



Translating Between Words and Numbers

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“GOOD” WORDS IN THE DRAFT

- “Good”
 - Compared to whom? (Is he Blake Griffin-good or Joe Johnson-good or Derrick Rose-good?)
 - Compared to someone typically at that spot?
 - Analysis:
 - Identify similar players
 - Subjectively and numerically (similarity scores)
 - Net points for comparable players

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“RAW” WORDS IN THE DRAFT

- “Raw”
 - Will it take __ years to develop? Into what?
 - Does he need special development to be good?
 - Analysis:
 - Subjective answer to number of years.
 - Subjective answer of what kind of comparison players
 - Larry Sanders, Brandan Wright, Yi Jianlian, Saer Sene
 - Numerical analysis of first couple years of performance
 - Did comparison players get x minutes, x shots, etc early on?

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“ENERGY”

- “Energy guy”
 - Rebounder?
 - Doesn’t have an upside? Won’t be better than ___?
 - Analysis:
 - Who else labeled “Energy”? Success of those players?
 - Dennis Rodman, Renaldo Balkman, DeMarre Carroll, John Brockman, Kenneth Faried, Tyler Hansbrough
 - What skills did they have?

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MORE WORDS IN THE DRAFT

- “Can’t defend”
 - Can’t defend man-to-man?
 - Can he help and recover? Does he require more help?
- “Too small”
 - Can’t shoot over people?
 - Can’t defend because guys shoot over him?
 - Won’t be able to pass because defenders are longer?
- “Winner”, “Finds a way to win”
 - We haven’t been watching closely enough.

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DO WORDS = WINNING?

- Those are all *elements* of a player
- Ultimate metrics are winning and cost
 - Short-term (“raw”) and long-term
- Must relate those elements to winning on this team and other teams (the market)

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THE BIG PLAYER EXERCISE

- Translate from words to numbers *on current players*
 - “All-time Great”: LeBron James, Chris Paul, Dirk Nowitzki?
 - “All-Star”: Rudy Gay, Manu Ginobili?
 - “Good”: Marc Gasol, Gerald Wallace, LaMarcus Aldridge?
 - “Solid”: George Hill, Zach Randolph?
 - “Starter”: Arron Afflalo, Thaddeus Young?
 - “Rotation guy”: Nick Young, Marreese Speights?
 - “Replacement level”: Jerryd Bayless, Johan Petro?
- May not get perfect translation, but exercise allows people to work together
 - Types of players with discrepancies

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WHO'S TO BLAME?

- Red Sox collapse in 2011
 - Owners, GM, Francona, Pitchers, injuries, all players?
- Absent this guy...
 - Jordan left Bulls 1993, wins from 57 to 55
 - Horace Grant left 1994, wins from 55 to 47
 - With Jordan back at end of 1995
- Baseball, Double+Single+3 outs

Method	Double	Single	Out	Out	Out
Linear Weights	101%	48%	-16%	-16%	-16%
Runs Created	67%	33%	0%	0%	0%
Est. Runs Produced	78%	47%	-8%	-8%	-8%

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PLAYER VALUE METHODS, “RATINGS”

- Examples
 - QBR in football
 - Win shares in basketball
 - Wins above replacement (WAR) in baseball
- Evaluation of Ratings
 - Sum to a team total (wins, points, net points)
 - Be predictable with change in time, environment

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PRESSURING A QB?

- “The Texans threw pressure at Aaron Rodgers”
 - Means they sent extra pass rushers
- “Rodgers threw well when pressured.”
 - Could mean same as above...
 - Could also mean that the pass rushers actually got to him and affected his throw because Rodgers is good when pressured.
- “When under pressure, Rodgers came through.”
 - This often means something different, like a close game

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WHAT MAKES SUCCESS IN FOOTBALL?



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WHAT ARE SPECIAL TEAMS?

- Strictly: Field goal unit, extra point unit, punt unit, kickoff unit, and their defensive counterparts
- Buffalo very bad in punt and kickoff coverage, very good in field goals
 - Very good in field goal/extra point defense.
- Because coverage more predictable, less luck, than FG defense, some want different weights
- *Should Special Teams Rating be explanatory or predictive?*

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DOES DEFENSE WIN CHAMPIONSHIPS?

- Better offensive teams (offensive efficiency) seem to win more games than better defensive teams (defensive efficiency)
- Better offensive teams seem to go farther in playoffs
- Defensive teams do start narrowing the gap at the Finals level, but it is still mostly offense
- Teams that *improve* their defense in the postseason (or not decline as much) do seem to win more championships.

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FIT

- “Carmelo just doesn’t fit with Amare”
- “The Knicks have no chemistry”
- Fit:
 - Skills that are compatible for producing a team result
- Chemistry:
 - Players who know each other (like each other?) enough to be able to adapt well??
- Fit is quantifiable. Chemistry is not ... yet

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TEAM RATINGS

- BCS has 6 different computer rankings
- College basketball has at least 65 different computer algorithms to rank teams
- Purpose of rankings may differ:
 - Predict winner of NCAA Tournament/BCS Game?
 - Reward regular season performance?
 - In big games?
 - More for big wins?
 - Win conference?
 - Predict winning in a playoff? Points for round?

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WHAT IS CLUTCH?

- In basketball:
 - Within 5 points, under two minutes left?
 - On game-tying or go-ahead shot?
- In football:
 - Making a game-tying/go-ahead field goal?
 - Driving a team downfield when losing? When winning by just a score?
- Is clutch repeatable?
 - Or is it just choking, which is scientifically shown?

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GAMBLING

- Most gambling confines the discussion to just “Who will win?”
- Most tools to answer that question are simple
 - Ratings methods
 - Simple stat simulations
 - Do not account for tactics, matchups
- Analytics are more about stories and decisions
 - Can help with gambling

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