NOTES

1. INTRODUCTION TO SPORTS ANALYTICS

1. Jonah Keri, *The Extra 2 Percent: How Wall Street Strategies Took a Major League Baseball Team from Worst to First* (New York: ESPN Books 2011).

2. Benjamin Alamar and Vijay Mehrotra, "Beyond 'Moneyball': The Rapidly Evolving World of Sports Analytics, Part I," *Analytics Magazine* (September 2011).

3. The draft is seen as a high-value starting point because of the very public and obvious failure rate in draft picks. When players such as Matt Leinart (tenth pick in the 2006 NFL draft for the Arizona Cardinals) fail to develop into the stars that high draft picks are "supposed" to become, the failure has a large effect on the organization because of missed opportunities (Jay Cutler, for example, was drafted right after Leinart by the Denver Broncos), the financial cost of the rookie contract, and a diminished view of the organization in the eye of the public. Analytics can help reduce the error rate in the draft and so it is viewed as valuable in this area.

2. DATA AND DATA MANAGEMENT

1. Raymond R. Panko, "What We Know About Spreadsheet Errors," *Journal of End User Computing* 10, no. 2 (1998; rev. 2008).

4. PREDICTIVE ANALYTICS AND METRICS

1. None of the current top-twenty times in international competitions were recorded before 2005, and legendary U.S. sprinter Carl Lewis's best time currently ranks sixty-fifth on the all-time list.

2. Dean Oliver and Michael N. Fienen, "Importance of Teammate Fit: Frescoball Example," *Journal of Quantitative Analysis in Sports* 5, no. 1 (2009).

3. As distance from the basket increases, the shot gets harder to make. Thus, if one player shoots more long-range shots than another and if both players are equal in shooting ability, then the player with more long shots will have a lower shooting percentage.

4. The value of a shot incorporates the ability of the player to make the shot based upon the distance from the basket, the point value of the shot (two point vs. three point), and the probability that the player gets fouled on the shot (which leads to free throw attempts).

5. NEW METRICS

1. This was put to the test in an extreme case in a January 1997 game between the Lakers and Grizzlies, in which the scorekeeper intentionally gave Laker point guard Nick Van Exel as many assists as he possibly could. Van Exel totaled twenty-three assists that night, and, despite an admission from the scorekeeper that he artificially padded the assist total that night, that remains the official record of that game (Tommy Craggs, "An Assist for Nick Van Exel: How an NBA Scorekeeper Cooked the Books," *Deadspin*, August 13, 2009, http://deadspin .com/5336974/an-assist-for-nick-van-exel-how-an-nba-scorekeeper-cooked -the-books).

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