For my research paper I want to show the correlation between sports and data analytics, or more specifically how data science and analytics has improved how we view and consume traditional sports. I whole heartedly believe the theory that data science has vast improved sports for everyone involved, coaches, players, front office, fans, etc. During this second phase of my research, I would like to go in-depth a little more on why I believe this, and maybe show other ways data science and analytics has impacted sports for the better. As it goes with any argument there are those out there that believe data science and analytics doesn’t add anything to sports, or even hurt the integrity and pureness of sports. I would like to dive into that side a little more as well and debunk or disprove these concerns.

In the first phase of my research, I talked about different areas in sports that data science and analytics has changed, but I wanted to touch on one a little deeper and that’s sports betting. Online betting has exploded seemingly overnight with the rise of companies like draftkings and fan duel, and they make it so user friendly with offer such as “no sweat bets” or “profit boosts”, that people who don’t even watch sports can jump on. Sports betting is a huge business that does seem to be going anywhere anytime soon, per (Dixson, 2023) there was a record $7.5 billion profit Per (Bengel & McCarriston, 2023) in May of 2018 a supreme court ruled in favor of online betting and left it to individual states to regulate it how they seem fit, as of today there are a total of 34 states and Washington D.C. that have legalized it, with more on the way. As this industry grows the companies that are involved in it grows with them, which brought about the role of sports betting analytics. Factors such as a team’s defensive strategy, how referees call a game, and even individual player injury and performance can now be predicted with reasonable accuracy (odds matrix, 2023). From this data gathered the oddsmakers set the odds either low or high, based off the probability a bet would hit, and how much they stand to lose vs gain in these bets.

Another area that I did not touch on last phase, but one that I think extremely important, is data science in sports medicine. Data science and analysis can be used to extend the playing career of an athlete, with wearable technology we can tell a lot about what the athlete’s body is going through and can potentially predict career ending injuries before they have. With wearable technology like heart rate monitors, GPS motion trackers, and accelerometers, analyst can track the strain and effort that is being placed on someone’s body (7t.com, 2016). With that information a coach or organization can then figure out when and for how long they need to rest an athlete to preserve them for the season. Also, per (7t.com, 2016) *“Soft tissue injuries are often the most common type of injury that cuts into an athlete’s sports time. Overexertion, dehydration, and poor conditioning can be detrimental to an athlete’s performance and health. Technology that can track exertion and performance through physiological/biological monitoring is helping teams train smarter and prevent injuries.”.* The data this technology tracks can help with personalizing training and recovery plans, nutritional guide if a player needs to lose weight or gain it, it can even help determine if a player is getting enough sleep.

Until this point, I have shown all the amazing things that data science and analytics can help with, and with all the good it can do you would think everyone would be on board with it, however there are those out there that still believe that the old school or antiquated way of thinking is the best. Some even go as far as saying that data science and analytics has ruined sports. My research wouldn’t be complete if I didn’t examine this side of the coin as well, as there could be something that we can learn from the complaints being presented.

Data science and analytics is great for tracking a lot of things, and in an industry like sports where data is everywhere, you would think that data analytics would be the end all but that’s not the case. There are many different factors that can determine the outcome of a game, that data science and analytics just can’t, and one of them according to (Burns, 2016) is the “Emotional X-Factors”. (Burns, 2016) Tells the story of the 2016-2017 Houston Rockets, and how they were the analytics darlings of the NBA and predicted to be one of the teams going to the finals, but due to the “Emotional X-Factor” things didn’t go as planned. Per (Burns, 2016) *“After a Western Conference finals appearance in the 2014-2015 season, the team exited in the first round of the 2016 playoffs and Howard subsequently left Houston and signed with the Atlanta Hawks. So, what went wrong? Reports indicate that Howard was upset about his role in the offense and didn't like the coach the team brought in for the upcoming 2016-2017 season.”.* When I read this story during my research one analogy, I thought of was the movie the war of the worlds. Just like the Martians in the movie you have this juggernaut of a team who people think can take it all, and just like the Martians getting taken they are taken down from the inside by germs from the people they captured, the rockets were taken down due to someone’s feeling about their role with the team and how they felt about the coach. I don’t care how many simulations you run, this is something that can’t be predicted or accounted for. Another factor that can’t be picked up from data is the play style of a player. Vince Wilfork is a prime example of this, he is a traditional nose tackle who was meant to plug up the hole and help stop the run, he is not going to have a bunch of sacks. His stats aren’t going to be like that of an Aaron Donald or Warren Sapp, but Vince was amazing at what he did, and will most likely make it to the Hall of Fame. Something like that data just won’t show the full story. Lastly an argument can be made that things like the wearable devices can be intrusive as well. Athletes are being tracked as they sleep, play, eat, etc., there seems to be no time that they are being monitored.

I still believe that data analysis has improved sports in many ways, but after doing research I do see the points against data analysis as well. I don’t think its negative however I think if we listen to the arguments against, and take it to modify or change some things, data analysis can be accepted by everyone.

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