

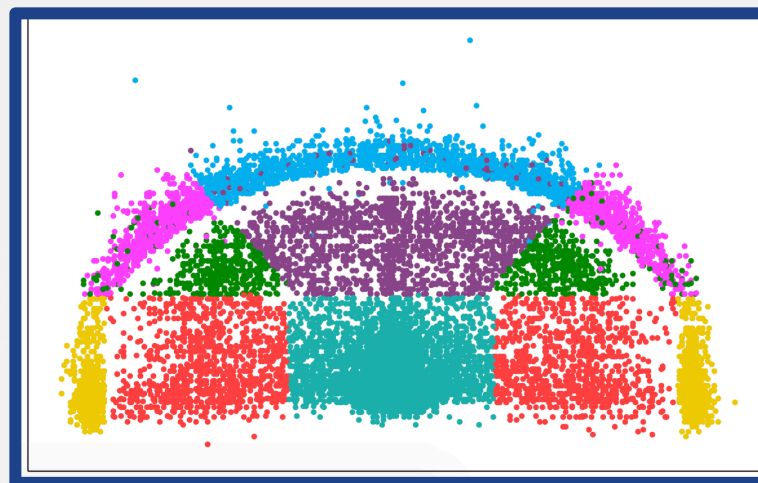
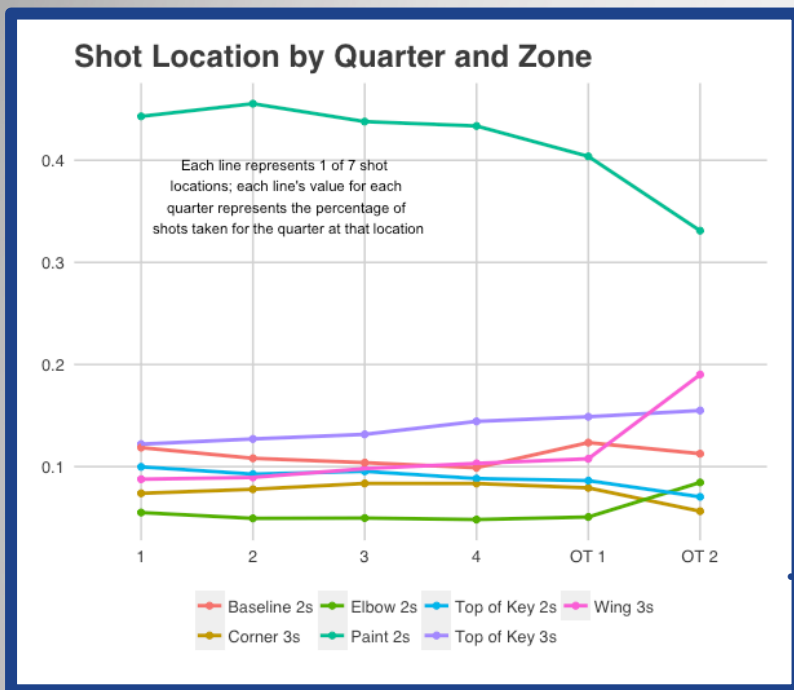


The Evolution of NBA Shot Selection

Stanford Sports Analytics Club

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Summary of Historical Data Exploration



"The 7 discretized zones used in the chart to the left"

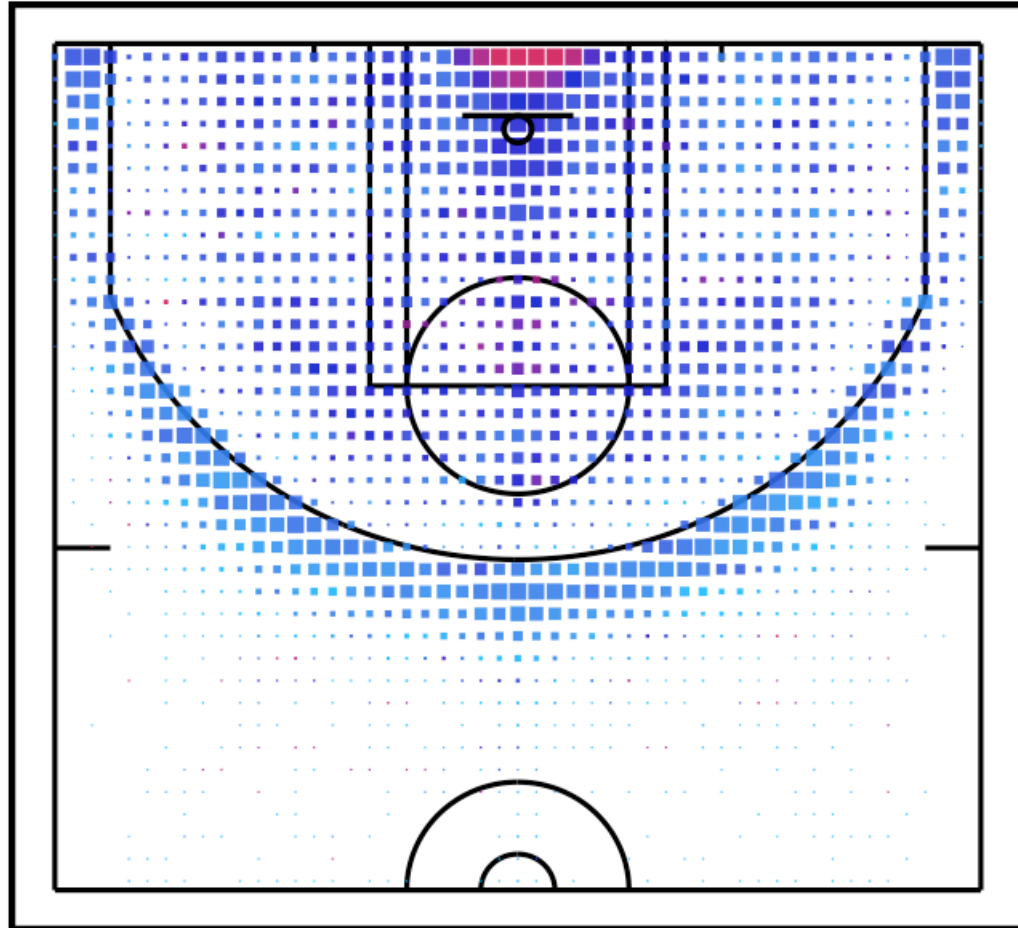
Quarter	Average Shot Dist (2015)	Average Shot Dist (2016)	Average Shot Dist (2017)
1	13.35	13.57	13.83
2	13.35	13.44	13.75
3	13.66	13.85	14.17
4	14.02	14.03	14.35
OT 1	14.29	14.27	14.92
OT 2	15.27	14.43	16.14

- Preliminary analysis of the effects of (1) defender distance, (2) ballhandler's dribbling time, and (3) possession time (not shown) showed little relationship with shot distributions.

- However, we discovered meaningful shot location trends across quarters.
- Shot distances increase and FGA in the paint decrease as games progress

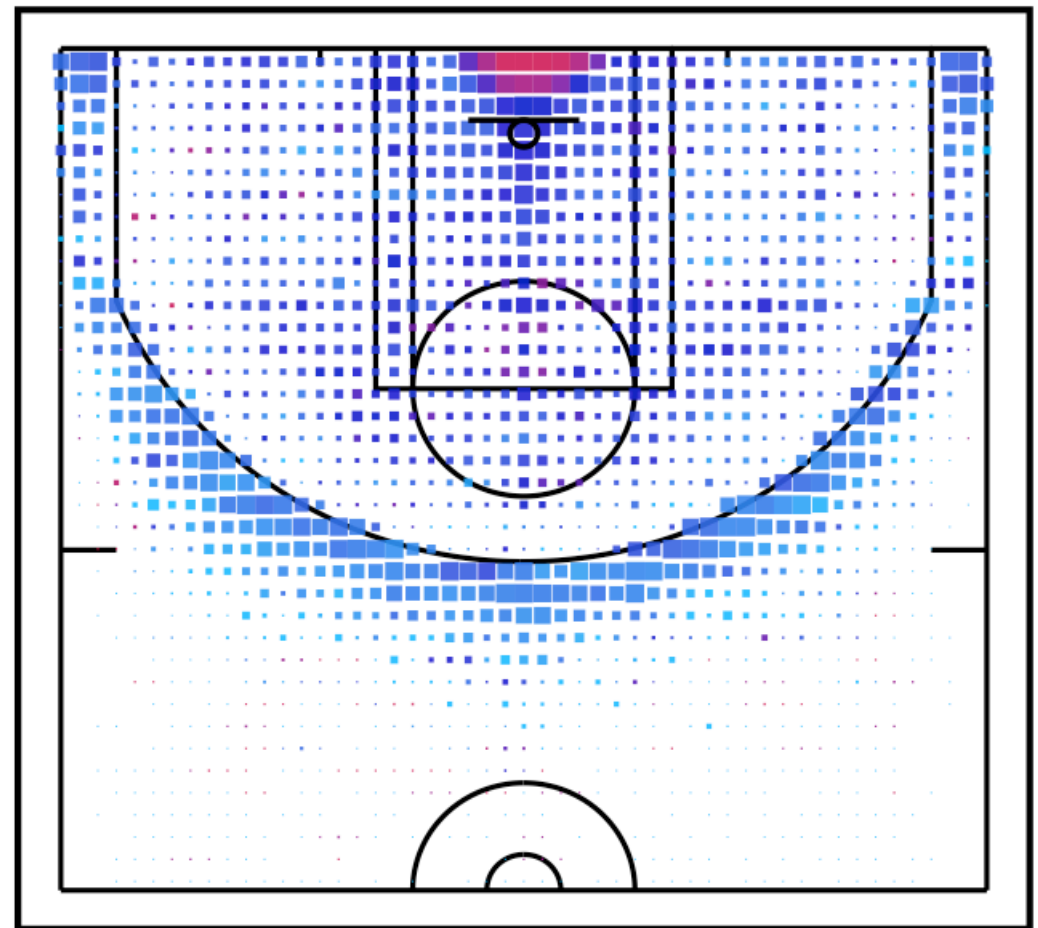
The Continued Rise of Deep and Corner 3s...

Actual Shot Chart for 2016-2017 Season



FG Pct
0.55
0.50
0.45
0.40
0.35
0.30

Projected Shot Chart for 2026-2027 Season

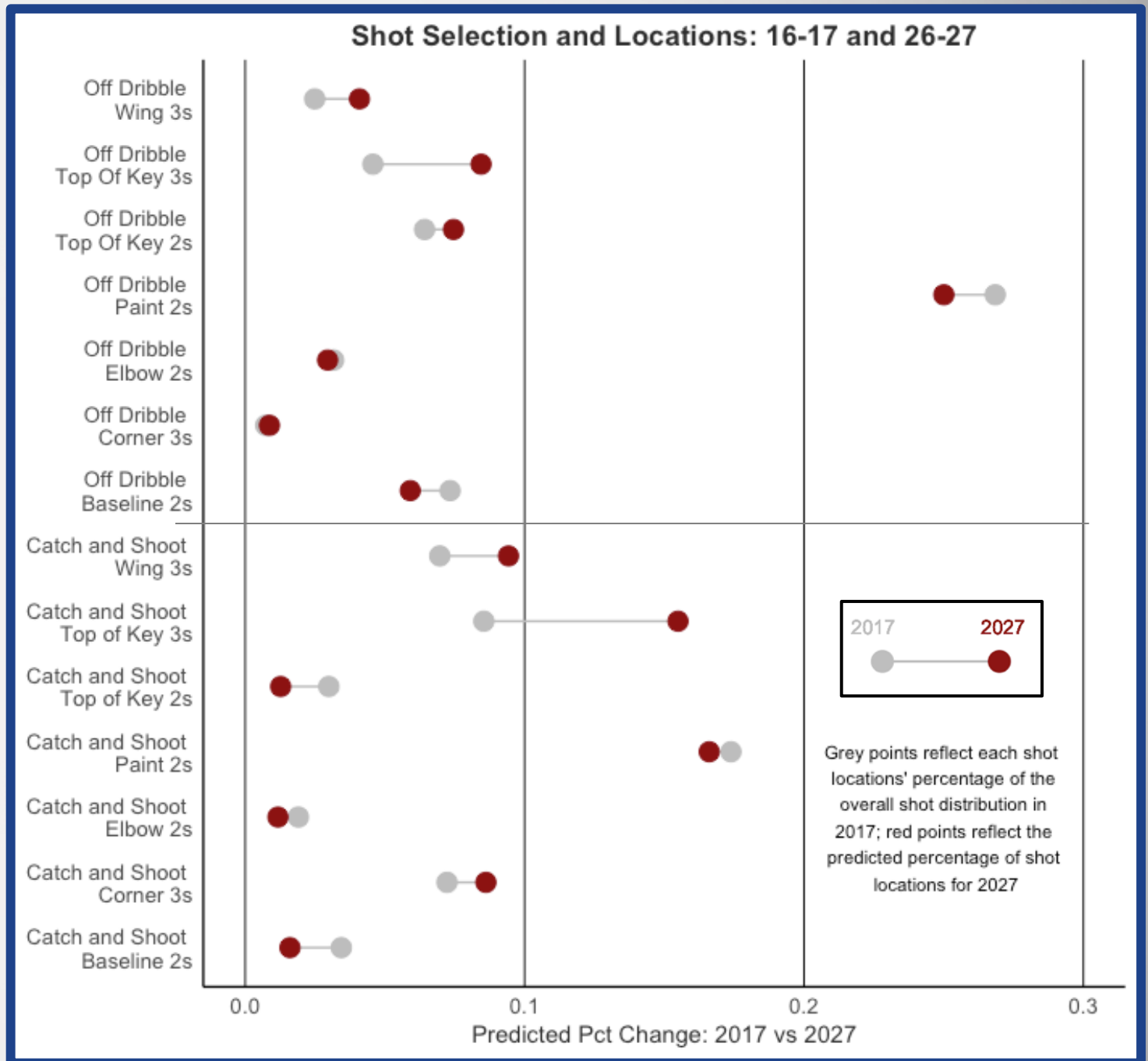


FG Pct
0.55
0.50
0.45
0.40
0.35
0.30

- Recent increases in deep and corner 3-point frequency aid in projecting that these shots will be even more prevalent in 5-10 years. Subtle size differences in shot chart markers can reflect a fairly significant increase shot attempts from each location.

... At The Expense of 2-Point Shots

- For all but one type of 2-point shot, their percentages of the overall shot distribution are projected to decrease.
- Meanwhile, *every* type of 3-point shot projects to become a larger part of offenses.



Should the NBA revive the mid/long range 2-point shot?

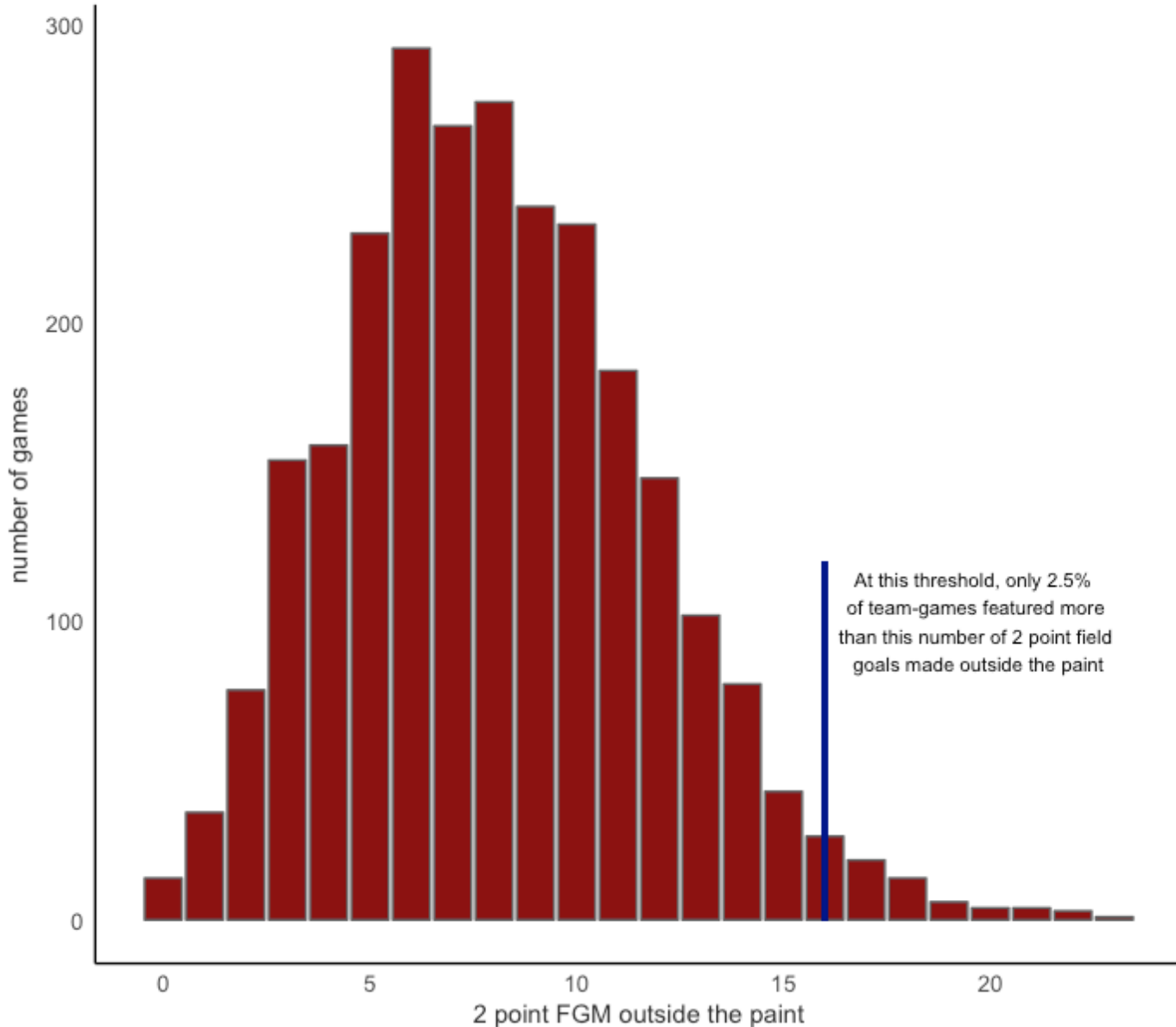
Motivations:

- Many exciting moments come from superstar players facing off in isolation.
- The value the elite long 2-point jump shooters has diminished.

Potential League Office Response:

- *If a team makes 'n' 2-point shots outside the paint in a game, make any subsequent 2-point shots outside the paint worth 3 points.*
- *Using $n = 16$ corresponds to approximately 2.5% of games where the rule would come into effect.*
 - *~50 games*
 - *~120 total qualifying FGM*

Distribution of Outside-the-Paint 2 Pointers Made in each 2016-2017 Game



Strategic Implications

- Fan excitement or gimmick?
- In-game strategies could change accounting for the new rule.
- DeMar DeRozan fans rejoice!

Concluding Thoughts

- Data confirms league trending toward more (and deeper) 3s.
- Proposed rule change could lead to more balanced offenses.
- 2-point jumpers are an iconic part of the league's history.

