

PROBLEM OF THE WEEK #10 – FEBRUARY 17, 2021

THE POSITION:

○ is David B
score: 1
pip: 69

7 point match

pip: 104
score: 0

● is KellyRae

XGID=--bBBCBBB-----A--A---cdf-1:-1:1:52:0:1:0:7:10

● to play 52

THE TOURNAMENT AND THE PLAYERS:

For this week's problem, I've taken another position from our weekly online tournament. This position comes from this Monday's weekly tournament (February 15, 2021). I ("KellyRae") am playing the Black checkers in the main tournament against David "David B" Beyda, who is playing the White checkers.

THE GAME SITUATION:

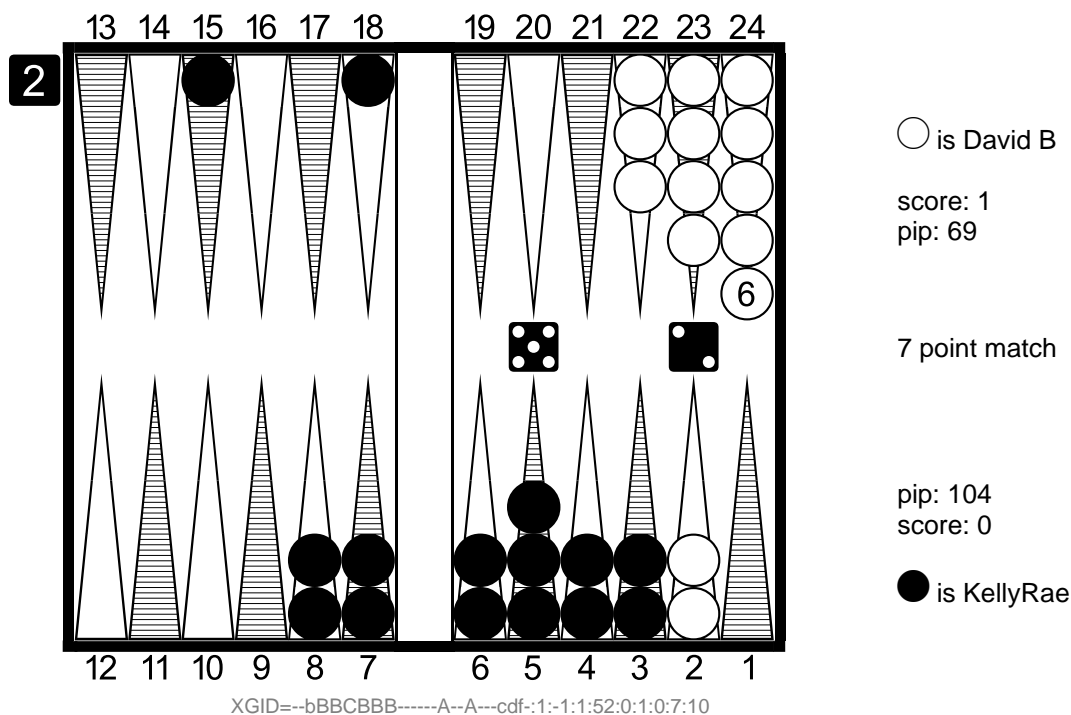
It's the second game of a 7-point match, with David leading 1-0. I found a double earlier in the game, so David is holding the cube at a two-level. I am on roll, with a very strong position, and I've rolled 52 – I have several possible plays to choose from.

THE QUESTION:

So, what's Black's best play here?

SOLUTION

EXTREME GAMMON ROLLOUT RESULTS



● to play 52

1.	Rollout ¹	8/6 8/3	eq: +0.944
	Player:	86.22% (G:23.90% B:0.71%)	Conf.: ± 0.004 (+0.940...+0.948) - [100.0%]
	Opponent:	13.78% (G:0.93% B:0.00%)	Duration: 39.1 seconds
2. ✓	Rollout ¹	15/8	eq: +0.912 (-0.033)
	Player:	88.15% (G:16.53% B:0.45%)	Conf.: ± 0.004 (+0.908...+0.916) - [0.0%]
	Opponent:	11.85% (G:0.37% B:0.00%)	Duration: 26.6 seconds
3.	Rollout ¹	18/11	eq: +0.907 (-0.037)
	Player:	87.99% (G:16.55% B:0.46%)	Conf.: ± 0.004 (+0.903...+0.911) - [0.0%]
	Opponent:	12.01% (G:0.41% B:0.00%)	Duration: 26.2 seconds
4.	Rollout ¹	18/16 15/10	eq: +0.906 (-0.038)
	Player:	88.16% (G:16.11% B:0.42%)	Conf.: ± 0.003 (+0.903...+0.909) - [0.0%]
	Opponent:	11.84% (G:0.37% B:0.00%)	Duration: 18.9 seconds
5.	Rollout ¹	15/10 5/3	eq: +0.905 (-0.040)
	Player:	87.93% (G:16.60% B:0.44%)	Conf.: ± 0.004 (+0.901...+0.909) - [0.0%]
	Opponent:	12.07% (G:0.43% B:0.00%)	Duration: 22.7 seconds
6.	Rollout ¹	18/13 5/3	eq: +0.900 (-0.044)
	Player:	87.42% (G:17.05% B:0.48%)	Conf.: ± 0.004 (+0.896...+0.904) - [0.0%]
	Opponent:	12.58% (G:0.51% B:0.00%)	Duration: 27.0 seconds
7.	Rollout ¹	18/13 15/13	eq: +0.891 (-0.053)
	Player:	88.05% (G:15.06% B:0.39%)	Conf.: ± 0.004 (+0.888...+0.895) - [0.0%]
	Opponent:	11.95% (G:0.36% B:0.00%)	Duration: 19.1 seconds

¹ 1296 Games rolled with Variance Reduction.
Moves: 3-ply, cube decisions: XG Roller

ANALYSIS

Black must first decide what his game plan/approach should be for this position. He has two basic possibilities.

First, he can elect to maintain the six-prime, with the aim of keeping White's back checkers contained while he brings his remaining outfield checkers home for the bear-off. If he elects to go with this approach, the rollout indicates that 15/8 is slightly the best of the lot, presumably because it retains the most flexibility by leaving the checker that is the furthest back where it is, while adding another spare checker atop Black's six-prime. But Black has many similar plays that maintain the six-prime which are all close in merit – there are only small equity differences amongst these plays because the status quo of the position remains essentially the same, with the positioning of Black's outfield checkers having only a small impact on the players' respective chances.

Second, Black can elect to try a "trap" play. A trap play involves inviting White to break his anchor while Black still has some checkers remaining in the outfield. The objective of this play is to force White off the anchor so that the remaining back checker can be attacked – the ultimate objective is to close out both of White's checkers, with the hope of winning a gammon. Black's chances of winning a gammon go up considerably when White is left with two closed out checkers on the bar, as compared to the case where Black leaves White with a deuce-point game as a defense of last resort. Against the possible upside of winning a gammon, Black must weigh the major downside of the play – by allowing White the opportunity to escape his rear checkers, Black risks losing the race. This is especially the case if White is lucky enough to roll an appropriate set of large doubles – in fact, since White is currently ahead by 35 pips in the race (28 after Black plays his roll), if Black allows White the opportunity to roll a large set of doubles, he will essentially lose the game if the dice Gods elect to smile upon White with such a roll over the course of his next few shakes.

In Backgammon's good old days, before we entered the modern Silicon Age, players loved to make trapping plays. In fact, they often overdid it. To his credit, Paul Magriel, in his seminal work on the game, *Backgammon*, cautioned against the indiscriminate usage of the trap play and set forth the key criteria for determining whether or not attempting such a play is warranted. Specifically, according to Magriel, you should attempt the trap play only when the following three conditions are met: ¹

1. Your opponent has *exactly* two men on a point in your inner board. The rest of his men should be in his inner board so that he has no choice about coming out if he rolls the number that releases him. This play must not be attempted until your opponent has broken his inner board and holds four points at the most – preferably, only three.
2. You have adequate builders to attack the man remaining in your inner board after one man is released.
3. You have a man or men far enough back so that you will have the opportunity to pick up the released man after closing out the blot which remained in your inner board. This is a sometimes neglected, but absolutely essential, condition for attempting the trap play.

As has so often proven to be the case, Magriel's criteria, while now more than 40 years old, have by-and-large survived the test of time and represent a strong analytical starting point in considering whether it is appropriate to attempt to execute a "trap" play.

Now, let's apply the criteria to the problem position.

- First, White has two men trapped on Black's deuce-point and will be forced to flee with one of those checkers if Black releases his six-prime. In addition, White's inner board is crunched, with checkers stacked on his lower points and his 4-, 5- and 6-points are all open for Black to reenter any hit checkers from the bar. This is important, since Black will want to hit loose on his deuce-point as soon as White breaks his anchor – the last thing Black wants to have happen is to hit loose, get hit back from the

¹ Magriel, Paul, *Backgammon*, X-22 Publishing, 1976, pp. 319-320.

bar by White, and then dance from the bar himself – with his own set of vulnerable blots in the outfield, the hunter will quickly become the hunted.

- Second, after playing 8/6 8/3, Black will have an ideal formation of builders aiming at the deuce-point. Once White is forced to break the anchor, if Black rolls any 1, 3, 4 or 5, he'll be able to attack White's remaining blot on the deuce-point; with a combination of those numbers, he'll be able to point on that checker and be in really great shape.
- Third, Black has two checkers in the outfield, on the 18-point and 15-point, which are well-positioned to capture any White checker that may be forced to leap out into the outfield (another favorable feature of the placement of Black's outfield checkers is that they are out of range of White's anchor on the deuce-point – as such, Black won't be giving White the opportunity to escape one of his rear checkers with a tempo hit that will take away at least half of Black's next roll).

In short, the positioning of the Black and White checkers, together with the specific number that Black has just rolled, perfectly meet the requisite conditions that justify an attempt to execute a trap play. Of course, Black will be giving White a chance to roll 66 and win the game, but that is the risk you take when you attempt a trap play. On the plus side, of White's 11 possible rolls that contain a six, 10 of them will force him to simply break his rear anchor, leaving his remaining checker on the deuce-point vulnerable to attack, along with a loose blot in the outfield that Black may be able to pick up as he brings his outside checkers home into his inner board. Black's outfield checkers are also far enough back that he may get additional chances to execute on the trap play if White doesn't immediately roll a number that forces him to break his anchor on his next shake.

Not surprisingly, and as the rollout confirms, while the top non-trapping play, 15/8, wins more games than the trapping play does (88%, as compared to 86%), it misses out on a lot of possible gammons (15/8 garners about 16-1/2% gammon wins, as compared to about 24% gammon wins following the trapping play). It is well worth sacrificing a few single game wins in order to get the additional gammon wins that the trapping play generates.

BEST PLAY

With conditions being ideal for a trapping play, Black should play **8/6 8/3**.

SOME ADDITIONAL THOUGHTS

A good way to improve your game is to examine how changes to the critical features of a problem position impact the relative merits of the alternative plays that can be made in that position (using eXtreme Gammon® or another commercially available "bot" for this analysis). For example:

- Move some of White's spare checkers off of his ace-point and deuce-point, and give White a five-point home board, and the trap play becomes a clear mistake.
 - Giving White a four-point home board seems to be the approximate break-even point – with a four-point home board, the trapping play and the prime-maintaining plays are about equal in merit.
- Change Black's roll to 53, and the play 15/7, adding a builder to the bar-point, is now just barely better than the trapping play, 8/5 8/3, which doesn't leave Black with as good a distribution of attackers for the deuce-point as he gets after playing his 52 roll in the problem position.²

² Note that in this particular instance, playing 15/7 does not foreclose the possibility of executing a trapping play on Black's next roll, particularly since the addition of a builder on the bar-point further enhances Black's collection of builders that can attack on the deuce-point if Black is able to attempt a "delayed" trap play (adequacy of builders being the second of Magriel's key criteria).

- Move Black's outfield checkers on the 18-point and the 15-point to the 6-point and the 3-point, and trapping becomes a mistake. Black no longer has outfield checkers to pick up a second blot if White is forced to break his anchor. Instead, in this particular case, Black should simply play 6/1 3/1, keeping White's back checkers blocked in on the deuce-point for another roll while Black reduces White's racing lead and improves his own inner board.

By undertaking this kind of detailed analysis, you'll gain a better understanding of the factors that make one play superior to another in a particular situation. You'll be able to handle not just positions that are very similar to the specific problem position in question, but you'll also gain an understanding of a whole range of positions of a particular type.

Note also that those positions where the play choice is borderline are colloquially referred to as "reference" positions. By knowing that two plays are toss-ups in a particular reference position, you can compare the features of a similar position that you may be faced with over the board in a game; then, by applying the knowledge and understanding that you gained from your review and analysis of the related reference position, you can determine which of your play alternatives is likely the best play. In application, you do this mainly by noting how the differences in the position you are faced with (as compared to the reference position) are likely to favor one play or another. For example, to use the points noted above, if you know that a trapping play is break-even in the case where your opponent has a four-point inner board, you can easily ascertain that trapping would be the way to go in a similar situation where your opponent only has a three-point inner board, since a weaker home board for your opponent is a factor that favors trapping play. Similarly, you would correctly elect to maintain your prime in a comparable position if you were facing an opponent that had a strong five-point inner board.

EPILOGUE

As it turns out, I actually botched this play and played 15/8, missing out on an ideal opportunity to attempt to execute a trap play.

The finish to the game after that was mostly uneventful. I brought my checkers in, David was able to escape both of his back checkers, and I ended up winning the race and a single game for two points.

TRAP PLAY: REFERENCES and FURTHER SOURCES FOR STUDY

Corbett, Mike, *Backgammon Problems*, Llumina Stars, 2007, pp. 133-150.

Hickey, Mary, and Storer, Marty, *What's Your Game Plan: Backgammon Strategy in the Middle Game*, GammonGo Publishing, 2011, Problems #14 ("The Trap Play") and #15 ("Open the Door a Crack?"), pp. 66-70.

Kageyama, Michihito, and Herrera, Roland, *Endgame Technique*, Edo Publishing, 2019, Part 8, Advanced Ideas: Trap Play, pp. 190-193.

Magriel, Paul, *Backgammon*, X-22 Publishing, 1976, pp. 319-320.

Woolsey, Kit, and Jones, Tami, *Understanding Backgammon*, The Gammon Press, 2003, Problems 85 and 88, pp. 258-260, 266-268.