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Baseball legend Yogi Berra defied math logic but still made complete sense to game enthusiasts when he famously said, “Baseball is 90% mental. The other half is physical.”

Well, the math is different in professional baseball these days. The unrelenting advance of data analytics is upending long-held baseball wisdom in how to spot stars, how to predict their performance and how many big dollars to sign them on for.

Spring training for the 2019 baseball season has begun in Florida and Arizona, and the first game is set for March 19. But the decks weren’t fully set until a few days ago, with a couple of big-name free agents still looking for a team. (A free agent can sign with any club or franchise, typically because their earlier contract has expired or they are yet to be drafted.)

Statistics and analytics were being blamed for top-ranking third baseman Manny Machado and right fielder Bryce Harper not landing deals until this week. As it turned out, on Tuesday, Machado [signed](https://twitter.com/Feinsand/status/1097911249399177221?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Etweet) a 10-year, $300 million deal with the San Diego Padres, a record for a free agent. Machado didn’t fare badly; his latest deal is the third highest for any individual sporting contract, and ranks behind Giancarlo Stanton’s $325 million deal with the Miami Marlins in 2014 and boxer Canelo Alvarez’s $365 million arrangement with sports broadcaster DAZN, according to a CNN [report](https://edition.cnn.com/2019/02/20/sport/manny-machado-san-diego-padres-deal-spt-intl/index.html). Harper, too, is [said](https://www.mlb.com/news/bryce-harper-rumors/c-297610378) to be close to a deal with either of four teams: the Philadelphia Phillies, the Chicago White Sox, the San Francisco Giants and the Washington Nationals.

**Advantage Analytics**

As with most other industries, data analytics is becoming the litmus test for big deals in professional baseball as well. “The analytics group has made its mark,” said Wharton statistics professor [Abraham (Adi) Wyner](https://statistics.wharton.upenn.edu/profile/ajw/), who is also chair of the undergraduate program in statistics. He is also a host of the [Wharton Moneyball](https://businessradio.wharton.upenn.edu/shows/wharton-moneyball/) program on Wharton Business Radio on SiriusXM.

Wyner drew a parallel between how valuation is done for corporate M&A deals, keeping in mind the net present value of the future cash flows of acquisition targets. “What we assume that the teams should know, but never seem to get, is that you’re paying for the future, not the past,” he said. “Historically that seemed to be what people did, because statistically, people would look at the past and they would project the future by just dragging out the past. That is just not the right way to do it. The data available today has made it better and easier to forecast the future.”

Major league baseball has had “two years in a row of an extremely slow market,” said Brendan Harris, a retired professional baseball infielder with teams including the L.A. Angels and Minnesota Twins. He is currently signed on with the Los Angeles Angels for player development. “There are many reasons for the slow free agency and the lack of signings, specifically analytics. Smarter teams do not want to commit to these long-term deals. And the players are starting to get pretty frustrated.”

Wyner and Harris discussed the influence of analytics in professional baseball on the [Knowledge at Wharton radio show on SiriusXM](https://businessradio.wharton.upenn.edu/shows/knowledge-wharton/). (Listen to the podcast at the top of this page.)