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Understanding Randomness

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Streaks and Statistics

All sports have their famous records and streaks, but probably none are more famous than New York Yankee Joe DiMaggio’s 56-game hit streak in 1941. It was done at a troubling time for the nation and gave hope to many people; one could even argue that it was heroic. However, Mlodinow argues that the streak may have only happened due to chance, that streaks are a part of chance and there is so much randomness in sports that something amazing like a streak can easily happen. Mlodinow does attribute some merit to the ability of the player, but he says that randomness plays so much of a part that possibly a “similar streak would have happened sometime in the history of baseball even if each player hit with the unheroic and unmiraculous—but steady—ability of an emotionless robot” (Mlodinow).

He explains that people are not conditioned to thinking that streaks occur because of randomness. Usually when a person thinks of something that is random they think of a plot with scattered points all over it, however, that is not always the case. Randomness can also be more organized, especially when there are few options, like heads or tails, and few repetitions as well. He says that “hot and cold streaks are identical to those you would obtain from a properly weighted coin” (Mlodinow). They can be compared to flipping a coin, for example, when one lands on heads, say, ten times in a row but then it evens out over time with tails.

Mlodinow then drifts away from sports and explains how probabilities are often misunderstood. Just because something is said to be successful a certain amount of times out of ten does not mean that it will always happen that way, especially when there is a small number of trials done. The probability represents what should happen, but it becomes increasingly accurate by doing more trials. Not understanding randomness is part of our psychology as humans. We are conditioned to try and solve problems and find patterns. This can hurt us, like in the example that Mlodinow uses where a rat outguesses a human in the red and green blinking light test because the human will try to guess the pattern and the rat will simply guess the one that blinks most often and therefore getting more correct. This does not mean that a rat is smarter than a person; it simply means that our brains are made to solve patterns and that is why we have trouble comprehending randomness.

Lastly, Mlodinow describes a study by Samuel Arbesman and Stephen H. Strogatz of Cornell University. They did a computer simulation of 10,000 repetitions of every player’s statistics from 1871 through 2005 to create 10,000 different baseball universes. They found that in 42% of the seasons there was a hit streak that was greater than or equal to DiMaggio’s 1941 streak. Also, many players often out-hit DiMaggio and held the record for longer. However interesting this experiment is, it is just synthesized, none of it ever happened. Math cannot just take away from the specialness and uniqueness of DiMaggio’s streak just because an equation said that it might have turned out differently in an alternate math universe.

Leonard Mlodinow tries to argue that Joe DiMaggio’s, or any other athlete who has a notable streak or record in sports, streak was more of a random act of chance than a two month long show of pure talent and excellence. To generalize his whole argument of “Extraordinary events, both good and bad, can happen without extraordinary causes, and so it is best to always remember the other factor that is always present—the factor of chance” (Mlodinow), one can say that chance is a part of every single event, one can count on randomness occurring and that makes randomness, well, dependable. The randomness that occurs in baseball smoothes out over time so that it is more consistent. That is why it is more beneficial to look at a player’s whole career than to look at a single season or streak if you want to really see how good he really is. Once you have looked at his career statistics and see that they are impressive, it is not too hard to fathom that he had such a hot streak, he was an exceptional hitter for his whole career.

Leonard Mlodinow, in his study of statistics and streaks in sports, has attempted to boil down athlete’s talent and the nature of the game to a simple random act of a chance equation. As a true fan of the game of baseball I completely resent his attempt to try and take away from the talent and heroic nature of the players who have attained such records and streaks such as Joe DiMaggio. A box model can only say so much about the outcome of an event. A box model does not know whether to hit a line drive, bunt, or poke a ground ball through second and third base; that is what is impressive about Joe DiMaggio and other baseball players like him, they play the game with a mind and with heart and I think that that says more about a record than the probability that it will happen again.

DiMaggio’s record is more than just a 56-game hit streak. Mlodinow says that a steady robot may be able to repeat what happened with enough tries, simply because of chance. However, DiMaggio was able to get 91 hits, 55 RBIs, and hit .409 while he and the Yankees went 41-13-2 during that 56-game streak (baseball-almanac.com). This means that he not only held the streak, but he contributed to his team’s success tremendously. A robot or box model does not account for everything that a batter faces in an at bat and would not be able to replicate the streak. DiMaggio was able to keep the streak alive while also attaining these impressive statistics. This encompasses situational hitting, the pitch selection thrown to him, weather; all things that he has mastered and practiced so that he is able to perform to the best of his ability.

DiMaggio was not just an average hitter. His outstanding hitting ability, years of practice, and sense of the game gave him the tools to be able to find himself in a streak like he did. As much as I think that trying to put a formula on baseball is wrong, I do believe that randomness does play a part, just like it does in every situation of everyday life. However, randomness plays so much of a role in everything that it is pretty much a non-factor. There is not evidence out there that says that if Joe DiMaggio was not in the MLB, someone still would have set the record that high; there is no way to tell that, even if you created 10,000 parallel baseball universes.

“People are remembered—and often rewarded—not for their usual level of talent or hard work, but for their singular achievements, the ones that stand out in memory” (Mlodinow). Mlodinow tries to say that people only remember Joe DiMaggio because of his hit streak, the one supposedly caused by chance. However, the reason that the hit streak was even possible was because of DiMaggio’s level of talent and hard work. This goes for any athlete who holds records or has impressive streaks. There are many more time-tested, talented, and over-all-successful athletes who hold records than sub-par athletes who do. Yes, there are the Roger Maris-types out there, ones who were decently good players who had one exceptional year. This can be attributed to chance or a season of serious focus and optimization of skill. Math cannot take away the fact that Maris hit 61 homeruns, a box model did not make him do that, that was all him.

Mlodinow’s point is valid; chance is a part of baseball. However, it is secondary to the player’s talent and knowledge of the game. It is hard for a human to comprehend the fact that a streak like this is completely possible more often than one would think. The fact that streaks occur in randomness does not make it easy for them to happen. When someone with the ability to have a streak like DiMaggio’s comes along he has to use his talent in order to perpetuate the streak; his skill is like the glue that holds the streak together – against the odds.

Works Cited

Mlodinow, Leonard. "The Triumph of the Random: From banking to baseball, winning streaks owe much to the laws of chance." *Online.wjs.com*. The Wall Street Journal, 16 July 2009. Web. 24 Feb. 2010. <http://online.wsj.com/article/SB10001424052970204556804574261942466979118.html?KEYWORDS=The+Triumph+of+the+Random+>.

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