

Eight Lessons from *Moneyball*: The High Cost of Ignoring Evidence-Based Corrections

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Abstract: Michael Lewis's book, *Moneyball*, documents the effective use of evidence-based practices by Billy Beane, the general manager of the Oakland Athletics. Lewis shows how Beane's reliance on theoretically relevant statistics and on a scientific approach to baseball allowed him to achieve winning seasons despite being burdened by severe budget constraints. His approach spurred much antagonism in the baseball community because it challenged many long-standing, but ultimately unsupported, practices. In this context, *Moneyball* provides a useful conduit through which to assess why many correctional agencies are ineffective in the services they provide. In fact, the points of comparison between baseball and correctional practices are striking and warrant careful illumination. Toward this end, we specify eight lessons that corrections can learn from *Moneyball* and evidence-based baseball.

Keywords: evidence-based intervention, corrections, rehabilitation

Over the past two decades, there has been an increasing call to base decisions in a variety of fields on empirical evidence (Ayres, 2007). Underlying this call is the claim that practices in many domains are not based on carefully collected and weighed data but on clinical expertise at best and on "gut feelings," intuition, custom, and ideology at worst. As Ayres (2007) points out in his recent book, *Super Crunchers*, the cost of ignoring the "numbers" is less than optimal decision making. In human terms, this means that medical patients needlessly die, challenged children do not learn to read well, investors in the stock market go bankrupt, the mentally ill are not cured, and offenders are not reformed and victimize again.

For a half century, research has shown repeatedly that actuarial decision making outperforms clinical judgments (Ayres, 2007). Still, during this period, statistical evidence often did not guide interventions into people's lives,

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including within medicine. However, a key turning point in the movement to use empirical data to inform practice came from a 1992 article, authored by a working group headed by Gordon Guyatt, called "Evidence-Based Medicine" (Ayres, 2007). In this widely read essay, Guyatt and his colleagues persuasively argued for a paradigm shift. Traditionally, physicians would receive medical training in the "basic mechanisms of disease and patho-physiologic principles." Then, through "unsystematic observations from clinical experience" and a dose of common sense, they would develop the expertise to "evaluate new tests and treatments" and to diagnose and intervene with patients (1992, p. 2421). The "new paradigm," however, would not discount clinical experience but would supplement it by equipping doctors with the motivation and skills needed to consult the extant research literature when making diagnoses and delivering treatment. "The final assumption of the new paradigm," Guyatt et al. (1992, p. 2421) noted, "is that physicians whose practice is based on an understanding of the underlying evidence will provide superior patient care" (see also Sackett & Rosenberg, 1995; Timmerman & Berg, 2003).

This article was an exposé of sorts, because it questioned the assumption that current medical practice was informed by the most rigorous scientific findings available. Quasi-scientific practices inspire notions of quackery and yield potentially disquieting consequences. Indeed, it is estimated that from 40,000 to 100,000 hospital patients die each year from medical errors, "a rate higher than deaths attributed to highway accidents, AIDS or breast cancer" (Wolf, 2000, p. 251). These errors have diverse sources, but a chief cause is the failure of hospitals to incorporate evidence-based practices into their daily operations (Berwick, Calkins, McCannon, & Hackbarth, 2006; Wolf, 2000). As Rothman (2007, p. 54) notes, "there is no minimizing the amount of outright medical incompetence. . . . When a majority of patients are not receiving standard care for standard conditions, evidence-based medicine has much to commend it."

Medicine is a high-status field and thus offers an exemplar for others involved in the care and treatment of humans. Not surprisingly perhaps, scholars in other disciplines have embraced the logic of this new medical paradigm to call for evidence-based approaches in their fields of inquiry and practice. Thus, to name but a few, authors have advocated evidence-based education (Davies, 1999), management (Pfeffer & Sutton, 2006), public health (Rychetnik, Hawe, Waters, Barratt, & Frommer, 2004), social work (Gilgun, 2005), and health and human services (Roberts & Yeager, 2004). Criminal justice has not been immune to this movement. Sherman (1998) quickly saw the wisdom of this approach and set forth a case for evidence-based policing; other scholars have made a similar case for crime prevention (Welsh & Farrington, 2006) and corrections (Cullen & Gendreau, 2000; MacKenzie, 2001, 2006).

The premise that evidence matters received another significant boost from a very unlikely source, Michael Lewis's (2003) best seller *Moneyball: The Art*

of *Winning an Unfair Game*. Lewis was puzzled by an odd empirical fact. Despite being in a small market and having a shoestring budget, the Oakland Athletics baseball team regularly won over 90 games a year and frequently appeared in the playoffs. How was this possible? By contrast, the New York Yankees outspent the Athletics—or “A’s” as they are known—by several times. It is not that the size of the payroll does not matter. The Yankees also won many games and, in fact, research shows that money spent on players’ salaries is related to winning (Hall, Szymanski, & Zimbalist, 2002; Wiseman & Chatterjee, 2003). Still, whereas the disparity in the Yankees’ and Athletics’ payrolls was large, the disparity in wins was not. What were the A’s doing to surmount the huge competitive disadvantage they faced with the Yankees and other financially flush teams?

Lewis’s answer was that the Oakland A’s were practicing evidence-based management. Decisions on which players to draft, play, retain, and trade were being made on the basis of statistics rather than on “clinical” experience from years of simply “being in baseball.” This approach was the brainchild of the Athletics’ general manager, Billy Beane, and was portrayed vividly in Lewis’s *Moneyball*. The book seemed to strike a chord, earning wonderful reviews (see, e.g., Thaler & Sunstein, 2003) and its way onto the best-seller list.

In this context, we suggest that *Moneyball* is a useful conduit for understanding the need to use evidence-based practices within the field of corrections. At first glance, baseball and corrections might appear to have little in common. But they share the common plight of being social domains in which irrational practices, based on unsystematic observation and “common sense,” have been enshrined with legitimacy. Both domains also are at the precipice of embracing a new paradigm—of leaping into the realm where decisions are guided by evidence. More specifically, *Moneyball* is a concrete way to illuminate how the correctional enterprise might be improved. We derive and share eight lessons from its pages. First, however, we will briefly tell the unlikely story of Billy Beane and the Oakland A’s.

MONEYBALL

The Traditional Baseball Paradigm

“When you get right down to it,” observes Schwarz (2004, p. xiii), “no corner of American culture is more precisely counted, more passionately quantified, than the performance of baseball players.” This fascination with numbers is not new. In fact, notes Schwarz, “arguments over the relative merits of batting average and fielding percentage, runs scored and runs driven in, date back to the game’s earliest days in the nineteenth century” (pp. xii–xiv). Ironically, despite the existence of an unending flow of data, baseball officials have long resisted attempts to use statistical evidence to guide their decisions. They are

particularly suspicious of outsiders who have never played, coached, or otherwise worked in baseball—that is, who have never been “within the white lines” of major league baseball (Gray, 2006, p. 195). Instead, they place a premium on what Merton (1972) calls “insider knowledge”—expertise derived from first-hand experiences that is not available to those not in the group. Clinical knowledge, in short, trumps actuarial knowledge.

The traditional baseball paradigm is based on four beliefs. First, a player’s talent is most accurately appraised by having “baseball men”—scouts—look at the individual in person. From years of playing and watching the game, it is believed that scouts have the judgment to distinguish which prospects have major league potential and should be drafted. Second, the statistics that have long been collected—batting average, runs batted in, earned run average—are more than adequate to assess a player’s performance and value to a team. Third, in game situations, decisions should be made according to the “The Book”—an unwritten compilation of baseball wisdom learned from insider experiences. This might involve, for example, batting a speedy player first in the lineup or bunting to move a runner into scoring position. Whether these customs—these “received truths”—stand up to empirical scrutiny is of no concern. Fourth, beyond “The Book,” intuition—presumably based on an acute reading of unique game situations—is a legitimate basis for managerial decisions. Quirky decisions that win games are to be celebrated as instances of baseball genius. Quirky decisions that lose games are to be seen as bold moves that just did not work out. The possibility that selective attention to success over failure might produce biased, ineffective future decision making is not a consideration.

The New Paradigm: Evidence-Based Baseball

As Gray (2006, p. 90) notes, “society’s anti-science impulses are mirrored in the insider baseball culture.” Over the years, baseball was depicted as being guided by wise traditions and by clinical expertise derived from years of experience in dealing with the unique situations and irreducible complexities inherent in the game of baseball. This near-hegemonic worldview, however, has been challenged during the past three decades. A new paradigm has emerged, one that embraces science, an actuarial approach, and an evidence-based analysis of baseball’s traditional wisdoms. The major figure within this paradigm has been Bill James. An iconoclastic figure from the nation’s heartland in Kansas, James produced reams of data and poignant essays that questioned widely accepted baseball knowledge and practices (Gray, 2006).

James was not the first to use evidence to provide new visions of the baseball enterprise. Branch Rickey, who is best known for helping to break the major league color barrier by bringing Jackie Robinson to the Brooklyn Dodgers, hired Alan Roth in 1947 to provide detailed statistical analyses of his

players. With a law degree from the University of Michigan, Rickey was receptive to data that would give him an edge in player decisions. In fact, "many of Rickey's decisions later hailed as brilliant . . . were bolstered by Roth's information" (Schwarz, 2004, p. 57).

Over the years, however, the use of evidence to inform baseball decisions proved sporadic and overwhelmed by the traditional insider paradigm. Starting in the late 1970s, Bill James would alter the intellectual landscape of professional baseball. Working in relative obscurity at first, James would become nationally known and, eventually, would be employed as an advisor to the Boston Red Sox (Gray, 2006). Three considerations contributed to his status and influence.

First, he gave the new paradigm a name: "sabermetrics." James derived this term "for his science" by marrying "the acronym for the Society for American Baseball Research and the Latin Suffix for measurement" (Schwarz, 2004, p. 127). This construct was important because it allowed other baseball researchers to join an identifiable movement; they would now be known as "sabermetricians."

Second, James engaged in what Hagan (1973) calls the "sociology of the interesting." His strategy was to take cherished folk wisdoms and then to show that, in fact, they are incorrect. For a generation of baseball fans raised in the 1960s and 1970s, this irreverence toward authority—this ability to unmask supposed truths as falsehoods—was fun if not exhilarating. Baseball's power elite thus were portrayed as stodgy and stupid, as clinging to outdated practices just as had the medical quacks of the 1600s.

Third and most important, James provided rigorous data to substantiate his claims. His first publication was called the *1977 Baseball Abstract: Featuring 18 Categories of Statistical Information That You Just Cannot Find Anywhere Else* (Gray, 2006, p. 31). It sold for \$3.50. Subsequent editions of the *Baseball Abstract* appeared and then other books followed. Again, the appeal of James's analyses was that his science revealed that the traditional paradigm simply misunderstood the nature of baseball and thus led to irrational practices. For example, James questioned the wisdom of attempted stolen bases and sacrifice bunts because they exchanged a base gained for a potential out; he showed that on-base-percentage (OBP), which included walks as well as hits, was a better predictor of runs scored than batting average; he revealed how players' batting averages could be affected by the dimensions of ball parks; and he questioned whether there was much evidence that "clutch" hitting exists or that the order in which players bat is a strong predictor of runs scored (Gray, 2006).

James certainly has a wide following outside baseball. Importantly, a new generation of mostly college-educated general managers is also increasingly receptive to sabermetrics. In 2002, the Red Sox legitimated Bill James when they hired him as a consultant. Two years later, the team broke the "curse of the Babe" and won their first World Series since trading Babe Ruth to the Yankees

in 1919. In 2007, another championship came to the Red Sox. James certainly was not the architect of the team, but his insights were a factor in the players signed, retained, and traded by the Red Sox. As Gray (2006, p. 156) observes, "Bill's influence on Major League Baseball is analogous to Charles Darwin's influence on nature. By changing the way we understand it, and changing the terms of the discussion about it, he did much to change the thing itself."

Still, within the baseball community, receptivity to his paradigm remains ambivalent and often outright hostile. A vigorous clash of paradigms persists. Insider knowledge continues to be trumpeted. Thus, in a recent column on Dusty Baker, the Cincinnati Reds' new manager, Paul Daugherty (2008, p. C1) observed that "if Baker manages by a book, it's one inside his head, not one written by Bill James." After all, Baker has years of experience on which to draw. As Daugherty concluded, "Here's a stat: Wins as manager: Dusty Baker, 1,162; Bill James, 0" (p. C10). Of course, the counterfactual is not considered: How many games might Baker have won had he made evidence-based decisions? But this is not the issue; James is not an insider, so what does he really know?

Billy Beane and the Oakland Athletics

In 1980, Billy Beane forfeited a football and baseball scholarship to Stanford University to sign with the New York Mets. Along with Darrell Strawberry, he had been one of two players the Mets had selected in the first round of the major league draft. Beane had inordinate athletic talent and the "look" of an exceptional physical specimen. A decade later, however, he sported a dismal .219 batting average and felt it was wiser to halt his career and become a scout for the Oakland A's.

By 1997, he had ascended to the position of the team's general manager. In so doing, he was prepared to conduct an experiment in sabermetrics—a real-life test of Bill James's new paradigm. What would happen if the team's decisions were based on scientific data?

This experiment was prompted by four factors. First, ironically, his own personal "insider" experience in baseball revealed how wrong insider knowledge could be. He looked like the prototypical outfielder and wowed the scouts with his sheer athleticism. But, as Beane understood, the hidden reality was that he could not hit very well. Second, when he joined the Athletics, the general manager was Sandy Alderson, a Harvard law school graduate who had never played baseball but who was an advocate of Bill James. He provided Beane with access to the sabermetrics' paradigm. Third, not wed to the traditional insider paradigm, Beane became enamored with the possibilities that inhered in actuarial decision making. It might give him an edge when competing against other teams. Fourth, the Oakland A's were financially strapped. With a limited budget, Beane would have to win without the luxury of high-priced

players. Unless he drafted well and traded for bargains, his team would be consigned to the lower echelon of the American League.

Beane's success in using evidence-based baseball is wonderfully chronicled in Michael Lewis's *Moneyball*. Dismantling the Athletics' reigning organizational culture that reflected the traditional insider paradigm, he insisted on making player personnel decisions based on meaningful statistics that could be shown to predict success in the major leagues (such as on-base-percentage). In so doing, he compiled a team that enjoyed a high level of success. As Table 1 shows, within two years the A's had a winning record. Then, from 2000 until 2006, the team averaged nearly 95 wins a year. Over the same period, the powerful New York Yankees averaged only two wins more.

The success of the A's is particularly noteworthy because of the limited budget available to them. As can be seen in Table 2, from 1997 to 2005 the A's were a true bargain: they ranked first among major league teams in the dollars spent per win (\$423,053). By contrast, the success of the Yankees was fueled by a payment that was almost three times higher (\$1,221,173 per win). In the next two years (data not shown), the A's dipped to fourth in the league in cost per win, mainly due to a poor 2007 season. Still, the point remain: during much of the last decade, the Oakland Athletics were highly successful despite a dismal budget.

This accomplishment is even more remarkable when one realizes that the A's achieved their consistent high level of winning despite having to "unload"—through trades or free agency—a cavalcade of all-star players that the team could not afford to keep. Faced with the inability to pay its proven stars, the A's lost players such as Johnny Damon, Jermaine Dye, Ray Durham, Keith Foulke, Jason Giambi, Dan Haren, Tim Hudson, Jason Iringhausen, Billy Koch, Mark McGuire, Mark Mulder, Nick Swisher, Miguel Tejada, and Barry Zito. How successful might the A's have been if Beane had been able to use his evidence-based management style unconstrained by budgetary considerations?

Table 1: Comparative records for the Oakland Athletics and New York Yankees, 1997-2007 (wins reported).

Year	Oakland Athletics	New York Yankees
1997	65	96
1998	74	114
1999	87	96
2000	91	87
2001	102	95
2002	103	103
2003	96	101
2004	91	101
2005	88	95
2006	93	97
2007	76	94

Table 2: The cost of wins for major league baseball teams, 1997–2005.

Team	Rank Order in Cost Per Win	Mean Cost Per Win in Dollars
Oakland Athletics	1	423,053
Minnesota Twins	2	439,174
Washington Nationals	3	443,448
Pittsburg Pirates	4	464,791
Florida Marlins	5	492,227
Kansas City Royals	6	515,703
Milwaukee Brewers	7	524,978
Tampa Bay Devil Rays	8	574,833
Cincinnati Reds	9	598,161
San Diego Padres	10	604,784
Chicago White Sox	11	604,998
Houston Astros	12	659,983
Detroit Tigers	13	676,336
Toronto Blue Jays	14	678,538
San Francisco Giants	15	702,021
Philadelphia Phillies	16	714,701
Cleveland Indians	17	728,524
Los Angeles Angels	18	732,408
St. Louis Cardinals	19	767,009
Colorado Rockies	20	770,079
Seattle Mariners	21	787,687
Chicago Cubs	22	862,166
Baltimore Orioles	23	899,322
Arizona Diamondbacks	24	889,973
Texas Rangers	25	930,985
Atlanta Braves	26	960,637
Los Angeles Dodgers	27	969,097
New York Mets	28	998,087
Boston Red Sox	29	1,005,667
New York Yankees	30	1,221,173

In the end, evidence-based baseball assumes that carefully analyzed evidence can minimize the biases and inefficiencies that inhere in decisions based on personal, unsystematic observations of one's individual experiences. Billy Beane's experiment provides an exemplar of science's power to increase the odds of success. Not all have been blind to this fact; *Moneyball* thinking has emerged as a viable paradigm that has its adherents. Even so, the resistance to scientific baseball has been stiff. In an epilogue to a later edition of *Moneyball*, Lewis described the debate as a "religious war." Echoing this view, Leonhardt (2005, p. 4–1) observes that the book has inspired "the equivalent of a theological dispute over whether baseball is a game of mystery or of data, of statistics and analysis or of intuition and human instinct." This reluctance to consider the benefits of evidence is perhaps expectable. Much is being challenged—an ideology, a way of life, a sense of being authoritative. Nonetheless, the point of these commentaries is that the continued embrace of the traditional baseball paradigm has been more a defense of the sacred than rooted in persuasive argument—almost the parallel of the Scopes trial in which evolution was rejected less on its own merits and more for the broader threat it posed to all that made life meaningful.

EIGHT LESSONS

As Ayres (2007, p. 150) notes, “there is an iron-clad law that it’s easier for people to warm up to applications of Super Crunching outside of their own area of expertise. It’s devilishly hard for traditional, non-empirical evaluators to even consider the possibility that quantified predictions might do a better than job than they can do on their own home turf.” It is for this very reason that we have turned to baseball to send the broader message of the importance of embracing an evidence-based approach in our own realm of corrections. In fact, baseball and corrections have much in common. Eight lessons, we argue, can be learned from *Moneyball* about the correctional enterprise.

Lesson #1: Correctional Treatment Programs are the Oakland A’s of Corrections

When the New York Yankees incorrectly judge a player’s talent, it is a disappointment but not a tragedy. With a salary budget in excess of \$200 million, the owner simply opens up his wallet and purchases the next star free agent. Billy Beane’s Oakland Athletics are not so fortunate. With limited resources at hand, there are few second chances to “get it right.” Beane must constantly make potentially risky player trades, giving up rising stars for the next set of unproven prospects. Without evidence-based decisions, the consequences could easily be years of dismal failure.

Corrections and, in particular, offender treatment programs are the Oakland A’s of governmental services. With offender populations under supervision rising to historic levels and state budget deficits looming large, corrections is woefully underfinanced. In this challenging environment, scarce resources must be used judiciously. There is simply no room to experiment with interventions that have not been proven to be effective. With high risk offenders, moreover, there are few second chances. If evidence-based treatment is not delivered, the likelihood that they will recidivate—victimizing people and property many times over—is inordinately high.

Lesson #2: Like Baseball, Corrections is Often Based on “Common Sense,” Custom, and Imitation—Rather than on Scientific Evidence

Baseball’s traditional insider paradigm has its cousin within corrections. Across the years, too few offender treatment programs have been based on empirically supported intervention strategies. Academic experts have been absent—either because they had no knowledge to share or because they were seen as outsiders. Programs, especially “innovative” interventions, instead were based on common sense and then often imitated across agencies and

states (Gendreau, Goggin, Cullen, & Papanozzi, 2002). Instances of such “correctional quackery” are too numerous to list, but some recent examples include scared straight programs, intensive supervision, and having offenders sing in choirs, raise pets, engage in long-distance running, and cross-dress to “get in touch with their feminine side” (Latessa, Cullen, & Gendreau, 2002; see also MacKenzie, 2001, 2006). How these programs would change the known risk factors for recidivism remains a mystery.

Lesson #3: Like Baseball, in Corrections “Looks” are More Important than Effectiveness

In *Moneyball*, there is a wonderful section in which scouts, discussing draft prospects, trumpet those who “look like a stud” and have a “face with character.” Players who deviated from this image of the prototypical athlete—a bit small, a large rear end, pudgy rather than chiseled, an arm that seemed to throw a touch too slow—were relegated to the scout’s dustbin. In dismay, Billy Beane would then consult the statistics and show why “looks” were unrelated to past and thus future performance. Muscles and a square jaw simply mattered much less than on-base and slugging percentages. Beane would thus discount the scouts’ insider views and draft by actuarial performance—by the evidence. The result is that he succeeded in drafting wisely, selecting players that other teams foolishly overlooked.

Correctional officials—or the politicians who guide their efforts—also readily embrace programs that “look good.” Among the most egregious examples are correctional boot camps. These programs were implemented largely because military discipline is accorded a privileged place in our national consciousness. It is seen as having “broken down” and “built back up” the character of many immature, if not wayward, young men. Having personally experienced the military, many elected and correctional officials were easily persuaded that the tough love of boot camps would instill moral fiber within juveniles and younger adults. What officials did not do, however, was to consult any evidence on whether military experience successfully reformed criminals and whether the sources of recidivism would be changed through the rigors of boot camp life. Of course, what “looked good” proved to be a failed experiment (Cullen, Blevins, Trager, & Gendreau, 2005; MacKenzie, 2006).

Lesson #4: Like Baseball, in Corrections the Wrong Theory Can Lead to Stupid Decisions

Based on Bill James’s analysis, Beane embraced a “theory of baseball” that contravened “The Book” at the heart of the insider’s paradigm. Beyond pitching, the key to winning games is to score runs within the context of an inning bounded by three outs. This simple conceptual insight, however, has

potentially profound implications. Within any given game, it makes problematic the sacrifice bunt (an out is exchanged for a base) and the attempted steal (where the risk of an out is present). This is because, in terms of producing runs scored, the cost of an out usually exceeds the benefits of advancing a runner one base. This insight also might affect who a team should draft. When high batting averages are privileged, players who secure walks are often overlooked. But on-base-percentage, which as noted includes walks, is a better predictor of runs scored than mere batting average. The theory of baseball explains why: a base is gained without the cost of an out.

Within corrections, theories detached from empirical evidence abound and lead to hopelessly flawed interventions. On occasion, these theories are kind-hearted, such as when the goal is to boost offenders' self-esteem in the mistaken belief that poor self-confidence underlies wayward conduct (Andrews & Bonta, 2006). Too often, the theories embrace a crude rational choice perspective in which it is asserted that some form of threat, harsh discipline, or pain will teach that crime does not pay and straighten out offenders. These impoverished theories, which conveniently neglect the empirical literature on predictors of recidivism, have little chance of working (Cullen, Pratt, Micelli, & Moon, 2002; see also Gendreau, Little, & Goggin, 1996). Understanding the cause of the problem—an understanding rooted in empirical data—is a prerequisite for its solution.

Lesson #5: Like Baseball, in Corrections Actuarial Data Lead to More Accurate Decisions than Personal Experience and "Gut Level" Decisions

In *Moneyball*, Billy Beane is depicted on draft day as celebrating the apparent stupidity of the franchises selecting players ahead of the Oakland A's. A common mistake is when teams draft "can't miss" high school pitchers. In fact, these pitchers are prone to injury and have compiled limited statistical profiles against mostly untalented hitters. By contrast, Beane's top pitching selections—those that are awarded lucrative contracts—are virtually all hurlers who played in college and have proven their durability and talent over a longer stretch of time. Their statistics, in short, predict future performance.

Similar to baseball, corrections is a field replete with decisions: who to incarcerate, who to parole, who to allocate services, and so on. In an amazing display of blindness or arrogance, those making these decisions—many of whom have never had a criminology course, let alone have read the relevant empirical literature—do so without any inkling that their choices may be governed by false criteria (e.g., whether a lawbreaker displays remorse at a hearing). This is especially true when judging an offender's risk of recidivating. To be sure, predicting the future—whether it is the performance of a baseball player or an offender—is a daunting challenge. Errors will be made. But the reality is

that corrections now has available offender assessment instruments that increase the odds of successfully prognosticating behavior (Andrews & Bonta, 2006; Bonta, 1996). Failure to engage in evidence-based decision making thus borders on the irresponsible. In baseball, the consequence is a failed draft; in corrections, an offender is needlessly confined or dangerously released.

Lesson #6: Like Baseball, in Corrections Knowledge Destruction Techniques will be Used to Reject Evidence-Based Approaches

Billy Beane was not a crusader for evidence-based baseball. In fact, he was content to remain in obscurity, using evidence to quietly exploit the inefficiencies of his competitors. Michael Lewis's *Moneyball*, however, unmasked and nationally publicized Beane's strategies. In many quarters where the traditional insider paradigm prevails, efforts were quickly made to undermine his approach. Some attacks were personal, depicting Beane as egotistical for thinking he was a so-called genius. Other claims were more subtle, trying to tarnish his accomplishments by noting that his team had not made it to the World Series. He also was accused of winning due to plain dumb luck—of fortuitously drafting three pitchers who carried his team (Tim Hudson, Mark Mulder, and Barry Zito). These critiques, of course, never address two more fundamental questions: Why would the evidence Beane uses not lead to better decision making? And how successful would the Oakland A's be if the low-budget team, which cannot retain its stars, made decisions on intuition rather than on hard data?

In corrections, these attempts to undermine the accomplishments of successful interventions are known as "knowledge destruction techniques" (Andrews & Bonta, 2006; see also Gottfredson, 1979). Favored "insider" interventions are defended without a shred of evidence. Successful "outsider" interventions are then held to impossible standards of proof (e.g., the follow-up period was only two years, not three years; meta-analyses do not include many unpublished studies). Of course, skepticism is a healthy norm within the scientific community. But differential standards of "proof"—virtually none for practices favored by insiders and the gold standard for evidence-based programs—are the hallmark of knowledge destruction.

Lesson #7: Like Baseball, in Corrections There is a High Cost to Ignoring the Scientific Evidence on What Works

In the deciding seventh game of the 2003 American League Series, the Red Sox led the Yankees 5 to 2 in the eighth inning. Pedro Martinez had pitched a remarkable game. The Sox's manager, Grady Little, had to decide whether to keep Martinez in the game or to replace him with a fresh reliever.

Little went with his “gut” and decided to “win or lose with Pedro.” This decision might not have been controversial except for the fact that Little had been given statistics showing that, across the season, Martinez’s performance declined substantially after the seventh inning and after he had thrown 105 pitches. Starting on pitch 110 to Derek Jeter, the Yankees hit a double, single, double, and double—tying the game at 5 apiece. The Red Sox would lose the game—and the team’s chance to play in the World Series—in extra innings. Grady Little would be fired as the Red Sox’s manager (Schwarz, 2004).

Like baseball, corrections is not immune to the high cost of ignoring the evidence (Van Voorhis, 1987). It is especially insidious, however, that many of these untoward consequences are hidden from public view. When elected officials trumpet a new “get tough” correctional practice based on pure speculation, they often are acclaimed for “doing something” about crime. Boot camps, again, comprise a priceless example, because they brought officials much fanfare and exploited the cultural beliefs of the public that military discipline builds moral fiber (Cullen et al., 2005). But the eventual costs—typically never disclosed to the public—were inordinate. Thus, millions of dollars were wasted on an intervention that had scant prospects of working; many young offenders were not diverted from a dismal life in crime; and many community members were needlessly victimized by offenders who might well have been reformed by evidence-based interventions. Unfortunately, accountability is limited. Unlike in baseball where Grady Little was fired for ignoring the data, the purveyors of correctional quackery are rarely asked to justify their failures. The time may well have come to do so.

Lesson #8: Like Baseball, in Corrections Evidence-Based Practices will Eventually be Difficult to Ignore

The new baseball paradigm advanced by Bill James and brought to life vividly in *Moneyball* is not going to disappear. Some baseball franchises will continue to ignore evidence to their peril; others will use the paradigm intermittently; and still others—a minority for now—will see evidence as integral to their enterprise. In the end, evidence-based baseball might well function like evolutionary theory. Because no experimental design study can be conducted and outcomes are open to different interpretations, the theory cannot be definitively proven. True believers in the traditional paradigm thus will have room to cling to old truths. But the evidence in favor of evidence-based baseball will mount over the years—just as the fossil finds have for evolution—to the point where only those of the traditional faith will deny its importance.

In corrections, a similar struggle will be faced. With so much at stake—offender reform, community safety, public monies foolishly wasted—the malpractice of ignoring evidence-based interventions will be harder to defend. The equivalent of a *Correctional Moneyball* certainly would help the cause! But in

its absence, scholars are creating an increasing body of evidence outlining the components or principles of effective and ineffective interventions (see, e.g., Andrews & Bonta, 2006; Gendreau, 1996; Gendreau, Smith, & French, 2006; Lipsey & Cullen, 2007; MacKenzie, 2006; Palmer, 2002). This knowledge base creates the ability to ask correctional officials and agencies a powerful question: Why aren't you doing what works?

CONCLUSION

Evidence-based approaches—whether in baseball or medicine or corrections—are accused of taking the art and humanity out of a field's enterprise (Gray, 2006; Rothman, 2007). And it must be admitted that an extreme actuarial approach that denies the wisdom of clinical experience is unwarranted. But the reality is that we do not live in a world populated by a bunch of "Houses"—the memorable doctor on the television series whose amazing clinical intuition allows him to diagnose seemingly mystifying medical conditions. In most contexts, the problem is not that we risk snuffing out such creativity and insider acuity. Rather, the greater risk is that we will subject people to practices that we have not bothered to show empirically do more good than harm.

Within corrections, however, special challenges remain. It is not sufficient to smugly criticize the purveyors of boot camps and similar misguided interventions as correctional quacks. For an evidence-based paradigm to take hold and shape practice, three important challenges will have to be confronted (Cullen & Gendreau, 2000).

First, as a profession, criminologists are most comfortable conducting studies showing how highly touted practices in corrections are, in fact, ineffective (Cullen & Gendreau, 2001). Although invaluable, these efforts do not address the reverse side of the coin: If certain programs have few effects, then what does work to reduce recidivism? Again, strides in this direction have been taken, but mostly by a limited and aging group of scholars (Cullen, 2005). The challenge ahead is thus for a new generation of criminologists to engage in *knowledge construction*—that is, to use evidence to design the interventions capable of reforming offenders.

Second, as information on what works continues to mount—as it is now doing—*knowledge dissemination* will have to occur. Sometimes called "technology transfer," in corrections there are minimal conduits for sharing detailed knowledge on how best to assess and reform offenders. In many cases, the difficulty is not practitioners' receptivity to knowledge but their inability to secure training in evidence-based practices. There is no functional equivalent in corrections to medical schools, but similar training facilities will be needed.

Third, *knowledge fidelity* will be a continuing concern. Even when evidence-based practices are developed and shared, it will be difficult to ensure that

programs are implemented and sustained with integrity. Limited resources, an absence of follow-up training, shifting staff, a changing political environment—these and a range of other factors can result in corners being cut and treatments being robbed of their capacity to transform the wayward. This problem is not unique to corrections; it occurs in medicine as well. But it must be an important point of emphasis in the time ahead.

Despite these hurdles to surmount, the emergence of evidence-based corrections is an uplifting development. Michael Lewis's *Moneyball* illuminated the power of evidence to achieve wonders in difficult circumstances. It thus created excitement and the chance for new vistas in a sport rich in, but also burdened by, its traditions. To be sure, a statistical, data-driven approach is not a panacea. But as in baseball, this paradigm does offer a formidable and still largely untapped strategy for transforming the correctional landscape. In so doing, advocates of evidence-based corrections have the potential to improve offenders' lives and to enhance public safety. This is a worthy adventure to join.

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