

NBA Conspiracy Theory

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Like most professional sports leagues, the NBA has faced its share of criticism from average sports fans to conspiracy theorists alike. Despite having the highest average player's salary, the NBA only ranks third in popularity out of the four major sports leagues in the United States. The lack of popularity can be attributed to the NBA's reputation taking a dive for its players' drug problems during the drug heyday of the 1980s, on-court violence as witnessed in the Palace Brawl of 2004, and off-court legal issues of high profile players. Somehow though, the league has always managed to get by, despite all the negative attention. However, the latest scandal regarding former NBA referee Tim Donaghy could taint the NBA forever.

Unlike other problems facing the NBA, the referee scandal blows the door wide open for its detractors and conspiracy theorists. This scandal provided conspiracy theorists fuel for their argument that the NBA is a corrupt organization. If proven that Donaghy fixed games that he officiated in for personal gain, then what is there to stop fans from believing that other officials may be doing the same thing? What if all NBA officials, or better yet whole league, up to and including its top executive, Commissioner David Stern, are all in on massive scheme to make popular players and large market teams win in order to increase revenue? The NBA is a money-driven organization, after all.

Following his arrest, Donaghy alleged that the NBA employs several corrupt NBA officials known as "company men" that always act in the best financial interests of the NBA. These referees, Donaghy contends, do whatever it takes to increase NBA profits such as having a bias in officiating in order to extend the length of a popular playoff series and making sure the popular players and teams win. One game that Donaghy pointed out specifically is Game 6 of the 2002 Western Conference Finals (WCF) between the Sacramento Kings and Los Angeles Lakers. In that game, the Lakers, facing elimination, beat the Kings 106-102 in what is

considered by Kings fans the worst officiated game in sports history. In this analysis we will use a model developed by sports statistician Roland Beech to determine the effects of officiating in games.

First, the game of basketball is one of the most difficult to officiate. Those who are familiar with the game understand that there is a fine line between a blocking foul (defensive) and a charging foul (offensive). The varying levels of physical play also leads to subjectivity of foul calls. What may seem like foul for one referee may very well be considered inadvertent player contact by another. The referees are also not afforded the luxuries of instant replay and multiple camera angles for most calls they make and often have to make a split-second decision. Despite the difficulty and subjectivity of foul calls, it is still possible in most cases to judge whether or not a correct call was made. Beech's NBA referee call breakdown model takes advantage of this ability and measures the impact officiating has on games.

The basis behind Beech's model begins with an entire review of all calls and noncalls made in the game. For the purpose of the model, noncalls will be defined as instances when a referee does not make a call when a call should have occurred. Beech then categorizes each of these calls as 'correct,' 'probably correct,' '50/50,' 'doubtful,' and 'highly doubtful' and tallies points earned from calls in each of these categories. Beech determines percentages for points in each category that he feels are handed by a referee, and thus unearned. For example, if a player with the ball is fouled and makes both ensuing free throws and Beech feels the call is 50/50, then 50% of the points will be deemed unearned. Beech actually uses 0%, 25%, 50%, 75%, and 85% in each of the respective categories. Beech sums the total number of unearned points for both teams and compares them to determine whether or not referees played a role in a game. It is also worth noting that the total number of unearned points can be a negative value. Points not

received from noncalls are subtracted from the total. In a fair basketball game, the amount of unearned points for both teams should be equal.

00% - 'yes' grade (has a 0% chance of being an incorrect call)
25% - 'probably'
50% - 'maybe'
75% - 'dubious'
100% - 'very dubious'

Beech applied his model to the officiating of Game 6 of the 2002 Western Conference Finals. In a heated playoff series, the Lakers held off the Kings in a widely contested 106-102 victory. The Lakers shot 27 free throws from foul calls in the fourth quarter alone, more than they shot in the first three quarters combined, and more than the Kings shot the entire game. The free throw disparity raised several red flags about the officiating in the game. For the 2001-2002 NBA season, Laker players Shaquille O'Neal and Kobe Bryant shot respective averages of 10.36 and 7.35 free throws per game with respective standard deviations of 3.62 and 4.14. In that game, O'Neal attempted 17 free throws, almost 2 standard deviations above his average and Kobe Bryant shot 11 free throws, about one standard deviation above his average. As a result of the perceived unfairness in officiating, the NBA received a great deal of admonishment. Former presidential candidate Ralph Nader is one of the harshest critics of the game, stating "At a time when the public's confidence is shaken by headlines reporting the breach of trust by corporate executives, it is important, during the public's relaxation time, for there to be maintained a sense of impartiality and professionalism in commercial sports performances; That sense was severely shaken in the now notorious officiating during Game 6 of the Western Conference Finals between the Los Angeles Lakers and the Sacramento Kings."

An application of Beech's model with the data shown below on Game 6 shows that the Lakers did indeed gain a net of six unearned points, which although not staggering, is still a significant amount given that they won the game by only four points. However, there is not

enough evidence to prove an actual NBA conspiracy. The number of free throws shot by the Lakers although abnormally high, fall within the 95% confidence interval. Even though there is not enough evidence to indicate a conspiracy to help the Lakers win due to their status as a large market team, the statistics show that poor officiating in the game played a role in their victory.

Official --	LAL		Bavetta			Delaney			Bernhardt			
Yes		18	27	18	7	11	15	8	7	12	3	9
Probably		20	15	8	7	1	13	6	7	12	7	5
Maybe		10	10	5	2	3	7	3	4	7	4	3
Dubious		7	1	4	4	0	2	1	1	2	2	0
V.Dubious		0	1				1	0	1			
Totals		55	54	35	20	15	38	18	20	33	16	17

Official	LAL FT	SAC FT	LAL 'Bonus' Pts	SAC 'Bonus' Pts
Bavetta	15-17	10-10	+1.1	-3.3
Delaney	9-10	4-8	-1.8	-1.6
Bernhardt	5-7	3-5	-2.6	-4.5
Joint Calls	5-6*	1-2	-0.1	+0.0
Totals	34-40	18-25		

I decided to use Beech's general model and apply it to Game 5 of the 2006 NBA Finals. This game featured the Dallas Mavericks and the Miami Heat. Similar to Game 6 of the WCF, it is widely considered one of the most poorly officiated games. The poor officiating was enough to incite more rumors of conspiracy theory. First, it is worth noting that Shaquille O'Neal is featured in both of these games. Heat star guard, Dwyane Wade shot a total of 25 free throws, equaling the entire Dallas team total. Wade's regular season free throw attempt average was 10.69 with a standard deviation of 4.86. The 25 free throws shot definitely raises a red flag about the officiating of the game.

For my application, I decided to revise Beech's model. Calls that are 'correct' and 'probably correct' are both awarded zero percent to the unearned points total as I found it very

difficult to determine distinguish between the two. I also changed the percentages of points earned from 'doubtful' and 'very doubtful' calls to 100% to be added to the sum of total unearned points. This revised model is a simplified version of Beech's model because I found it very difficult to distinguish between both 'correct' and 'probably correct,' and 'doubtful' and 'very doubtful'. Based on my very subjective analysis, I concluded that the Heat received a net of 8.5 unearned points, more than enough to cover their one-point win.

Official	DAL unearned	MIA unearned
Salvatore	-2.5	3
Crawford	0.5	1
DeRosa	-0.5	1
	-3	5

In the end, applications of the models on two games with controversial outcomes are simply not enough to indicate an NBA conspiracy to help out the large market teams and promote the popular players. The model itself is very subjective, much like the calls the referees make during games. However, the data shows that there is enough evidence to point to poor officiating as a deciding factor in the games.