The 6-0 Finals

The Greatest of All Time discussion is a complicated one. Purely because there is a lack of conceptual apparatus that defines the "Greatest", even if the word is stripped of cultural and basketball influence, popularity, the perception of a player, and simply relegated to the question: who is the best, on the court, basketball player of all time. An advantage is the existence of an objective goal that must be necessarily accepted i.e. win a championship.

Then, who is the 'best' player? One could define it as the individual who contributes the most to a team for winning the championship. But the fact of the team game muddles the equation significantly. Can there be a best player in the world with terrible teammates, forcing him into not even making the playoffs? Even if we figure an account for a single season, how do we compare eras? The modern league presents a deeper talent pool, making championships more challenging to secure than in previous eras. Yet, advancements in training, recovery, nutrition, and overall basketball knowledge—refinements built on the foundation laid by past generations—grant the current era a distinct advantage over those that came before

Perhaps the larger goal of analysis is to tackle these difficult, nuanced questions. Meanwhile, it interests me to pursue the implications of common arguments made - not merely on the GOAT debate. This essay deals with one such - The 6-0 Finals Argument.

The 6-0 Finals

> **The 6-0 Finals**: Michael Jordan's perfect record in the Finals—six appearances, six championships, no losses–adds significant credence to his G.O.A.T status.

Assume this is true, that such an achievement does provide some credence to Jordan's case (and it does to a certain extent). What are the implicit assumptions and consequences of this argument? Let 6-0 be referred to as a metric, not as sole marker of the G.O.A.T, and Jordan the best player given this 6-0 metric.

First, it implies that Jordan's 6-0 is a greater achievement than Russel's 11-1. Two justifications could support the assumption.

1. Russell had to face inferior talent, and the general competition was weaker back then.
2. The 1 loss prevents a perfect finals record, which is valued. Thus, if Russell went 11-0, skipping the finals for that 1958 season, he would be the best given the 6-0 metric.

The usual argument is founded on the first, which is acceptable. Although one can take (2) as base, it has certain problems as we will discuss later.

Second, it implies that LeBron's 4-6 is inferior to Jordan's 6-0. And that if LeBron were to go 6-0 (or more), it would equal or be better than Jordan's valuation in this metric.

Third, it implies that we value Jordan's 6-0, given that he was the best player in the finals. Note that I didn't say Finals MVP, as the not-best player (even on the winning team) could win it i.e. Igoudala. Additionally, nobody would say Pippen is the co-GOAT because of his 6-0, or KC Jones is greater than Jordan because of his 8-0.

Hence, the modified 6-0.

> **The Modified 6-0 Finals**: Michael Jordan's perfect record in the Finals—six appearances, six championships, no losses–as the **best player** in the series, adds significant credence to his G.O.A.T status.

Preliminary Lemmas

Lemma 0.1 (The Eye-Test Lemma): Evaluating a player purely by watching, commonly referred to as the Eye-Test, is irrelevant in discussions comparing players.
Proof: This is fairly trivial. Assume there is a discussion between parties A and B, on a player comparison. Discussion necessitates a shared ground of assumptions. The eye test, by its very nature, cannot be part of this shared foundation—if both parties had already agreed on what their eyes perceive, a common ground would already exist, rendering the eye test redundant. Conversely, if their perceptions differ, the eye test offers no shared basis for comparison, making it irrelevant to the discussion.

This is not to suggest that statistics capture everything—they do not. For instance, defensive play, overall playmaking, off-ball communication, etc. However, admitting the limitation of statistical analysis is no justification for the Eye-Test. If science is deficient in explanation, one does not turn into voodoo.

W-Player Theorem

Theorem 0.1 (W-Player Theorem): Let P be a player with a defined career. Construct a new player, W-P (W-Player), by arbitrarily removing seasons from P's career. Then, the career of W-P is always worse than or, at best, equal to that of P.

Proof:

Let P be a player with a career defined as a sequence of seasons:

$$C = (s_1, s_2, \ldots, s_n)$$

where each season s_i has an associated performance metric $f(s_i)$. The total career value is given by:

$$F(C) = g(f(s_1), f(s_2), \ldots, f(s_n))$$

where g is an aggregation function (e.g., sum, weighted sum, peak-adjusted value, etc.).

A **Weakened Player (W-Player)**, denoted as $W(C)$, is obtained by removing an arbitrary subset of seasons from C. The claim is that:

$$F(W(C)) \leq F(C),$$

or equivalently,

$$W(C) \preceq C.$$

This means a W-Player always has a career that is at best equal to the original player but never better.

We assume that the performance function satisfies:

$$f(s_i) \geq 0, \quad \forall s_i \in C.$$

This assumption is grounded in the idea that simply playing an NBA season is an achievement. Even a marginal NBA player contributes some non-negative value to their career, however small.

- **Intuition**: A player who played 15 (1 season as a star and 14 as a roleplayer) seasons has a "better" career than someone who played only 1 season as a star. Assume the star seasons are of equal value.
- **Comparison of marginal cases**: A 15th man who played for two seasons is considered to have a stronger career than one who played for just one season. Despite both seasons having a negative VORP, BPM, etc

This assumption ensures that any season contributes positively or neutrally to the total career value $F(C)$.

We now prove that removing seasons from C results in a career that is at best equal to the original but never better.

Case 1: Removing a Peak Season
Let $s^* = \arg\max f(s_i)$ be the season with the highest contribution. Removing s^* decreases any reasonable aggregation function g, as peak seasons contribute strongly to career value.
Since $f(s^*) > 0$, we have:

$$F(W(C)) < F(C).$$

Thus, $W(C) \prec C$, meaning the weakened player has a strictly worse career.

Case 2: Removing a Late-Career Season
Consider the final season s_n, where $f(s_n)$ is small (e.g., due to aging decline or a farewell tour). Since $f(s_n) \geq 0$, removing s_n cannot improve $F(C)$; it can at best leave it unchanged.
If $f(s_n) = 0$, then $F(W(C)) = F(C)$.
Otherwise, $F(W(C)) < F(C)$.
Conclusion: $W(C) \preceq C$.

Case 3: Removing an Arbitrary Season
Let s_k be a randomly chosen season.
By assumption, $f(s_k) \geq 0$.
Removing s_k decreases g unless $f(s_k) = 0$, in which case $F(W(C)) = F(C)$.
Otherwise, we get $F(W(C)) < F(C)$.
Conclusion: $W(C) \preceq C$.

For all cases, removing seasons **never improves the career**, and at best leaves it unchanged.
Therefore:

$$F(W(C)) \leq F(C),$$

which completes the proof.

Valuation of LeBron

How does LeBron fare up to this 6-0 metric? By the Eye-Test lemma, if one assumes Jordan to be the best given 6-0, it must have been the consequence of some statistical observation. It has to be a totalizing statistical metric i.e. PER, BPM, etc. If it is merely an isolated metric, PPG, RPG, etc., there is no precedent to claim best at basketball. Now, Basketball Reference only provides Game Score as a totalized metric for a playoff series. For demonstration purposes, we can assume the 6-0 argument, if based without incoherence, **can** be based on that.

> Jordan has been to 6 finals in total, 1991-1993 and 1996-1998. In these series, he has led both teams in game score in 5 of them. All except the 1996 finals, where Shawn Kemp led all players in game score.
>
> LeBron has been to 10 finals in total, 2007, 2011-2018, and 2020. In these series, he has led both teams in game score in 6 of them. All except 2007, 2011, 2017, 2020.

The Bill Russel case arises. A potential objection to Russell given his imperfect record. If we remove Russell from the conversation, introduce LeBron instead, scrutinizing his imperfect record compared to Jordan's now. Using the W-Player Theorem, we remove 2007, 2011, 2017, and 2020 from LeBron's career. Let the new player-career created be W-LeBron. W-LeBron has a better finals metric than Jordan. And that is a weakened player-career than LeBron.

Here, LeBron beats out Jordan by being the best player*, that is best given Game Score, in more finals than him. Thus, by the modified 6-0 LeBron is better than Jordan.

In the 1996 finals, Kemp beat out Jordan by +0.4 in Game Score. One could raise objections of statistical irrelevance to the difference, that both Kemp and Jordan could be said to be equally best according to Game Score. Thus, we have the modified normalized 6-0.

> **The Modified Normalized 6-0 Finals**: Michael Jordan's perfect record in the Finals—six appearances, six championships, no losses–as the **best player** in the series, including the 1996 finals, where the performance of Kemp and Jordan are assumed to be statistically equivalent, adds significant testament to his G.O.A.T status.

Since Game Score is concerned with unadjusted stats, it is relevant to adjust relative to the series. Even exempting Game Score, it is vital to think about player transcendence relative to

their Era, as any prerequisite of comparison amongst them. Therefore the 0.4 factor must be contrasted with the median game score of a player.

Define the approximation factor r using the 1996 Finals as the baseline:

$$r = \frac{0.4}{\text{Median Game Score in 1996 Finals}}$$

where: - 0.4 is the assumed statistical equivalence threshold in 1996. The Median Game Score in the 1996 Finals serves as the reference baseline. For a given Finals year, scale the equivalent difference:

$$\text{Equivalent Difference} = r \times \text{Median Game Score in Finals}$$

where: - r is the approximation factor derived from 1996. The Median Game Score of that Finals adjusts the threshold for era differences.

With this, we find Jordan has indeed been the best player in 6 finals. However, LeBron has been the best in 7 finals, the one where an equivalent difference ruled in favor of LeBron in 2020.

What about the average performance across finals? One could say Jordan has the highest average relative game score across finals. Cumulatively, as a consequence of more finals appearances, LeBron has more total game score points than Jordan, but given averages this would be correct. In all the series where they have been the best player, LeBron has a relative game score of 5.59 and Jordan has a relative game score of 6.23.

But, if we apply the W-Player theorem, consider the top six finals of LeBron (where he is the best player given Modified Normalized 6-0), removing the weakest - what does the relative game score average look like for W-LeBron? Then, the scores are W-LeBron with 6.73 and Jordan with 6.23. Thus, LeBron > W-LeBron > Jordan.

VORP And BPM

One source discussing VORP and BPM is a Reddit post. However, since it does not disclose its data source or calculation method, its reliability is questionable. That said, if we assume the data is accurate: Jordan led in VORP 4 out of 6 times, while LeBron led in VORP 5 out of 10 times—the same pattern holds for BPM. Since the file is edit-disabled and cannot be

downloaded, a detailed analysis of relative Game Score concerning VORP and BPM remains an open question.

Conclusions and Questions

As I've made clear, this isn't an analysis of who the greatest basketball player is, where "greatest" means the best at on-court basketball. Instead, the focus is on examining the implications of a specific argument, in this case, the 6-0 Finals Argument. Even within this analysis, further questions arise.

1. What happens in the relative analysis for VORP and BPM, given credible (that are verifiable) sources?
2. Given 6-0, is there another basketball player better than both LeBron and Jordan? I assume this is unlikely, but there is a chance.

References

Basketball Reference, https://www.basketball-reference.com/
VORP + BPM Reddit Post
https://www.reddit.com/r/nba/comments/9k2hp9/top_5_finals_vorp_19842000/
https://www.reddit.com/r/nba/comments/9i079u/oc_finals_bpm_2001present/