

## What do the social sciences have in common with baseball? The story of Moneyball, academic impact, and quantitative methods.

by Blog Admin

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*Moneyball, starring Brad Pitt, premiered recently in Britain and though not apparent from the title, the film helps clarify some of the most pressing debates in political science, especially the hot-topic of the 'impact' of social science. [Eric Kaufmann](#) discusses how the story of a US baseball coach who utilised the human sciences to create a winning dynasty highlights the real, measurable forms of knowledge that social sciences can produce.*



Based on Michael Lewis' gripping book, *Moneyball* recounts the tale of how Billy Beane, manager of the Oakland A's baseball team, managed to forge a winning dynasty on a shoestring budget. Beane's success owes a large debt to quantitative methods. His sidekick Paul Depodesta, an economics geek from Harvard, used multiple regression analysis to uncover the hidden relationships that conventional wisdom and the human eye failed to reveal. Depodesta's trademark laptop crunched the numbers to discover that only two offensive statistics really mattered when it came to winning: [on-base percentage](#) and [slugging percentage](#).

Beginning in 1999, Beane faced down his scouting staff and the skeptics and cleaned house on the basis of these new metrics. In terms of players, out went the bold and the beautiful, and in came the consistent, the boring, and the ugly. The A's roster of castaways included the gawky pitcher David Beck, nicknamed 'the Creature', and an overweight Alabamian, Jeremy Brown. When the A's called Brown to select him as their first rounder, he couldn't believe what he was hearing down the line and thought it must be a prank call from his roommates.

What lessons does *Moneyball* hold for the study of politics? Politicians and policymakers have been quick to defend the so-called STEM (Science, Technology, Engineering, Mathematics) subjects. After all, aren't these real, measurable, and 'hard' forms of knowledge while the social sciences are a flabby luxury to be sacrificed in our lean times? Clearly not.

If any field of endeavour is competitive, it is professional sports. Beane clearly demonstrated that the human sciences contain truths every bit as hard as those in the natural sciences. His investment in Paul Depodesta paid off handsomely and has been repeated throughout baseball and beyond. Arsene Wenger is British football's Billy Beane, watching numbers as much as players to better leverage his team's thin wallet. Damien Comolli, formerly of Tottenham, and Mike Forde of Chelsea, are friends of Billy Beane who learned their mathematical arts from the Master. Beane himself has taken a new interest in football, reports Simon Kuper of the FT.

Quantitative social science analysis has numerous applications and its practitioners are clearly recognised as adding value. While it is true that the shine has come off the 'quants' whose job it was to predict how humans and companies behave in financial markets, most retain their jobs and remain indispensable to their employers. The demand for political science 'quants' such as psephologists is not quite so great because their products tend to be public goods rather than private commodities that can be captured and marketed.

Yet Beane and his Oakland A's would be nowhere without public goods. Sports statistics are a social science like any other, and the groundwork for Beane and Depodesta's insights was laid by the non-profit field of Sabermetrics (after SABR, the Society for American Baseball Research). In the 1970s, an obscure baseball hobby statistician from small-town Kansas, Billy James, began to develop his own ideas about which numbers counted. He was the first to identify the importance of walks for a team's winning percentage. Over time, his small group of spare-timers blossomed into a large network. This social science infrastructure, rather than that of private firms, established the know-how which allowed the Beanes and Wengers of this world to thrive. By contrast, the proprietary data collected by private teams involves enormous duplication of effort, no pooling of data and zero sharing of key insights from which a scientific

knowledge base can be built.

Meanwhile *Moneyball* tells us a great deal about the simmering debate between the protagonists in the great 'quantitative vs. qualitative' debate. Those outside academia may see this as a tempest in a teapot, but inside its halls, the matter is often deadly serious. Political science lies on the faultline between Economics, which has become entirely quantitative, and sociology, which remains resolutely qualitative and anti-positivist. In the United States, quantitative methods dominate in virtually all the top universities and in leading journals like the *American Political Science Review*. In Britain, only the University of Essex is unabashedly quantitative, though there are important 'quant' subcultures in many British departments.

Might Britain be ripe for its sabermetric moment, with the University of Essex playing the role of the Oakland A's? Without wishing to comment on Essex's payroll or the quality of its draft picks, one take home point from the movie might be that the days of qualitative 'scouts' and their homely methods are numbered. As Paul Krugman wrote in 1996, there is a conflict 'between the essentially literary sensibility that we expect of a card-carrying intellectual and the scientific/mathematical outlook that is arguably the true glory of our civilization. That war goes on; and economics is on the front line. Or to be more precise, it is territory that the literati definitively lost to the nerds only about 30 years ago—and they want it back... But they can't have it, because we nerds have the better claim.'

Have the nerds won? Beane's success in winning during the regular seasons of 2000-6 has turned sour since then. More damning is that he never translated the A's regular season success into a major league pennant. Freely admitting that the playoffs escape the statistical regularities that assert themselves over a 162-game season, he may have overlooked the intangibles of leadership and team psychology. Sports quants have committed other slip-ups: when Alex Ferguson at Man U sold Jaap Stam to Lazio Roma in 2001 on the basis of his declining number of tackles (which are statistically associated with winning), he surprised many and committed an epic blunder. Stam's ability to control defensive space meant he rarely needed to tackle.

Perhaps these are teething pains on the road to better science. Unfortunately, events in politics often move too fast to generate runs of statistics in which predictable patterns can assert themselves. Meanwhile, the statistical tools which work in baseball, with its set-piece format, have been difficult to translate into football, with its 11 moving parts and multiple interactions. Beyond the relatively predictable corner kicks, insights have been harder to come by. Politics resembles football more than baseball, with a few exceptions like elections and roll call votes. Even the economy, where demand tends to fall when prices rise, does not always behave itself. As Krugman belatedly recognised after the financial crisis, 'the economics profession went astray because economists, as a group, mistook beauty, clad in impressive-looking mathematics, for truth'. Quantitative methods have, and will continue to, improve our understanding of politics. But, like Beane's sabermetrics, it is no silver bullet.

*A full version of this blog first appeared in [Political Insight](#) magazine.*

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