

Expert Elicitation: What information do mock drafts provide about the actual NBA draft?

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Abstract: NBA mock drafts, or experts' forecasts on how teams decide which player(s) to select, are published at different times before the draft. These mocks provide experts' opinions of the players in the form of rankings. In this project, we ask which subset of the mocks provide the best information to the decision makers. To answer this question, we analyzed metrics of mock draft accuracy, methods of combining mocks, and models for forecasting future drafts.

Data: We have comprehensive mock data from the 2018 and 2019 drafts and limited data from other years starting from 2016. Data includes authors' ranking of their top players and the players' overall

Combining Mocks

Linear Weighting Method (LIN)

- Players in each mock are assigned points based on their ranking and these points are added across all authors. Players are ranked according to their total points.
- Used for end of season NBA awards.

Ranked-Choice Voting (RCV)

- Each draftnik votes for their top-ranked player and the player with the majority of the votes is chosen. If there's no majority, the player with the fewest votes is eliminated and replaced by the draftnik's next highest-ranked player.
- Process is repeated until all players are ranked.

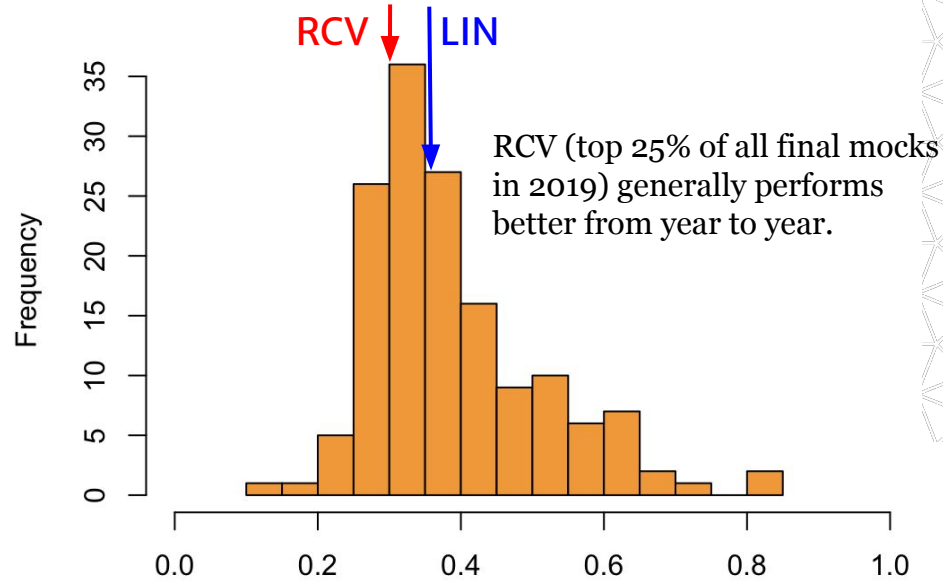
Mock Draft Accuracy

- Want to emphasize the importance of accurately forecasting earlier draft picks.

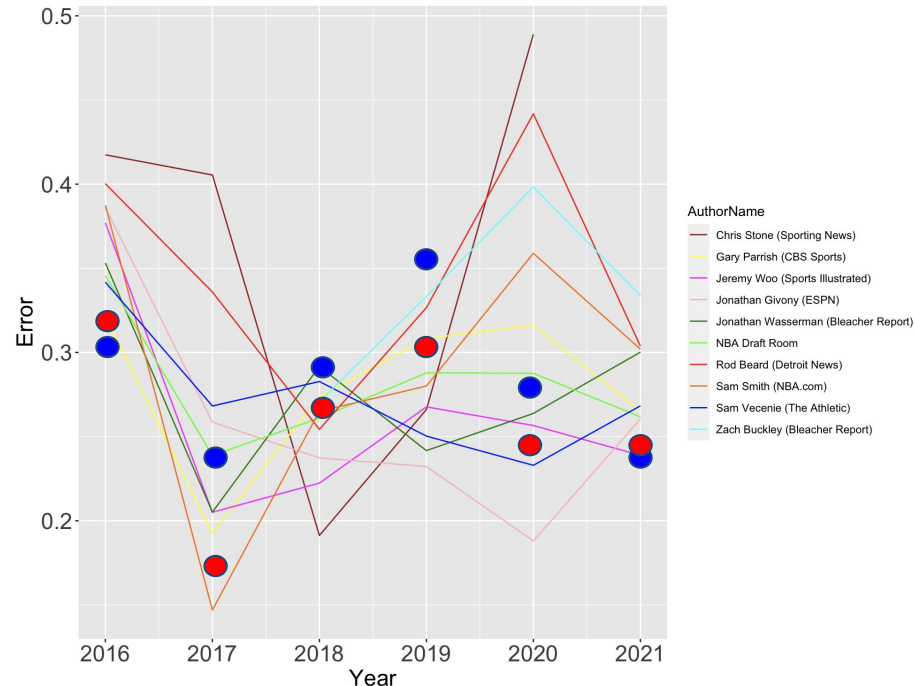
$$\frac{1}{M} \sum_{i=1}^M |\log(\text{mock}_i) - \log(\text{actual}_i)|$$

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Distribution of Mock Draft Errors (2019)



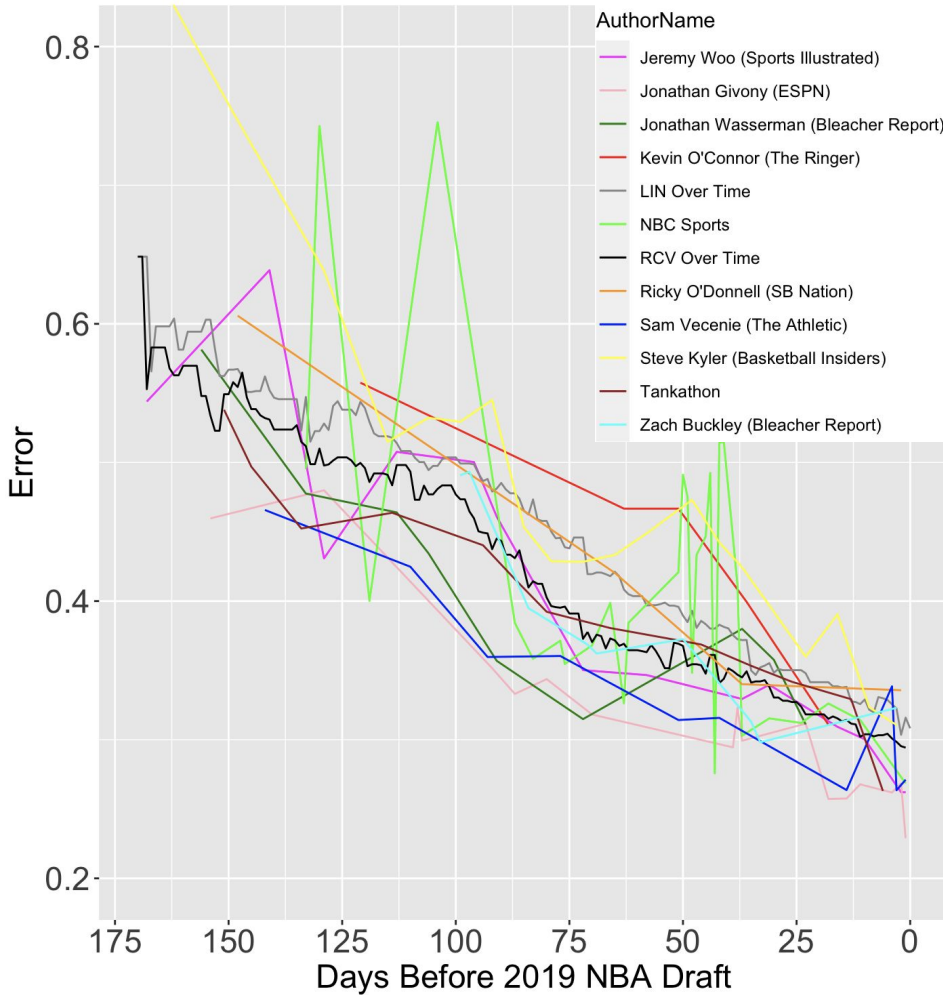
Mock Draft Errors Over 6-Year Span



How do authors perform over time?

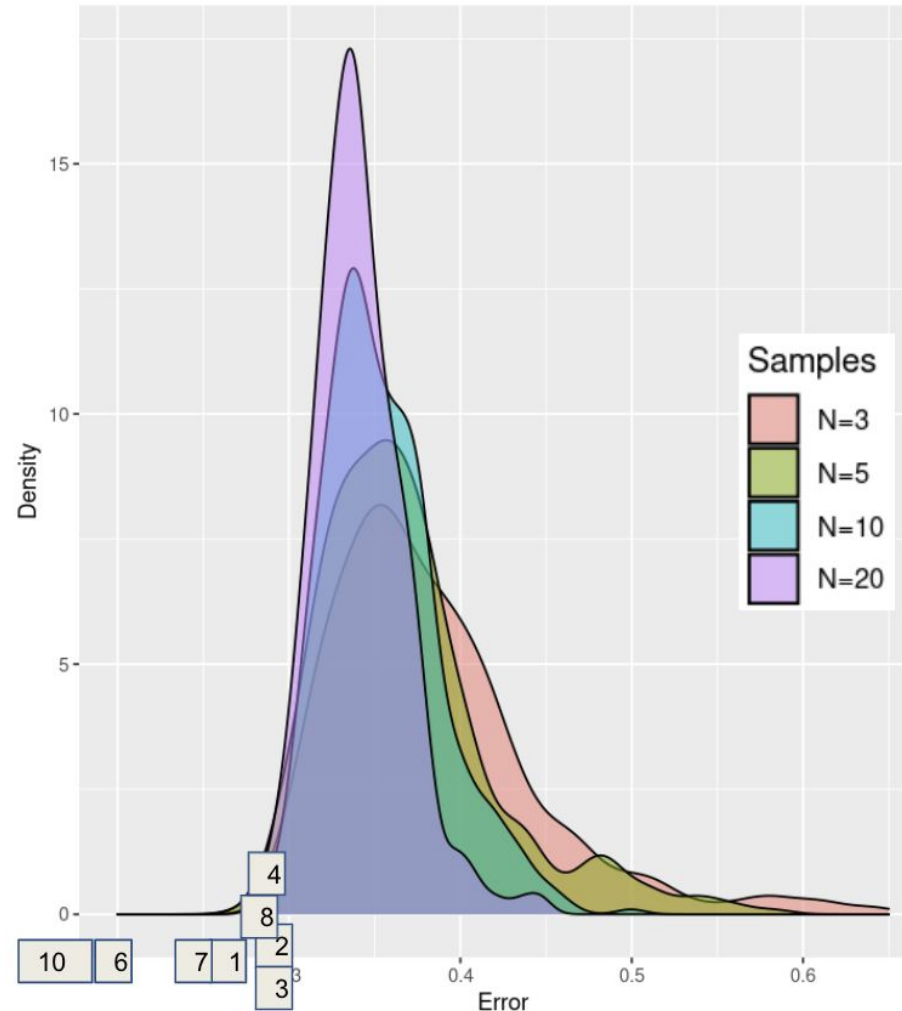
Is there an ideal size and subset of mocks?

Errors Over Time for Select 2019 Authors



- At any given day, RCV performs better than LIN.
- Authors generally keep improving until draft day, although bigger improvements definitely occur before then.

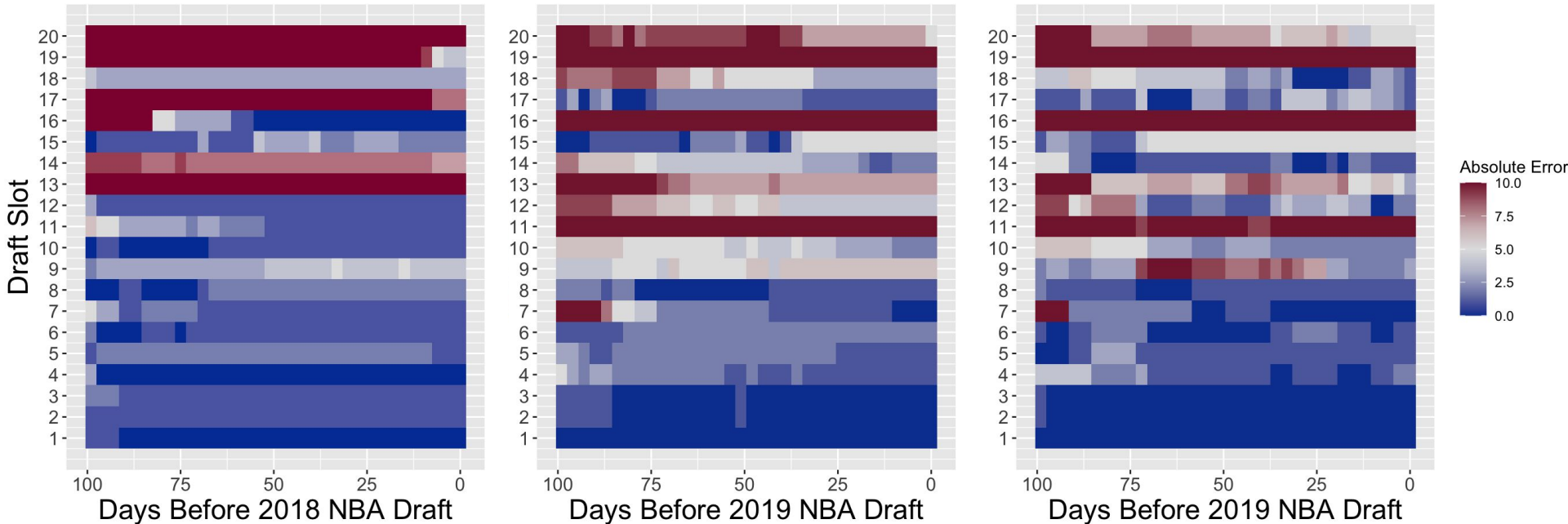
RCV Error Across Number of Mocks Sampled (2019)



- RCV on 500 random samples of each sample size of mocks.
- Larger samples ensure at least a decent accuracy, but won't achieve an "excellent" result.
- Select trios of authors are noted by the numbers above.
- So how can we select the best mocks for RCV?

How does RCV perform across the top 20 picks?

RCV Error for Individual Draft Slots RCV Error for Individual Draft Slots RCV Draft Slot Error Using 2018 Data



- For both years, there's usually a few hard-to-predict players outside the top 10 picks.
- Early predictions of top ~5 picks are accurate to within 2 draft slots.
- To get a slightly more accurate prediction for 2019, we can use the mocks that performed well both individually and as a group (3rd plot).

Conclusions

- While authors from big-name sites usually perform well, it's difficult for authors to perform exceptionally well (top 10%) over multiple years.
- We should account for both individual and group (RCV) performance when analyzing mocks.
- Future Extension: Subsets of mocks used for RCV can be tuned using historical data by assigning authors different weights based on their performance in previous years.