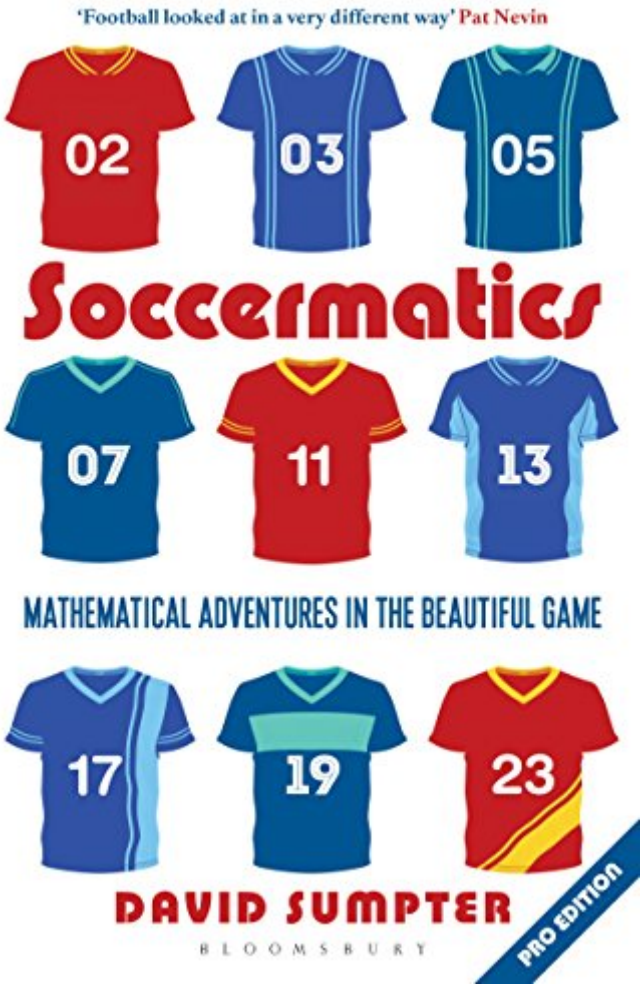
Soccermatics: Mathematical Adventures In The Beautiful Game (Bloomsbury Sigma)



Synopsis

’Football looked at in a very different way’ Pat Nevin, former Chelsea and Everton star and football media analystFootball Ã¢â ¬â œ the most mathematical of sports. From shot statistics and league tables to the geometry of passing and managerial strategy, the modern game is filled with numbers, patterns and shapes. How do we make sense of them? The answer lies in the mathematical models applied in biology, physics and economics. Soccermatics brings football and mathematics together in a mind-bending synthesis, using numbers to help reveal the inner workings of the beautiful game.This new and expanded edition analyses the current big-name players and teams using mathematics, and meets the professionals working inside football who use numbers and statistics to boost performance.Welcome to the world of mathematical modelling, expressed brilliantly by David Sumpter through the prism of football. No matter who you follow Ã¢â ¬â œ from your local non-league side to the big boys of the Premiership, La Liga, the Bundesliga, Serie A or the MLS Ã¢â ¬â œ you’ll be amazed at what mathematics has to teach us about the world’s favourite sport.

Book Information

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Customer Reviews

Very enjoyable read with a range of good information on the game and mathematical approaches to analysing parts of it. Of particular interest was the cross pollination of research into animals with football. The book was broken up into easily digestible chunks that held the interest from start to finish and were not overly academic in nature. The layers within each chunk were built up sequentially and left one thinking that one knew something of the process, the maths involved and the utility of the work at the end of the chunk.Interspersed with good elements of humility and humour I found it well written for the layman (me) and the depth there for budding mathematicians, football managers and researchers. Worth the cost of purchase for me. Looking forward to seeing more from this author.

Compared to soccernomics this is the much better book. It doesn't quite reach the writing quality of moneyball but it is nevertheless entertaining and full of great insight and fun math applications.

Great book! As someone who works on public health-epidemiology I'm used to statistical models, this book illustrate how soccer can be use as means of explaining this models as well as how it can enrich research in all areas. Is good in math and soccer level, is great to give you insights, particulary if you do research in any area or if you like soccer and wanna get into the somewhat cryptic math of its statistics in order to filter the bs from media expert. If you what you are looking for is "magic bullet" book for gambling, this won't be case.

Very good read made difficult theories easy to understand

Love the novel application of math and statistics to soccer. I've read and done a lot of analysis and the ideas contained in this book were novel (at the time I read it, though that will surely change) and I greatly enjoyed the viewpoint.

I definitely liked the premise of the book, applying mathematic techniques to analyze soccer, and the author presented his work in an approachable manner. While I think the math presented was simple enough, I could have handled more and wish the book was a little more in depth.

I read a lot of sports mathematics books, and I tend to be pretty hard on them. One common fault is bad mathematics, Soccermatics excels here, it contains some top-flight professional mathematics and no errors. Another common fault is failure to appreciate the game. Here again the book is

written with a deep love and reasonably competent understanding of the game.Why then is this only a three star book, not a great one likeÃ Â Scorecasting? Two problems. First is that the author is not skilled in explaining mathematical insight or reasoning. For example, he asks the question, how many coin flips of heads in a row is as improbable as getting a perfect draw in the German lottery (picking six numbers correctly out of 49). He gets the answer by doing the full calculation, which conveys nothing to people who don't already know how to do it, and nothing new to people who do.I'd explain it by comparng getting the first number correct (6 out of 49 or about 1 in 8) to getting three heads in a row. The sixth number (1 in 44) is between getting five and six heads in a row. To keep the numbers round, I'd use five, and say getting the average number right is about like four heads in a row. There are six numbers so it's like 24 heads.I like my explanation because (a) you can do it in your head, (b) it emphasizes the important logical point of dividing improbable events into independent steps and multiplying the probabilities, (c) it leads naturally into the concept of using logarithms and (d) people have an intuitive feel for the relative probabilities of getting three heads in a row versus guessing one of six numbers out of 49, but not of the probabilities of 24 heads in a row or getting six out of six numbers.Another example concern the relative frequencies of goal totals in football games. The author asserts it follows a Poisson distribution and shows a chart with a rough correspondence. But lots of other distributions would show similar rough correspondence and he never explains what a Poisson distribution (or even a distribution) is, nor why it seems appropriate for soccer.The wonderful point that the author fails to make is you can reason out likely distributions of goals. For example, suppose in some league games average two goals scored between the two teams. As a first cut at analysis, you might use your football knowledge to observe that it seems about equally likely that goals are scored in either half (this is not true for most other sports). Therefore, you'd expect about 1/4 of the two goal games to have both goals in the first half, 1/4 to have two in the second half, and 1/2 to have one goal in each half. That implies 1/4 of halves have zero goals, 1/2 have one goal, and 1/4 have two. That suggests that out of 16 games you expect 1 to be scoreless, 4 to be 1-0, 6 o be 2-0 or 1-1, 4 to be 3 goal games and 1 to feature 4 goals.That's not wildly wrong, and it shows how you might combine football knowledge with some simple assumptions to guess the distribution. But one obvious problem is some games have more than four goals. You can improve your answer by using the same reasoning, but breaking the game up into quarters instead of halves. The more parts you break it into, the more complicated the calculations get, The Poison distribution is what you get if you use the same logic with an infinite number of intervals. Now readers understand what a distribution is, how you might guess the shape, and what a Poisson is. They might gain some appreciation for

mathematical machinery that simplify computations.This brings me to the second problem The math is never connect to football. There are discussion of math like the ones above that use football only as background illustration, and football analyses that use math only for accounting, not insight. For example, if you compare actual football goal totals to Poisson distributions, in most cases anyway, you will notice there are not enough 2-0 games (typically about 25% fewer than Poisson predictions). You couldn't notice this unless you first figured out the Poisson, but once you do you can unlock football insight. What factors work against a game ending with a 2-0 score?Some explanations suggest themselves. When the game is tied, teams play a certain way. When there is a one goal difference, the team that is ahead plays more defensively, while the team that is behind gets more aggressive, these tendencies seem to roughly offset from the standpoint of goal scoring. But when there is a two goal differential, the team that is behind can adopt tactics so aggressive that even with the other team in defensive mode, there is more chance of goals being scored at one end or the other. Or perhaps the team that is ahead switches from trying to prevent goals to trying to prevent quick goals. Or it could be the officials. In close games, officials don't want to determine the match with marginal penalty kicks or red cards; but when the game is likely decided already, official get more concerned with preventing injuries or punishing obnoxious players. Anyway, this is the kind of thing that mathematics plus sports knowledge can illuminate.The two longest parts of the book left me cold. The author draws a lot of diagrams using detailed game data that he claims illuminate important points. This seemed to me to be about as useful as looking at tea leaves. The underlying mathematics of this kind of thing is fascinating and profound, and the author is an expert in the field, but he doesn't explain them enough to excite mathematical interest, and the results are not clear enough to impress any football fans.The other long part is a staggeringly dull detailed accounts of his amateurish attempts to win money betting on football. Mathematics as a logical system gets thrown out the window, although he uses a lot of numbers and calculations.In between these indulgences, there are some interesting analyses, but really none that combine both mathematics and football in meaningful ways. I actually enjoyed the book, but I'm about as interested in this stuff as anyone. Other aficionados might find more to dislike in this book. If you have only a weak interest (or negative interest) in mathematics but love football, I don't think you'll get through this book, but if you do, you'll learn a little useful math and some interesting stuff about football. If you love math and have only a passing interest in football, I suspect you also won't finish, but you will find some good nuggets here and there.

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