

Barry Codell, a brilliant and inspiring Rogers Park polymath, invented one of baseball's most significant statistics. Then he took his BOP and went home

Outside Pitch



LAST SUMMER, AN HOUR BEFORE A GAME against the Seattle Mariners, White Sox slugger Frank Thomas sat down in the team's bustling clubhouse, unfolded a crumpled sheet of notebook paper, and lost himself in its odd, hand-scrawled contents.

Thomas had always been interested in baseball statistics, and especially interested in his own. The piece of paper he held offered a new statistical measure, something Thomas had never seen, and it led to a startling conclusion. Frank Thomas, the scribbles argued, could be considered the fourth-greatest hitter of all time, behind only Babe Ruth, Ted Williams, and Lou Gehrig. The statistic, absent the usual references to batting average and other standard baseball numbers, had been sent to Thomas by Barry Codell, an unassuming 53-year-old activities director at a Chicago nursing home. While the other Sox players grabbed their gear and headed for batting practice, Thomas seemed bolted to his chair, transfixed by Codell's numbers. Baseball statisticians had analyzed Thomas for years, but never like this.

An hour later, Thomas went on a hitting rampage, crushing two home runs and a double before manager Jerry Manuel showed mercy on Seattle by resting his superstar. Reporters in the press box remarked that Thomas looked to be playing like a man possessed.

Thomas likely didn't know that Codell had once been a giant in the field of baseball statistics, but that he had turned his back on

▲ *The big bopper: By calculating the relationship between bases and outs, Codell revealed the essence of baseball.*

SPORTS

fame—even as statisticians like Bill James were becoming national figures—and seemed to vanish, for no apparent reason, into the ether. Today, Codell remains an enigma. He does not drive a car, own a computer, or even attend baseball games. He has never taken a college course, yet he lectures on comparative religion, gerontology, and poetry. Many who know him believe him to be the smartest man they have ever met. He still invents baseball statistics. He just doesn't tell many people about them.

"Barry Codell's work was revolutionary," says Cappy Gagnon, a baseball historian and past president of the Society for American Baseball Research. "Then he just walked away. He disappeared. No one knows what happened to him."

BASEBALL SEEMS TO HAVE BEEN INVENTED for statistical analysis. Nearly all of its events—even individual pitches—can be quantified and recorded. Since shortly after the founding of the National League in 1876, batting average has reigned as the king of baseball statistics. Its simple formula—*bats divided by at bats*—remains gospel among fans and experts alike. A batter reaches baseball's most accepted standard of excellence when he achieves a .300 batting average.

Even as a child, Barry Codell looked beyond the standard measures of talent. He learned to love baseball from his father, Seymour, who as a boy in Philadelphia became perhaps the only white bat-boy in the history of the Negro Leagues. In 1954, at age seven, Codell attended his first game, in which Clyde McCullough hit two home runs for the Cubs. "I thought I was watching the greatest home run hitter of all time," recalls Codell. "He went on to finish with a total of three homers for the year. I'd say it was a great day for both of us."

By the time he was ten, Codell was offering three-pronged explanations for the collapse of the Washington Senators in the 1925 World Series. Hard-core baseball enthusiasts marveled at the boy's ability not just to remember names and facts, but to see into the game, to extract the truth between the numbers. His instinct for distilling hidden greatness in seemingly average players was perhaps the best evidence of the young man's feel for nuance in the game. Do you realize, the young Codell might ask, that White Sox second baseman Cass Michaels and

shortstop Luke Appling were the first double-play combo in history to hit above .300 and walk more than 100 times in a season (1949)? Or that Michaels's real name was Casimir Kwietniewski, making him the player with the longest name ever to start an All-Star game? No one, it usually turned out, had realized anything of the sort.

Above all, Codell understood that batting average was a deeply flawed and misleading statistic. For example, it considers a single and a home run to be

equivalent achievements, which clearly they are not. It fails to account for steals, walks, sacrifices, and other important offensive achievements. And it misses, Codell kept thinking, something fundamental about the nature of baseball itself. If only he could invent a statistic that went beyond batting average, Codell believed, he might revolutionize thinking about the game.

Codell's epiphany came at age 29, when he was riding a bus down State Street one day in 1976. At its most basic

Doing the Diamond BOP

The Diamond BOP (base-out percentage) is Barry Codell's latest baseball statistic. It is the first stat, he says, that measures both individual and team contribution in a single number. It is derived from averaging two of Codell's most powerful stats: a player's BOP (an individual measure) and his Talled BOP (a measure of his contribution to the team). Here is how to calculate the Diamond BOP, along with a chart of some Hall of Famers—including this year's inductees—and those the Diamond BOP suggests might be more deserving:

BOP = (Bases ÷ outs)

Talled BOP = (4 (Runs scored + RBIs ÷ 2)) ÷ Outs

(Codell multiplies by four the average of runs scored and RBIs because that theoretically captures the total number of bases produced by those two events.)

Diamond BOP = Average of BOP and TBOP

HALL OF FAMERS (lifetime percentages)

Player	DBOP	Batting Average
Robin Yount	.732	.285
Rod Carew	.763	.328
Tony Perez	.771	.279
Roberto Clemente	.786	.317
Ernie Banks	.799	.274
Kirby Puckett (inducted 2001)	.803	.318
Dave Winfield (inducted 2001)	.819	.283

NON-HALL OF FAMERS (lifetime percentages)

Player	DBOP	Batting Average
Richie Allen	.939	.292
Gil Hodges	.864	.273
Norm Cash	.861	.271
Rocky Colavito	.860	.266
Minnie Minoso	.858	.298
Bobby Bonds	.849	.268
Jim Rice	.838	.298

North vs. South (2000 season)	DBOP	Batting Average
Frank Thomas	1.212	.328
Sammy Sosa	1.126	.320

The Shortstops (lifetime percentages)	DBOP	Batting Average
Alex Rodriguez	1.023	.309
Nomar Garciaparra	1.007	.333
Derek Jeter	.891	.322

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level, he reasoned, baseball is an ongoing battle between bases and outs: A batter tries to accumulate as many bases as possible while avoiding outs. Could such a fundamental truth be reduced to a statistic? Indeed it could, and in remarkably simple fashion. Divide a player's total accumulated bases—including walks, steals, hit-by-pitches, and sacrifices—by the number of outs a batter accounts for, including those by double plays (two outs), being caught stealing, and sacrifices. In that simple equation—bases divided by outs—Codell believed, the essence of baseball revealed itself. Before that bus ride, no one had bothered to account for outs, an astonishing oversight in the game's 150-year history.

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Codell rushed home to put his formula to use, calculating the lifetime base-out percentages (or “BOPs”) for many baseball greats. The results synched with Codell’s gut suspicion. The prodigious slugger Richie Allen, who spent three seasons with the White Sox, registered a BOP of .942, while Cubs shortstop Ernie Banks came in much lower, at .789. Norm Cash of the Tigers owned a lifetime BOP of .883, while Cubs favorite Billy Williams was just .840. Bobby Bonds, who had his best years with the San Francisco Giants, posted a BOP of .877; Pittsburgh’s Roberto Clemente “bopped” just a .783. In each pair, the player with the lesser BOP had become a Hall of Famer, while the better man had not. The BOP revolution was about to begin.

CODELL WAS NOT THE ONLY PERSON THINKING deeply about baseball statistics in the mid-1970s. A group calling itself SABR—the Society for American Baseball Research, founded in Cooperstown, New York, in August 1971—had a few hundred members dedicated to examining the sport’s history and statistics. Convinced that he had created baseball’s ultimate stat, Codell submitted the BOP to SABR. The impact

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was the statistical equivalent of the shot heard round the world. As Codell remembers it, Harold Seymour, the author of an acclaimed multivolume history of baseball, characterized Codell's calculations as "astoundingly simple and simply astounding"; Scott Hall of Minnesota Public Radio said that the base-out percentage had completely changed his vision of the game; and Jack Brickhouse, the legendary Chicago broadcaster, insisted that *everyone* should know about Codell. Even Bob Costas, baseball's high-profile savant, struck up a regular correspondence with Codell, probing for more insight.

Few of his admirers would have guessed that Codell had never attended college ("School was interfering with my education," he explains). Even fewer might have guessed that he was earning a living lecturing for the Chicago Public Library's speaker's program on subjects ranging from Buddhism to Byron to Tin Pan Alley—a gig he had secured through audition by speaking authoritatively on Romantic poetry.

Soon, Codell and fellow SABR member Bill James were being touted by media as the prophets of baseball's "new numbers." Word spread in SABR circles that sports agents and mediators were using the BOP to negotiate some big money contracts. SABR membership grew rapidly. James and others seemed to bask in their celebrity, scrambling to publish more statistics and jockey for the title of baseball's reigning numbers guru. To Codell, a self-effacing intellectual unschooled in publicity and self-promotion, the cliquish rat race evolving from SABR's newfound notoriety began to taste of foul medicine. Even as the BOP became the standard by which many informed baseball thinkers measured a batter's performance, Codell began to withdraw from the scene, loath to scratch for recognition in a field that he once had mined just for fun. "I had to kick myself out," Codell says. "Organizations can disorganize a man." Within a couple of years, he had disappeared into obscurity, leaving SABR members to wonder what had become of one of the finest minds ever to consider the game of baseball.

IN THE MID-1980s, AFTER HE QUIT THE BASE-ball stats scene, Codell began thinking deeply about the elderly. During his talks at libraries or especially at nursing homes, Codell might break into a rousing Al Jolson medley, and he could see that the el-

derly attendees came alive during those trips back to important markers in their lives. He thought about Socrates, about how the ancient Greek philosopher considered himself a midwife who simply helped others to deliver ideas they already possessed. Socrates had used the word "maieutics"—meaning "to act as a midwife"—to describe the process. Thinking he could do the same for the elderly, Codell began to craft his own maieutics program to bring forth memory and experience from the elderly. A living encyclopedia of American history and popular culture, Codell used humor, music, vernacular—"whatever I could summon"—to take nursing home residents on a journey back into their own lives. In front of old women who couldn't recognize their own grown children, he might hum a popular 1927 melody, and some of these ladies not only hummed along, but added the lyrics. On other occasions, he might break into Yiddish, talk about Calvin Coolidge, recite lines from Sophie Tucker's autobiography, and ask, "Is that what you remember New York restaurants to be like, Mr. Stein?" Soon Mr. Stein was talking not just about restaurants, but about the horseradish at Lindy's on Broadway 50 years earlier.

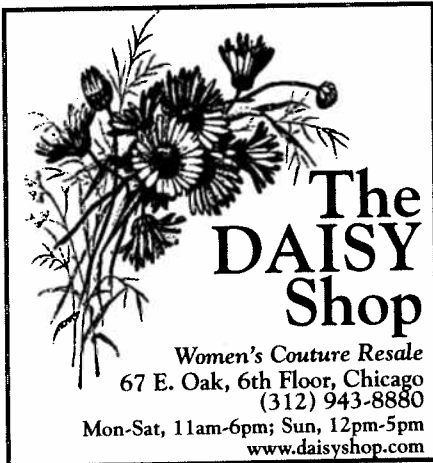
Codell's maieutics came to the attention of Chicago's Northwest Home for the Aged on California Avenue, which hired him to formally institute the program. In 1989, he won the Governor's Award for Innovation in Gerontology. "I can't say enough about Barry's ability to relate to the residents here," says Fred Oskin, executive director at the Northwest Home. "He is deeply creative, and he has used that talent to find ways to reach the elderly. He reaches them in ways that enrich their lives."

All the while, Codell continued to invent new baseball statistics—the diamond mean, the two-man game, essential bases—that went beyond the BOP to analyze pitching, a player's contribution to his team, and other central baseball questions. His formulas remained simple and intuitive, but he showed his work to almost no one, save for an occasional friend in his Rogers Park neighborhood or an interested statistician who had managed to track him down. In the meantime, the new breed of SABR statistician had taken a different tack, creating increasingly indecipherable statistics based on advanced mathematical models. One got the sense, looking at their tangles of astrophysical



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equations, that the new breed might not have time for a story about seeing Clyde McCullough hit two of his three season homers in a single game at Wrigley Field.

TODAY, CODELL REMAINS VIRTUALLY UNKNOWN, even among SABR members. "You know, the name sounds vaguely familiar," remarks Neal Traven, cochair of SABR's statistical analysis committee. "I think he might be someone from the sixties or seventies. Aside from that, I don't know anything about him. But I'll say this: Accounting for outs is a huge part of statistical analysis right now. If he was the first, it was an incredible contribution."

The fame Codell shunned seems to have fallen upon his children. (Codell has

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been married to the former Betty Newman, his high school sweetheart, for 33 years; they met when she was the editor of the *West Word*, at Niles West, and he was her sports editor.) His son, Reggie, is a nationally known hip-hop musician. His daughter, Esmé, named for a character in a J. D. Salinger short story, is the author of a recent bestseller (*Educating Esmé*) about her first year teaching in the Chicago public schools.

Codell still does not drive a car ("Aristotle and the Peripatetics knew that walking and thinking went hand in hand, and I agree with them," Codell says). He still does not own a computer ("Like the automobile, I believe the computer is a passing fancy," he jokes). He still avoids the ballparks ("I'm too busy thinking about baseball to attend games"). And he still invents statistics. Last year, he created what he calls the Diamond BOP, the "first-ever statistic to account for individual and team contribution in a simple, elegant number." Such an announcement gets the attention of SABR's old guard.

"I'd give anything to learn what stats Barry is working on," says Stuart Shea, a baseball researcher and author of several books on baseball players and statistics. "He's a brilliant thinker who operates on a different spectrum from most researchers. He's a pencil and paper guy whose work is literally charming—it charms those who know it. It's a huge loss not to have access to his mind."

"He was extremely original, revolutionary," historian Cappy Gagnon says. "So it disappoints me that he refuses to share. What's the point of keeping it to yourself? Why would you invent statistics for yourself? If he thinks he has the next BOP, he should put it in print."

Codell says he has always been happy to share his statistics, including the Diamond BOP, which he says provides an interesting look at this year's Hall of Fame inductees—and at others who might be more deserving (see "Doing the Diamond BOP," page 68). As to the fond memories held of him by long-time SABR members, he is grateful, but philosophical. "It's nice that people remember me," Codell says. "Some guys do it for a living. So do I, but not for money."

With that, Codell gathers notes for a lecture he will be giving on comparative religion, mixes them with a pile of his baseball statistics, and packs the lot away for his walk to the Northwest Home. Before he leaves, though, he tells a story about attending one of his first Cubs games.

"Wally Post had accidentally thrown his bat into the stands and hit an old lady," Codell recalls. "Later in the game, Pat Piper [the long-time Cubs public address announcer] said, in that great, cracking voice, 'The old lady has returned to her seat!' The crowd gave her a standing ovation. I was seven. It was the first standing ovation I ever saw, and it was because the old lady had returned to her seat. I thought it was part of the game, and the astonishment of the game has never left me.

"You know," Codell says after a few moments' reflection, "statisticians today use all these complex formulas. But there's a distancing today between the statisticians and the beauty of the game. In the end, the beauty of the game is most important." Then Codell heads off to entertain in the dining room at the Northwest Home, ready to help another elderly person remember her salad days, the days of simple beauty. ■