



Moneyball

The Art of Winning an Unfair Game

by Michael Lewis
W.W. Norton © 2003
288 pages

Focus

Leadership & Mgt.

► **Strategy**

Sales & Marketing

Corporate Finance

Human Resources

Technology & Production

Small Business

Economics & Politics

Industries & Regions

Career Development

Personal Finance

Concepts & Trends

Take-Aways

- The best young baseball players are lithe, fast and strong, or so says common wisdom.
- Scouts knew that quick, agile Billy Beane was going to be a Majors all-star.
- Beane regretted signing a Major League Baseball contract rather than accepting a scholarship to Stanford. He's now general manager of the Oakland Athletics.
- Billy proved that the best athletes are not always the best Major League players.
- Number crunchers already knew that expensive home run hitters and speedball pitchers did not guarantee winning teams.
- A factory night watchman developed and employed sabermetrics — Wall Street-style rigorous statistical analysis — to divine the true traits of a winning team.
- Analysts saw baseball scouts and managers as idiots with no idea how they won or lost.
- Baseball decision-makers ignored sabermetrics (except in the fantasy leagues).
- In 2002, Oakland became the first team to use the sabermetricians' method so it could avoid paying star salaries.
- Beane built a quality team on the kind of probability theory investors use, instead of selecting for traditional talent, and spent \$100 million less than the Yankees.

Rating (10 is best)

Overall

9

Applicability

6

Innovation

10

Style

10

Relevance

What You Will Learn

In this Abstract, you will learn: 1) How Wall Street math can be applied to baseball; 2) What's wrong with baseball scoring; and 3) How Oakland manager Billy Beane and his statisticians are changing the way baseball players are recruited, coached, traded and sold.

Recommendation

Author Michael Lewis takes you inside the hidden process of the 2002 baseball draft as seen by Oakland Athletics general manager Billy Beane and his egghead staff, and by Beane's snuff-sniffing, monosyllabic, case-hardened baseball scouts. Lewis moves with grace and speed, back and forth across 30 years of baseball history, delving into baseball lore, statistics, drafting processes, the baseball business, baseball's current cast of characters and the way they all interplay. Lewis shows how baseball and derivative investment strategies can be viewed in the same framework. In the friendly confines of baseball, he presents a million dollar lesson about the inefficiency of sloppy data. Defective athletes as redeemed heroes, baseball as a metaphor for business, what a concept! *getAbstract.com* recommends this intriguing book to everyone who loves baseball, numbers, box scores, statistics, business theory and a good yarn about unlikely heroes who are changing sports' business and sports' history.

Abstract

The Body of Baseball Knowledge

Baseball is a business where management has inherited and propagated a belief system that forces it to spend too much money on employees who assure that it will fail to accomplish its goals: winning championships and making money. Baseball managers and scouts have always recruited apprentice ball players based on their speed, body shape and strength. This is baseball's most basic logic and one cannot argue with it, especially by employing the facts.

Jeremy Brown, Meet Billy Beane

Take, for example, Jeremy Brown, a fat, short, slow catcher, who also happened to be the greatest hitter in the history of his college with the least number of outs and the highest on-base percentage. The most fundamental logic of baseball apprenticeship demanded that recruiters reject him. A new player is supposed to be a work in progress, carved marble awaiting the finishing touches of major league agents and managers. If he is fast, strong and lithe, he can be shaped into a major leaguer. If he is slow, short, fat and already a great hitter, it does not matter because Major League Baseball makes apprentices into great hitters but it does not draft pudgy, slow kids. It only drafts guys who are shaped like prospects.

In his youth, Billy Beane was shaped like a template for Cooperstown. He had so much raw talent Stanford University offered him a scholarship to succeed John Elway as quarterback when Billy wasn't starring on the baseball team. The professional baseball geniuses who drafted Billy and persuaded him to skip college predicted that he would beat his friend Darryl Strawberry to the major league stardom. No one noticed that Billy could not cope with failure, because he had never failed as an athlete until he reached Triple A ball.

Since the greatest professional hitters with the greatest ability miss at least 65% of the time, Billy was not psychologically suited to baseball greatness. He could run, catch and

"What was happening to capitalism should have been happening to baseball: the technical man with his analytical magic should have risen to prominence in baseball management just as he was rising in prominence on, say, Wall Street."

"The treatment of amateur players is the most glaring violation of free market principles in Major League Baseball."

“Billy Beane was a human arsenal built, inadvertently, by professional baseball to attack its customs and rituals.”

“Billy wasn’t one to spend a lot of time worrying about whether he was motivated by a desire to succeed or the pursuit of truth...he had a natural coruscating skepticism about baseball’s traditional wisdom.”

“It was as if a big new market-moving Wall Street money manager had sprung into being, and bought shares only in vegetarian restaurants, or electric car manufacturers.”

throw, but he could only hit 2.5 out of 10 times against major league pitchers. Those 7.5 failures resulted in tirades, trashing and mental wounds. Billy understood that he was not suited to playing professional baseball years before his coaches and managers did. He did not understand why, exactly, until he chose to move from the field to the front office and read a pamphlet inspired by Bill James. James founded a movement called sabermetrics, which was designed to make baseball more scientific. James wrote his *Baseball Abstract* while he was a night watchman at the Stokely Van Camp pork and beans factory outside a tiny Kansas town. The first year, 1977, 75 copies sold. James was surprised so many people were interested.

Sloppy Data

James was not satisfied with the way baseball kept its statistics. They provided little useful information to those who really wanted to understand how teams won and why they lost. Twenty years later, Wall Street computer wizards including Ken Mauriello and Jack Armbruster applied their understanding of the complexities of financial markets, especially derivatives, to the same issue — “the inefficiency of sloppy data” — that James confronted after midnight at Van Camp’s, back when baseball players were paid in the low six figures.

The Prophet before Profit

In 1977, James challenged the concepts of hits and errors: two pillars of baseball logic. For example, think of Albert Belle, the slow power hitter, playing left field. The hitter barely touches a great pitch. The lazy fly floats toward shallow left field. Belle is out of position. A runner on second knows, as does everyone, that Belle will be slow to get the ball and throw. The runner bolts for third. By the time Belle gets near the ball, the runner is rounding third and the hitter is near second. The box score reports a double by the hitter with a run batted in (RBI). It records a negative against the pitcher, who made a great pitch that would have resulted in an out if a fleetier (or better positioned) person had been in left field. The pitcher’s earned run average (ERA) rises, because a run scored that would not have scored with a different leftfielder. Belle is not given an error, because he is so slow he could not try to catch the ball on the fly and had no chance for a play at home. No play, no error.

This kind of sloppy data is still recorded and reported. It remains the basis upon which most baseball general managers make decisions when drafting players, trading players and selling players. Supply and demand being what they are, coaches pay millions for lower ERAs and for higher RBIs. Few except James and his successor sabermetricians ever asked, for example, how many extra doubles Belle should hit to compensate for being unable to field. Why not? First, because the guy who invented baseball scores had a background in cricket, where there are no errors. Second, because most players believe that luck evens out statistics that they can’t comprehend. Third, until the advent of the players’ union and free agency, most ball players earned less than \$100,000 and stars rarely got more than a few million.

Moneyball

Owners did not think about the money their management spent to buy fading stars or hot prospects when players were cheap. Even today, some owners annually cough up a players’ salary budget of more than \$100 million, even though Oakland wins as many games with less than \$50 million. Why? Steinbrenner buys and owns stars, players who will live forever in the Hall of Fame at Cooperstown. Oakland may own some future Hall of Famers, but it will sell them at a profit once they reach stardom. Oakland will spend

“What begins as a failure of the imagination ends as a market inefficiency: when you rule out an entire class of people from doing a job simply by their appearance, you are less likely to find the best person for the job.”

“The evaluation of young baseball players had been taken out of the hands of the old baseball men and placed in the hands of people who had what Bill valued most (and didn't have), a degree in something other than baseball.”

“The central insight that led him both to turn minor league nobodies into successful big league closers and to refuse to pay them the many millions a year they demanded once they became free agents was that it was more efficient to create a closer than to buy one.”

the profit to buy more ball players who star only in its database. It can't afford to pay established stars in their prime, so it settles for winning. And it finds its winning players by efficient analysis of sloppy data.

Set Up Men

In 1990, when Billy Beane was the Oakland Athletics' fifth outfielder, he asked to become a scout instead. Many who knew Billy's physical abilities thought he would achieve baseball greatness. Nevertheless he walked off the field of dreams and actually asked for the job they give washed-up minor leaguers and the owner's distant kin. He liked baseball. He just didn't like standing in the batters box facing his failures. So he joined management.

Oakland's general manager was Sandy Alderson, an attorney educated at Dartmouth and Harvard, a Marine. Tony La Russa was the manager. Since Alderson never played big league ball and La Russa did, the players and coaches virtually ignored Alderson's businesslike approach. It didn't matter. In 1991, Oakland's owner Walter J. Hass, Jr., owned the highest-paid players in baseball. Hass was willing to lose millions to field a competitive team. Oakland made the World Series in 1988, 1989 and 1990. Hass died in 1995 and the team was sold to real estate developers Steve Schott and Ken Hofmann. They wanted to run it like a business and would not bankroll a team that won games but lost money. Alderson, who had studied Jamesian baseball theory, agreed. He commissioned engineer Eric Walker to apply sabermetrics to Oakland. Walker's study suggested that on-base percentage was the key to victory, that scoring was a process, not a talent. [Science had reared its head in Oakland.](#)

Pork and Beane's Ball

In 1993, Alderson made Beane his assistant, gave him Walker's study and told him to find undervalued minor league players. By the time he became general manager in 1997, Beane had read all 12 of James' annual *Baseball Abstracts* and much of the published work that followed his theory of sabermetrics. Computers had improved. Stimulated by James' thinking, baseball-loving programmers, mathematicians and statisticians challenged the traditional logic of baseball's measurements of success. Until the 2002 amateur baseball draft, no one had actually used sabermetric statistics to determine the future course of a real, big league team.

Beane assembled his staff for the closed door draft. Until then, his scouts had always had the final word on recruits. [Scouts and coaches spoke their own language](#) and shared a belief in the absolute necessity of speed, agility, lighthness and arm strength. The famous scouts — Hoppy, Pitter, Bogie, director of scouting Kubota — sat there, chewing their tobacco wads. Harvard economics grad Paul Depodesta also came. He never played baseball, but he had the computer. The process began, as always, with the scouts providing their list of amateur players that matched the needs described by the general manager. Traditionally, the manager stayed out of the process. The GM and the scouts spent three days selecting the team's future, finding boys to replace the men they would not be able to afford once these players' negotiated 13 years of indenture ended and they became free agents. Oakland had \$40 million to spend and averaged \$1.5 million to each of its 25 men.

The average big league salary was \$2.3 million per player. The average Yankee's salary was about \$5.64 million. Oakland's frugality was a problem for baseball commissioner Bud Selig, the owner of the hapless Milwaukee Brewers. Oakland had won almost as many games as New York and more than any other team in its division. Selig hired Paul Volker to chair a commission on baseball parity which concluded that it was not fair for teams with vast amounts of money to compete with teams (like Oakland) without deep

“The mood in the room was exactly what it would be if every person in the room was handed his own personal vial of nitroglycerin.”

“Because science doesn’t work in the games that matter most, people who play them are given one more excuse to revert to barbarism.”

pockets. Selig and the poor owners wanted revenue sharing among teams so the Yankees and other rich teams would help pay star salaries to players at poor teams. Oakland was the anomaly. It proved that salary is yet another baseball myth. Oakland won with nobodies who are paid nothing. When its players became stars, it sold them and started over.

In 2001, Beane sold Jason Giambi, the 2000 MVP, to the Yankees. Beane also marketed relief pitcher Jason Isrenhauser and center fielder Johnny Damon. He kept their salaries plus draft picks. Then, he had to find major league road kill and undervalued minor leaguers to replace two great players. He looked in the majors for men who had lost a step, diminished in power and aged. Beane did not buy them for the caché of former stardom. His stats showed that a team full of losing stars drew fewer fans than a team ripe with winning future stars. He bought the older guys because they were disciplined, knew the strike zone and were willing to walk. His computers told him who they were. Beane acquired David Justice and Scott Hatteberg, who was not a star and not very expensive. He was, however, a very disciplined batter. He never struck out. The numbers said that a team with nine players who hit like Hatteberg would score 950 runs a season. The powerful 2002 Yankees scored 897 runs.

In the amateur draft, Billy looked for college players who had confronted adversity and failure and kept going, or who just didn’t worry about failing to hit 65%. He selected fat, tall, slow or clumsy boys, identified by his boxscore-crunching computer as players no team wanted, but who dependably got on base.

During the 2002 draft, Billy took only one player from his scouts’ list. He and his staff rejected an entire year’s work by the traditional scouting staff, despite its 200 years of experience. Clearly, the scouts were out of business; most left Oakland. The player who made both lists was Nick Swisher, an Ohio State standout. The other player, a first round draft pick, was Jeremy Brown, the short, fat catcher from Alabama.

In 2002, the Athletics won 103 games (and the division) and lost 59. The worst losses came at the hands of the Minnesota Twins in the divisional playoff. Beane didn’t predict the playoffs; he said he could not get enough data — playoffs are short and chance is a constant factor. His job, he said, is to select an affordable team and “to get us to the playoffs.” Then, “whatever happens is...luck.”

About The Author

Michael Lewis is the author of the bestseller *Liar’s Poker: Rising Through the Wreckage on Wall Street*, based in part on his experience as an investment banker for Salomon Brothers. He is a contributing writer to the *New York Times Magazine*, a columnist for Bloomberg and a visiting fellow at the University of California at Berkeley. His writing appears in *The New Yorker*, *Slate* and *Foreign Affairs*. He has served as editor and columnist for the British weekly *The Spectator* and as senior editor and campaign correspondent for *The New Republic*. He filmed and narrated short pieces for ABC-TV’s “Nightline” and hosted a series on presidential politics for NPR.

Buzz-Words

Sabermetrics