (though they may not be the same on any given pair),
- 2) Regardless of your style, finding that spot/area will give you the best chance to score,
- 3) There are ways of identifying the optimum breakpoint, and,
- 4) You need to know the type of ball motion you need from different breakpoints.

Remember, he/she who finds it first, wins.

Strategies: First, you have to know your own game. How closely do you watch where your ball makes the transition from skid, through the hook phase, into a roll? Many bowlers know whether they hit their target at the arrows or not. But if your launch angle or your approach direction is inconsistent, your ball may take an erratic path across that arrow, making your breakpoint inconsistent. Poor ball-speed control may have a great effect on the length of the breakpoint distance. If your balance is not good at release, if you don't really "post" the shot, your ability to see the actual breakpoint may be compromised. Do you watch the highest scorers to see where their balls are breaking? They may not be exactly the same on your lane(s), but if they are on the same oil pattern, they should at least give you some clues as to where to try.

As we've said before, this takes dedication, and probably the help of a coach. Look for coaches through any Smartbowler Pro Shop, at <http://www.bowlsport.com/> or the "Find a..." function of the USBC website at <http://bowl.com/>.

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