

Date: Thu, 22 Sep 2005 14:14:37 -0700

Subject: ## three notes on Harrington v.2's Red Zone Strategy

I was thinking about Harrington's surprisingly aggressive all-in strategy for the red zone, from his 2nd volume. This seems to be what lots of players do, but it also seems kinda stupid, so I was surprised that he proposed it too. When I first read his book, his explanation of why it's a good idea made sense. But now, on rethinking it a little bit, I'm back to thinking it's wrong, or at least grossly exaggerated, for the following three reasons:

1) His examples are not realistic.

On pages 142-155 in his volume 2, Harrington plays out a number of examples of his "red-zone strategy in action". The blinds here are 1000-2000, with \$100 antes, with 9 players at the table (counting you), and the average M among the 9 players is about 4.8. Your M is 2.

Since the average M is just under 5, you'd think that other players besides you would be willing to take some risks. On p155 he gives a summary of the 11 hands he analyzes, and things look pretty reasonable at first. But here are some other stats:

-- In those 11 hands, you played 6 (including your blinds), so you acted $6/11 = 55\%$ of the time.

Your 8 opponents, in those 11 hands, had 88 chances to act, and in total they acted 12 times, which means they acted less than 14% of the time! (Including their blinds.)

-- Looking at just the blinds: you played your big blind 1/1 time, and your small blind 0/1 time.

Your opponents played their big blinds 1/10 times, and their small blinds 0/10 times.

In these examples, your opponents are paralyzed by fear and are playing irrationally, crazily tight. No wonder going all-in worked.

2) The assumptions in his mathematical analysis are not realistic.

On page 141 and pages 162-172, he gives some math justifying going all-in in the red zone.

On p141 he explains that, if your $M=3$, nobody's in against you yet, there's a 50% chance that you'll steal the pot if you go all in, and you have a 33% chance of winning the hand if you do get called, then going all-in is profitable for you. That's mathematically correct, and I agree that it's a useful thing to keep in mind. But, first of all on p130 he defines his "red zone" as being M between 1 and 5. It may be that going all-in with a medium hand when $M=2$ or 3 isn't that bad, but when $M=5$ it seems really risky. Second, and more importantly, I question the assumption of a 50% chance to steal the pot. If your M is only 3, won't the big blind be very likely to stand up to you?

On pp162-172 he goes into even more detailed justification, showing that going all-in with T8 off-suit, when your $M=7.7$ and with 4 players behind you, is profitable. His assumptions, on pp 164-165, are ridiculous in my opinion. He assumes, for instance, that the player to your left and the big blind are tight players who will only call you with AA, KK, QQ, or AK. The button is "looser", and the small blind is the "loosest" player, who will call you with any pair, AK, AQ, AJ, or KQ.

First of all, his tight players are ridiculously tight. I don't think I've ever seen a player that tight. You mean to tell me, in the big blind, with the blinds getting big, you look down and see JJ, the fourth best possible hand, and you're gonna fold it just because

someone who could very well be going all-in with T8 offsuit has gone in before you? I don't think so. For one thing, if you're the big blind and are at all sophisticated you might consider the fact that AA and KK are a bit unlikely for your opponent here since your opponent might want to trap you if he had these hands, so even if you're worried about your opponent being tight, QQ, TT, and AK seem more likely. You're already in for your big blind, and if anything, from what I've seen even tight players will play a bit loose as the big blind because they want to show that they can't get pushed around so easily. You'd just have to be an absolutely terrible, mindless player to fold JJ here. And even terrible mindless players are usually terrible in the opposite way: they're too loose, not too tight.

What about his "loosest" player? Not really that loose at all! When I played that tournament with you at the Bicycle Club several months ago, I had a streak of 30 hands or so where I folded every time. Finally, I was getting desperate, and went all-in with something like T9. I'd guess my M was around 2.5 at the time. The big blind called me with A5, and knocked me out. Ace - FIVE!!! I don't fault him for calling. My point is that that's not even in the ball-park of Harrington's example. That guy was not unusually loose or anything, and that was after I (should have) established a super-tight image, if anyone were looking. Granted, Harrington is talking about someone calling an all-in where $M=7.7$, not 2.5, but still. People love to call all-ins. And on p141 he's talking about $M=3$. NO WAY do you have a 50% chance of stealing the pot, with 4 players yet to act and $M=3$. More like 25%, maybe, and that's if you have a tight image.

3) Although going all-in isn't that bad, calling or raising might be better.

In his example on pp162-172, you're playing people who are absolute idiots -- they are WAY too eager to fold. Also, you're in a great situation: the first 4 players all folded to you. You have a mediocre hand (T8), but two of the 4 players after you are already in for blinds, and may have even worse hands. So it stands to reason that there may be other plays besides going all-in which may yield a profit for you.

For instance, say you just raise to twice the big blind. That might also yield a profit for you, and the profit might be more than if you'd just gone all-in. For instance, if someone else has a pair of tens or better, they'll probably re-raise, and you'll be able to get out of there without losing everything. And, since you made a little raise, if your opponent just calls and then an ace comes on the flop you might be able to scare them out with a continuation bet. It's hard to analyze all the possibilities, but my guess is that, under reasonable assumptions, you'd make more on average with a small raise than an all-in there. I was thinking of doing some kind of Harrington-like calculation for this strategy, but there are just too many cases to consider.

My feeling is that going all-in pre-flop is just making things too easy for your opponents. All they have to do is look at their cards and decide whether their hand is good enough to call you or not. If they're bad players, all the more reason to make them work a little bit and play you after the flop.