The Analytic Revolution in the NBA

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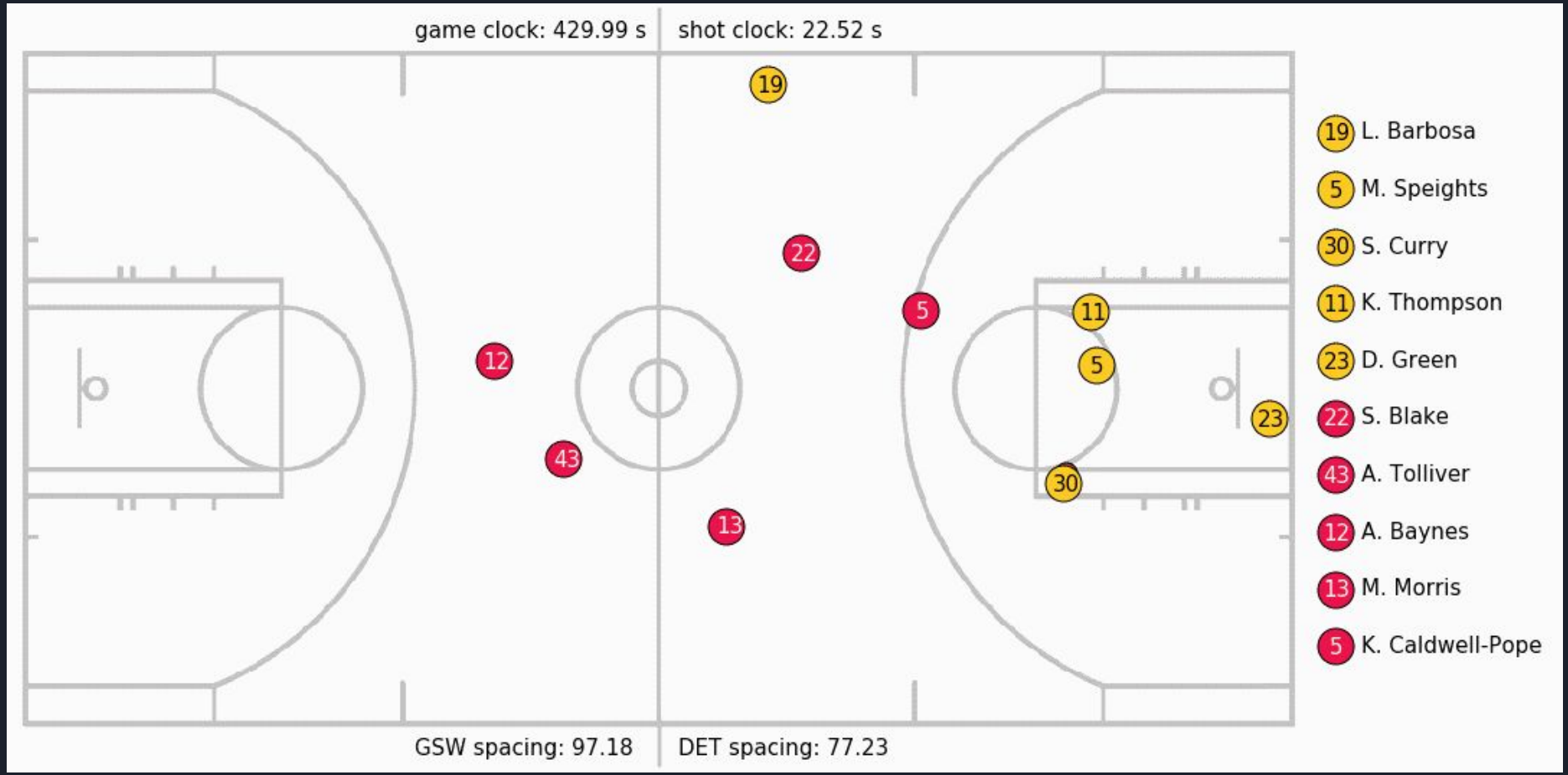
Origin of Analytics Movement in NBA

- Elo Rating in Chess
- Rise of Moneyball (Billy Beane and SABRmetrics)
- John Hollinger and PER
- Daryl Morey and Moreyball in the Rockets Organization

Wider Adoption of Analytics

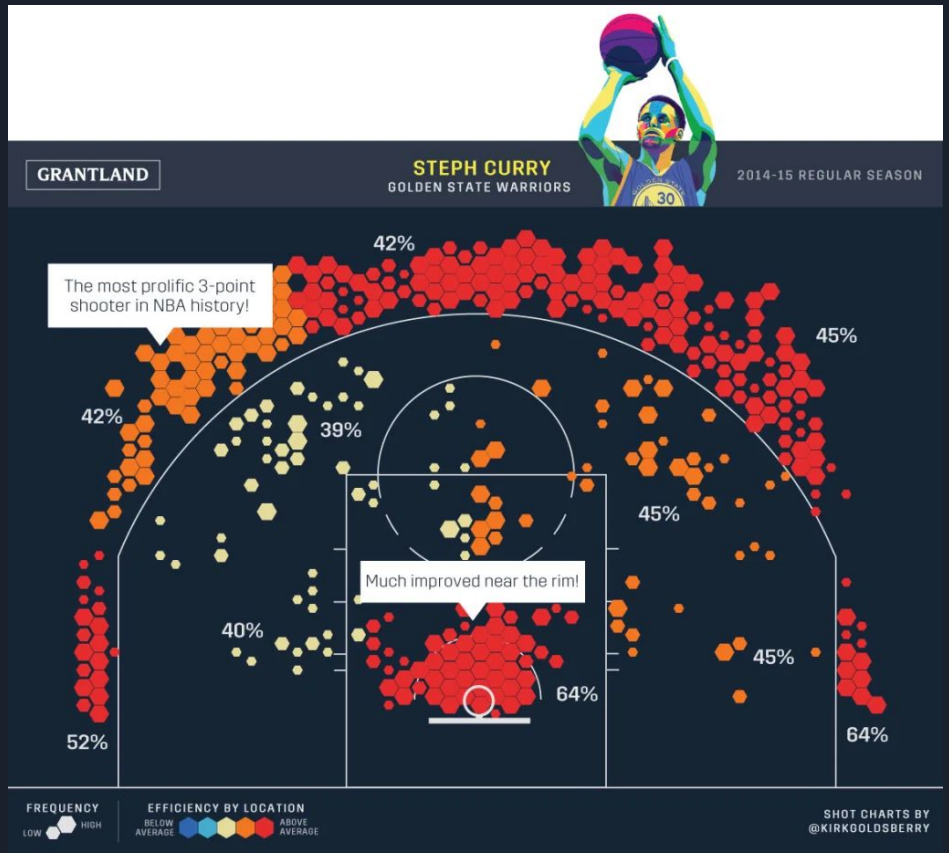
“We’ve welcomed it … in the NBA. Data is data. You can’t turn the clock back on that in any industry. Whether its leading to increased 3pt shooting, whether it's a different kind of assessment of certain players’ skills on the floor.”

- Adam Silver, Commissioner of the National Basketball Association


game clock: 429.99 s
shot clock: 22.52 s
19
22
5
11
12
5
23
43
30
13
GSW spacing: 97.18
DET spacing: 77.23
19 L. Barbosa
5 M. Speights
30 S. Curry
11 K. Thompson
23 D. Green
22 S. Blake
43 A. Tolliver
12 A. Baynes
13 M. Morris
5 K. Caldwell-Pope

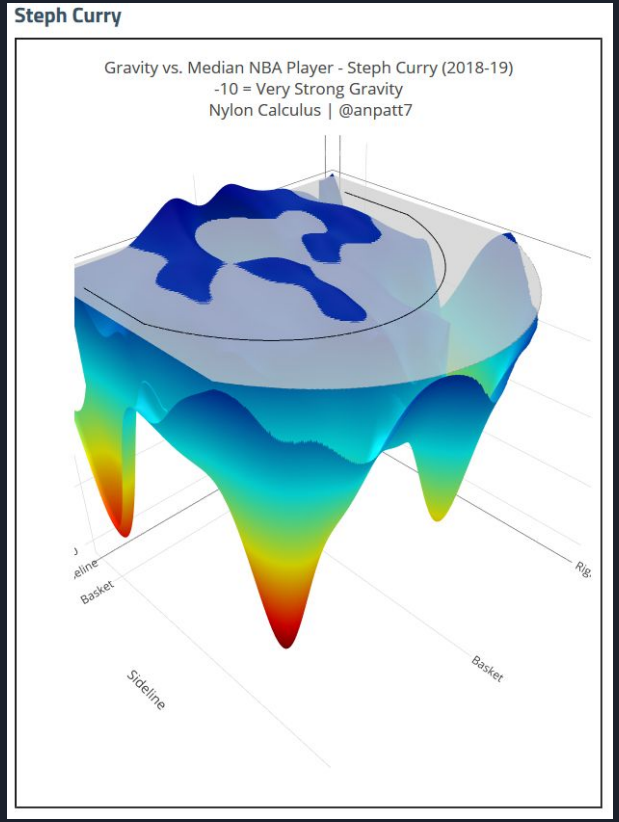
Wider Adoption of Analytics

- FiveThirtyEight's RAPTOR metrics
    - Robust Algorithm Player Tracking On/off Ratings
- Grantland and Kirk Goldsberry
    - Shot charts
- Role in sports gambling



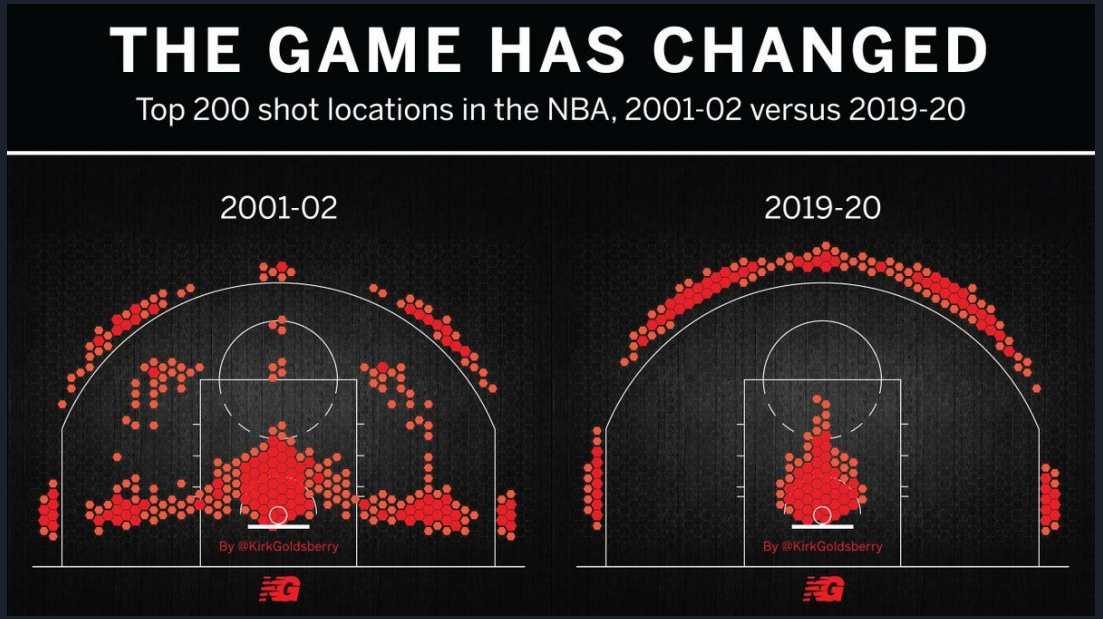
What are the advanced stats?

- Per 100 possessions
- Net Rating
- Value Over Replacement Player
- Win Shares
- True Shooting
- Gravity - link to interactive graphic



Effect on the league

- Small Ball lineups with the Miami Heat
- 3pt Revolution

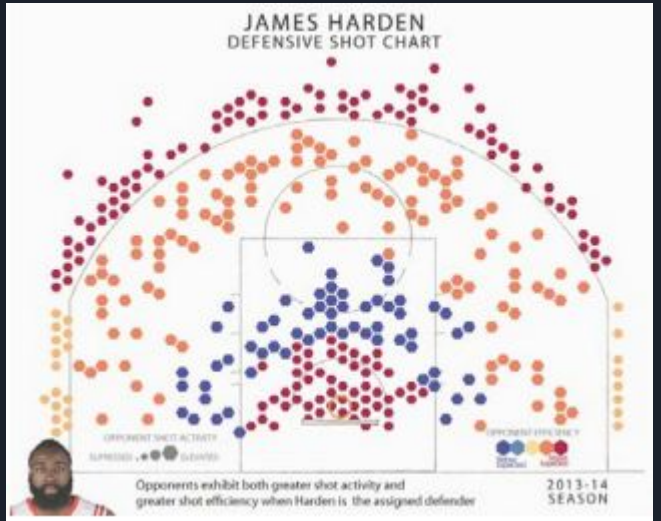


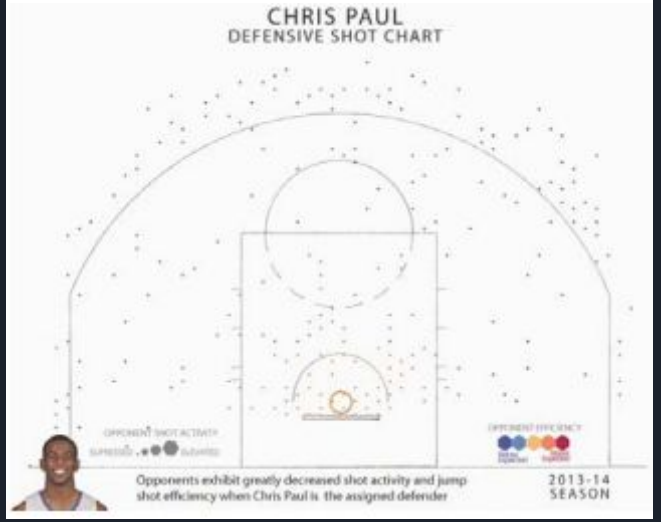
Where does it have shortcomings?

- Chemistry
- Defensive Metrics
- Criticism for making the game boring
- NBA is pretty stingy with advanced data and API endpoints
- Teams are very secretive about their methodologies

What's the future?

- MIT SLOAN Advanced Defensive Metrics
- Testing rule changes in the G League
- Leveraging live tracking
- Collecting more diverse sets of data
- International Journal of Performance Analysis in Sport





Conclusions

- Analytics are here to stay
- The game has been transformed by analytics
- Analytics have substantial shortcomings

Thank you for your time!

Questions?

Link to Works Cited