Routledge
Taylor & Francis Group

Sport in Society

Cultures, Commerce, Media, Politics

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/fcss20

The iron cage of efficiency: analytics, basketball and the logic of modernity

Matt Dawson

To cite this article: Matt Dawson (2023) The iron cage of efficiency: analytics, basketball and the logic of modernity, Sport in Society, 26:11, 1785-1801, DOI: 10.1080/17430437.2023.2208040

To link to this article: https://doi.org/10.1080/17430437.2023.2208040

Published online: 03 May 2023.

SPORT IN SOCIETY
2023, VOL. 26, NO. 11, 1785–1801
https://doi.org/10.1080/17430437.2023.2208040

Routledge
Taylor & Francis Group

The iron cage of efficiency: analytics, basketball and the logic of modernity

Matt Dawson

Sociology, University of Glasgow, Glasgow, UK

ABSTRACT

Analytics, the application of advanced statistics to sport, has become increasingly prominent. This paper will focus on their application in basketball. I will argue that the introduction of analytics is an attempt to expand the logic of modernity into sport, an area which, for Elias, its demands had historically been temporarily suspended. Instead we can see some of the key tenets of analytics – which I will explore via reference to *The Mid-Range Theory*, a recent book promoting their use in basketball – as reproducing the modernist demand for control, order, prediction and efficiency. In turn, I will also explore how the critique of analytics reflects the critique of modernity, most notably in its attempt to disenchant the social world and create a new iron cage of efficiency. Therefore, the case of analytics in basketball shows us that what Wagner called modernity as interpretation still has significant social purchase.

ARTICLE HISTORY
Received 20 January 2023
Accepted 24 April 2023

KEYWORDS
Analytics; basketball; Bauman; Elias; modernity; sociology of sport

DeMar DeRozan splits opinion. DeRozan is an American professional basketball player in the National Basketball Association (NBA), the foremost league in the world. He joined the NBA in 2009 and since then has played for the Toronto Raptors, San Antonio Spurs and Chicago Bulls (his current team). In his early years, he was noted for his athletic play, but as his career progressed he became more well known for a playing style which relies heavily on guile, using subtle moves and exquisite footwork before, often using convincing fakes, finding ways to shoot the ball above the outstretched hand of the defender guarding him. Each DeRozan basket seems a testament to unique cunning and mastery.

It also has been effective. DeRozan has been named to six all-star teams ('all-stars' are nominated by fans and coaches as representing the best 12 players in either of the NBA's two conferences) as well as three All-NBA teams (these are selected by journalists to represent the top players for the whole season. There are three all-NBA teams, first, second and third, each containing five players), including two second teams (roughly equivalent to top 10 for that year).[1] DeRozan's greatest skill is his scoring ability. For his career, he has averaged 21 points per game. This is the 17th highest among active players and, by amassing just over 20,000 points during his career, DeRozan is the 44th highest all-time scorer in a league which is 76 years old, a ranking that will rise as he continues playing. In addition,

CONTACT Matt Dawson matt.dawson@glasgow.ac.uk

he has improved over his career, most notably in terms of his 'playmaking',[2] as indicated by his average numbers of 'assists' (a pass to a teammate who then scores) per game increasing from around 2–3 to 5–7. DeRozan has also been part of successful teams. The NBA operates an 82-game regular season which selects the 16 (out of 30 teams) who compete in a four round playoff series. This culminates in two teams playing in the NBA Finals, with the winner crowned champion for that year. While DeRozan has not to this point reached the NBA Finals, his teams have made the playoffs in 7 of his 14 years and have reached the semi-finals once and the quarter finals two more times. It seems then to have been a successful career, with years still to go and with a sizeable group of fans. Indeed, while playing in Toronto, he was referenced in a song by Drake (a Raptors fan) who suggested that 'my city love me like DeMar DeRozan'.

Nevertheless, there are those who feel that despite these accolades, DeRozan is an overrated player. Most notably, DeRozan's critics would point to his 'plus/minus'. Plus/minus is an indicator of whether, while you are on the court, your team either outscores, or is outscored by, the opposition. For example, a positive plus/minus of +5, means your team outscores the opponent by five points each game on average while you are on the court. A negative plus/minus, for example −5, means being outscored by that amount during your playing time. In all but 2 of his 14 years, DeRozan has had a negative plus/minus, often while his team was winning. For example, on his most successful team, the 2015/16 Toronto Raptors, DeRozan had a plus/minus of −6.2, while the team outscored its opponents by 4.5 points per game. By this measure, Toronto was much better, 9.7 points per game better to be exact, with DeRozan off the court. When seeking to explain this discrepancy, reference is sometimes made to DeRozan's poor defensive play, but focus tends to fall on his style of offence; the same style which has, seemingly, made him so successful. As I will expand on below, DeRozan tends to disproportionally shoot what are seen as 'inefficient' shots. The result is that DeRozan's 'true shooting percentage' (a measure which takes into account the difference in points each type of shot produces) would place him 73rd among active NBA players. This, it is suggested, is very low for a player who has been either the primary or secondary offensive option on almost every team he has played for.

What is the significance of this disagreement for sociologists? Is it not it the case that disagreement about the value and ability of players is common to sport fandom and analysis? Part of what Elias and Dunning (1986, 71) called the 'passionate outbursts', which are encouraged in sport against the control of passions encouraged elsewhere? I will instead argue that DeRozan is symptomatic of a broader conflict in the cultural vocabularies available to us to make sense of basketball, and sport more generally, today. Note the language I have used in this introduction, in DeRozan's praise we see comments on his style – cunning, guile, playmaking, footwork – and descriptive statistics. In criticism of him, we see more advanced statistical terminology – plus/minus, true shooting percentage, efficiency of shots. In short, the latter perspective bears the mark of 'analytics', the use of increased quantification and statistical logic to understand sport. In this paper, I am going to explore how the increased entrance of analytics into basketball is, in effect, the latest spread of the logic of modernity into cultural life. In turn, we can understand the significant opposition to analytics in basketball as evocative of the critique of modernity. As Gruneau (2017) noted, the emergence of sport and modernity share a similar timeline and, partly due to this, sport has been intimately tied to the advancement *and* the critique of modernity, including the

advancement of capitalist modernity (Collins 2013). A similar point is made by Guttmann (1978) for whom contemporary sport is 'modern' due to its embrace of modern processes such as secularism, specialisation of roles and rationalisation. Therefore, my goal in this article is to explore this rearticulation between the logic of modernity – which in Gruneau's (2017, 9–10) characterisation would share elements of the instrumental and discursive understanding of modernity – and sport in the context of the increased use of analytics. This rearticulation, in many ways, goes beyond the processes noted by these authors in impacting both the format *and* narration of sport. This, in turn, suggests that Elias and Dunning (1986) claim that the experience of sport was beyond the reach of modernity must now be questioned further. While my focus in this article is on the use of analytics in basketball, the themes I draw upon here may well be relevant to other sports where these statistical techniques are being increasingly used. Indeed, there is increased focus on the use, and value of such approaches in football/soccer (e.g. De Silva et al. 2018, Memmert and Raabe 2018) and, while this would be a matter for future research, it is possible a similar interaction with modernity is at work there.

When a more difficult shot is better: the rise of analytics

Analytics began in baseball in a story made famous by Michael Lewis in *Moneyball* (2003), later made into a movie starring Brad Pitt. It involves using advanced statistics to assess the value of players and strategy. The desire of those using analytics was to remove the inherent biases and blind spots found in subjective assessment and, by using such statistical measures, discover strategies and players who otherwise have been overlooked by more 'traditional' means of assessment. The emergence of analytics was aided greatly by the increased availability of sports data and improved computer technology. It also was aided by the expansion in University education, especially in the data sciences. This produced a large number of people numerate in handling data who were sport fans and who needed an outlet for their activities. In turn, with the increased capital valuation attached to, and profit generated from, sport team ownership the entry of owners from hedge funds and financial capital provided a receptive audience for quantified, data-led, approaches.

Baseball shares what C.L.R. James (1963) identified in cricket: a certain simplicity and beauty due to it involving two players facing each other directly at the crease. Due to this direct interaction, but contrary to what James would have favoured, baseball was quite receptive to quantification since at most points action can be reduced to an interaction between two people – a pitcher and a batter – where we can calculate the odds of each person's chance of success. When applied to basketball, a team sport with 10 players on the court, it became more complex. Therefore, the key starting point for basketball analytics was efficiency of shots.

There are three ways of scoring in basketball: free throws (worth one point each), two-point shots from near the basket out to the three-point arc[3], and three-point shots beyond that arc. A key message of analytics was to convert those shots into a measure of efficiency, based on points per shot. For example, if we know that an NBA team averages around one point per possession, then our goal is to maximise shot attempts that increase that average. If an average player shoots 60% on the shots closest to the rim ('layups' as they are termed), then each layup is worth 1.2 points; this is an efficient shot. The same is true of free throws,

if an average player shoots 70% on these, then they are worth .7 points each. Given players usually shot two at a go, that is 1.4 points per possession.

What about further away from the basket? If a player takes a shot from 21 feet, this is worth two points and let us assume an average player shoots 40% on such a shot. This shot is worth .8 points per possession and therefore is an inefficient shot. But, if that player moves back three feet, and even if we lower their percentage to 35% in doing so, given it is worth three points it is worth 1.05 points per possession and suddenly becomes efficient. If we can improve that player's three-point percentage, for example getting it to the 40% they shoot from slightly closer, it is suddenly worth 1.2 points per possession, or as valuable as a shot close to the rim, but without the trouble of having to navigate multiple defenders to get that close.

Doing these calculations means that teams are encouraged to play a particular way. To be exact three types of shots are encouraged – layups, free throws and threes. A premium is also based on the 'corner three', the one part of the three-point arc where the distance is shorter, and thus percentages are improved. It also suggests teams should encourage their opponents to shoot 'long twos' as the most inefficient shots. Therefore, returning to DeRozan, a player like him who shoots largely from the long two area – less than 10% of DeRozan's shots are threes, while roughly half come from between 10 feet away from the basket out to the three-point arc – is seen to be an inefficient player. If either a) he distributed his shots differently, with more threes and more shots closer to the rim or b) his opportunities were passed to another player able to do this then, analytics would suggest, his team would be more efficient offensively and therefore improve. This explains why his 'plus/minus' is so negative for a player who, without access to these numbers, seems to play like a star.

Further analytic measures seek to capture this efficiency, with 'true shooting percentage' being frequently cited. While this calculation is percentage based, it is linked to the points each player generates per shot; for example, a 'true shooting percentage' of .600 is 60% and therefore that player averages 1.2 points per shot. A look at the list of active players ranked by true shooting percentage for their career indicates three types of player: the tallest players who shoot exclusively close to the rim (Rudy Gobert, first, .671; DeAndre Jordan, second, .645), those who shoot a high volume and percentage of three point shots (Steph Curry, fourth, .627; James Harden, tenth, .610) and players who have a more varied selection of shots, but produce a high efficiency on them (Nikola Jokic, third, .632; Kevin Durant, seventh, .619). DeRozan's .553, 73rd, pales in comparison to this competition.

Analytics has been very successful in the NBA, with almost all teams now having an analytics department which will include figures with titles such as 'Director of Quantitative Research'. It has also produced a significant media contingent who advocate, or simply make use of, analytics in their coverage. Consequently, it has impacted the style of play with the most notable impact being a significant increase in three-point shots. This shot was introduced into the NBA in 1979 and was a minority pursuit for most of that time; for example, even in 1992, only 8.7% of shot attempts were three-pointers. In 2023, 38.7% of shots were threes. These shots have largely come at the expense of the 'long two' with only 16% of shots coming between 10 feet away from the basket and the three-point line in the 2022/23 NBA season.

If this was the ultimate outcome of analytics, then, significant as it would be, the sociological interest would be minimal. However, I want to suggest that analytics has provided

a different way of narrating and understanding the game, which reflects modernist logic. I will now outline what I mean by this logic of modernity.

Predictable and controlled: the logic of modernity and sport

As Wagner (2008) notes, when we speak of modernity, we need to carefully unpick what it is we are discussing. Modernity is both 'a way in which human beings conceive of their lives' (Wagener 2008, 2) while also being a dedication to particular institutional forms and ways of justifying knowledge. Wagner captures this dual element by speaking of modernity as 'experience' and as 'interpretation'. While the former, with its institutional forms and moments which shape modernity is significant – and is the focus of Guttmann's (1978) discussion of modern sport – this paper is focused on modernity as interpretation. This, suggests Wagner, is an approach to the 'self-understanding' of modernity as both ethos and experience (Wagner 2008, 12).

It is this ethos, the underpinning principles, or what we may call the 'logic' of modernity as a project which concern me here. This shapes the ways in which we as actors seek to interpret and narrate the modern world of which we are part. The logic of modernity provides both what Mills (1940) termed the 'common vocabulary of motives', namely how we explain our own motives and actions to the social world, but also the logic for understanding the movements of that world itself. Modernity provides a 'cultural story' (Richardson 1990) which explains the world with reference to dominant interests and expectations, including the role of the rational economic actor for the emerging capitalist order. Such stories are significant for how we engage in culture. For the Australian sociologist John Carroll, humanity has to 'live by story' (Carroll 2018, 160), by turning our experience into a story, with a logic, an explanation and, like all good stories, a cast of characters who get the rewards or punishments they deserve. These stories give human social action 'a permanency, an immortality, and above all a dignity that it is otherwise denied' (Carroll 1980, 39). Modernity provides us with a story to narrate the world we confront.

So, what is this story? For Bauman, we can trace the development of a logic of modernity to the desire to make the world both ordered and predictable. As he argues, at a time when humanity became disenchanted with religious explanations for order and the West was looking for a way to justify its position:

> Modernity was not merely the Western Man's thrust for power; it was also his *mission*, proof of moral righteousness and cause of pride. From the point of view of reason-founded human order, tolerance is incongruous and immoral. The new, modern order took off as a desperate search for structure in a world suddenly denuded of structure (Bauman 1992, xiv–xv)[4]

This desire for order is, for Bauman, an inevitable part of human culture (Bauman 1973). Culture 'consists in turning chaos into order, or substituting one order for another – order being synonymous with the intelligible and meaningful' (Bauman 1973, 96). What marked out the modern cultural attempt for Bauman was two factors. Firstly, it was all-encompassing. Modernity sets itself up against ambivalence and saw this as a problem to be solved. For the modern order, *any* sense of ambivalence, disorder or certainty was awaiting the human ordering project, for Bauman (1991, 7) 'we can say that existence is modern in as far as it is effected and sustained by *design, manipulation, management, engineering*'. It is this element of design and manipulation which marks out modernity, given the imperialist

mission of science which 'was born out of the overwhelming ambition to conquer Nature and subordinate it to human needs' (Bauman 1991, 39). All of nature should be controlled, rational and ordered and it was in science that we had the promise of a means to achieve this goal. For Echeverría (2019, 170) this was indicative of *capitalist* modernity which had an inherently 'mathematising' element to this project as the ability to calculate was used as an indicator of this order being achieved and, thereby, capital being generated. Therefore, as indicated in Weber's notion of instrumental rational action, modernity produces an orientation which, in emphasising order and predictability, creates clear 'expectations as to the behaviour of…other human beings' and, with its emphasis on science and mathematical calculation, emphasises 'rationally pursued and calculated ends' (Weber 1978, 24), central to modernity's connection to capitalism. While, as Bauman notes, social scientists have often misunderstood the laws that natural sciences offer – these are less hard and set 'laws' of nature and more a probabilistic claim of most likely outcomes (Bauman 1978) – modern science, including the statistics which relied upon mathematising, was frequently invoked in the quests for laws whose calculation indicate order and predictability.

Secondly, this quest for order, predictability and calculation is a never-ending quest. As Bauman notes, the classifying as something as 'order' inevitably produces new forms of 'disorder'. Modernity is 'an obsessive march forward – not because it always wants more, but because it never gets enough' (Bauman 1991, 10), including the desire to further expand markets (Bauman 1992, 51–52). As Wagner (1994) points out, modernity was both about liberty for individuals *and* discipline in terms of further extending its mission.

Therefore, we can say there are four elements which are central to the logic of modernity: order, predictability, calculation and its progressive mission. While not speaking in this language of modernity, we can see much of this logic at work in Elias's (2000) *The Civilizing Process*. Here Elias highlights how this element of control, Wagner's disciplining function of modernity, was expanded to individuals. The increase in etiquette manuals and minute guidance in customs reflected the broader state and class formations which modernity and capitalism were generating. Therefore, modernity increasingly, across the cultural sphere, made society and human action more predictable and demanded an increased amount of control from actors. As he puts it, a '"civilised" standard of behaviour' involved 'a very high degree of automatic constraint and affect transformation' which was 'conditioned to become a habit' (Elias 2000, 157). This notion of control was, at the same time, increasingly plausible, as greater scientific knowledge promised to make the external world subject to human understanding and, potentially, manipulation. For Elias (2000, 35), this urge 'to improve, modify, adapt' was central to the French scholars who set out the process of *civilization*.

Of course, the emergence of modernity brought with it its own critique. These can be grouped into three categories. One, akin to the role Bauman (1986) assigns socialism in modernity, is as 'counter-cultures'. Such counter-cultures may disagree on the means developed under modernity, but in suggesting alternative means they aim for the same end. For example, most forms of socialism disagree with the functioning of capitalism as the dominant formation of modernity, but their end goal is a modern one: of furthering of democracy into more areas of society. The second body of criticisms emerged from a broadly romantic position, in which the dominance of rationality and encroachment of bureaucracy, often itself linked to capitalism, was seen to limit the possibility of human greatness and happiness. While, of course, Weber himself was not unproblematically a romantic – although he was perhaps unwittingly inspired by it (see Gouldner 1962, 209–210) – his notion of the

iron cage and its famous links to 'specialists without spirit, sensualists without heart' is a good example of such a critique (Weber 1992, 124). This position had a somewhat inevitable focus on the heroic individual who was now problematically expected to increasingly control themselves for modern ends. A third critique is what Wagner terms the 'self-cancellation' of modernity. Frequently found in sociology, such an approach 'identified basic problems in the practice of modernity but…remained reluctant or unwilling to abandon the imaginary significations of modernity' (Wagner 1994, 62). In short, much like the counter-cultures of the Left, though with a broader cultural and not solely political focus, they remained tied to a project though were critical of many of its processes.

Despite its intimate connection with emerging forms of modernity (Guttmann 1978, Gruneau 2017) sport provided a realm in which these critiques of modernity, especially in their romantic form, could find a home. Inevitably, sport commentary and fandom emphasises elements of human achievement which sit more comfortably within this romantic tradition – the individual/team who takes on the odds and heroically achieves; the exceptional achievements of the well-developed human body; the emotional displays of victors and vanquished; the feats of stamina that sustain players through a long game. It also provided lessons of comradeship and the promise of valiant, heroic activities linking us to ancient times (Gruneau 2017). Furthermore, by valorising the body unsullied by industrial degradation, sport seemed to offer the ideal of a world untouched by the worst excesses of capitalism. Indeed, for Elias and Dunning (1986), sport occupies a significant place within the civilizing process. For them, sport operates as a release-valve for the tension built up by the requirement to control elsewhere in life. Sport, as a 'mimetic' experience, can 'evoke tensions in the form of a controlled, a well-tempered excitement without the risks and tensions usually connected with excitement in other life-situations' and thereby has a 'a liberating, cathartic effect' (Elias 1986a, 48–49). This 'Quest for Excitement', as Elias and Dunning (1986) call it, allows for this different logic to dominate, at least temporarily, as the example of football demonstrates:

> it is prolonged battle on the football field between teams which are well matched in skill and strength. It is a game which a large crowd of spectators follows with mounting excitement, produced not only by the battle itself but also by the skill displayed by the players…The tension of the play communicates itself visibly to the spectators. Their tension, their mounting excitement in turn communicates itself back to the players and so on until tension reaches a point where it can just be borne and contained without getting out of hand. If, in this manner, the excitement approaches a climax, and if then suddenly one's own team scores for the decisive goal so that the excitement resolves itself in the happiness of triumph and jubilation, that is a great game which one will remember and about which one will talk for a long time – a really enjoyable game (Elias and Dunning 1986, 86–87)

While the demands of civilised modernity mean that sport is now expected to carry more detailed rules and exclude the extreme acts of violence found in an earlier era (Elias 1986b; Guttman 1978), the ways in which we are asked to experience sport provide a safe mimetic experience of violent warlike conditions as a form of tension relief. A similar view is offered by Carroll (1998), for whom sport operates as both an appeal to togetherness with fellow players and/or fans, while also being an opportunity to 'test your luck' by seeking to explain whether the Gods or fate are on our side. It is a rare metaphysical experience amidst the rational demands of modernity. As he puts it: 'Sport gives Clark Kent the chance to identify with his Superman, every weekend' (Carroll 1998, 37).

As we have seen sport and capitalism have a strong connection in modernity. As Collins (2013) argues sport, with its focus on competition, 'fair play' and, above all, a world of 'winners' and 'losers', became a key cultural prop in the advancement of capitalism. For Gruneau (2017, 160–198), this notion of sport producing 'winners' and 'losers' is reflected in the connection between sporting megaevents and 'development'. It is therefore unsurprising, as Collins (2013) details, that the history of sport seems to be an even greater embracing of capitalism as 'amateurism' (however corrupted it may be) comes to be replaced by professionalism united with the eventual riches of television coverage. As we see below, this invocation of winning at any costs, always perhaps most stark in American sport, reflecting that society's strong embrace of capitalism, is it itself central to analytics *and* to its critics.

It is then interesting to consider basketball and capitalism in the context of Elias and Dunning's focus: the experience and narratives around sport. Here, companies have relied upon romantic notions of the sport uncorrupted by modern concerns for their capitalist ends. Basketball has been promoted by referring to the almost super-human, unattainable position of players. Michael Jordan, the personification of basketball's commercial power, is a good example. Nike famously advertised his sneakers by dismissing claim that 'it must be the shoes' which gave him his abilities. Meanwhile, Gatorade commissioned a song, 'I Want to be Like Mike', which made clear that, no matter how much Gatorade one consumed, being 'like Mike' was impossible. Therefore, when it comes to basketball at least, with the exception of the veneration of the 'win at all costs' mentality, the calculative, rational means-end material concerns of capitalism have been able to sit alongside the narrative of sport as outside modernity quite effectively to this point without significant resistence.[5]

It is here we can return to analytics. I would suggest the growth of analytics in basketball is an attempt to undo the trend noted by Elias and Dunning of leaving sport outside the logic of modernity and instead is an attempt to subject the game to this logic. As we have seen, this would involve seeking to explain basketball not with reference to heroic attributes of athleticism, the luck of the gods[6] or the excitement of built-up tension, but rather to explain it via rationality, control and predictability in an ordered system. There are economic incentives for those advocating analytics – as indicated by the increased number of roles devoted to analytics and basketball. Furthermore, there is an increased market for such statistics with the expansion of legalised sport gambling in the US. However, without wishing to dimmish these markets it is not clear that economic drivers would be the key factor for the adoption of analytics in the sport more broadly. The NBA, like most large-scale sport today, draws most of its income from television; it is not obvious how introducing greater statistical measures is likely to increase TV audiences, especially new audiences. To explore then how analytics has expanded this logic of modernity in basketball, I will turn to a recent book which puts the analytics case exceptionally well, before turning to the critiques of analytics which, in turn, echo the aforementioned critiques of modernity.

Modernity in basketball: The Mid-Range Theory

The Mid-Range Theory: Basketball's Evolution in the Age of Analytics is a book published in 2021 by Seth Partnow. Partnow started out as a basketball journalist, running a website called *Nylon Calculus* which, as the name indicates, offered an analytically informed approach. Then, in 2016, he began working for the Milwaukee Bucks, an NBA team,

eventually becoming their 'Director of Basketball Research'. After three years working for the Bucks, he returned to journalism and currently contributes his analytics informed approach to *The Athletic*. *The Mid-Range Theory* then is an attempt to bring the knowledge gained from writing about and applying analytics to the sport and, in Partnow's (2021, xviii) words, 'explain the development of the modern style of play from a statistical standpoint'. I have chosen to focus on *The Mid-Range Theory* here not only due to Partnow's significant role as an advocate, but also since it is, on my subjective reading, a perceptive and at points subtle advocacy of analytics.

A reader picking up *The Mid-Range Theory* will note immediately its attempt to present itself as a serious scholarly take on its subject; there are frequent footnotes to explain upon concepts and link to other relevant pieces. Each chapter begins with an epigraph which seeks to place the argument into a broader cultural context (the anthropologist Marilyn Strathearn is quoted for one of these). The book not only seeks the legitimacy of science in appearance, but also in content. There is one discipline that Partnow turns to most frequently to explain the behaviour of players and other analysts: behavioural economics. Early in the text Partnow (2021, 4) introduces the work of Daniel Kahneman and Amos Tversky and their 'proofs of all the ways in which our minds routinely trick us into short-circuiting rational decision making' as a justification for the implementation of analytics. To counter such poor decision making, there is a frequent invocation of 'laws' which can explain behaviour. For example, there is a chapter devoted to applying 'Goodhart's law' to argue the folly of using a particular statistical measure as an indicator, rather than an outcome, of good play (Partnow 2021, 41–55). These points are demonstrated by graphs, a language based heavily on statistics and their acronyms (hence the need for both an introductory note *and* appendix on data and statistical terms) and a desire to bring cold objective rationality to analysis of the NBA. Much of this reflects the earlier discussion concerning efficiency of shots with Partnow (2021, 10) claiming that measures of 'shot quality…reduces the fog of uncertainty'. However, Partnow's text goes far beyond this starting point of analytics. For example, he discusses 'Linsanity', a memorable moment where a hitherto unknown Taiwanese-American player by the name of Jeremy Lin played at a level equivalent to the best players in the world for a couple of months in 2012. Lin attracted huge attention and popularity due to a mix of his underdog story (enriched by the note that he had recently been sleeping on a teammate's sofa), ethnicity, exciting style of play and his playing for the New York Knicks. Partnow seeks to show how the traditional statistics being used to demonstrate Lin's ascension were 'broken' and underplayed the extent to which, despite Lin's impressive scoring run, he was committing a historic amount of 'turnovers' (losing possession of the ball to the other team) relative to how often he handled the ball (Partnow 2021, 32–40).

Where *The Mid-Range Theory* shows its strongest affinity to the logic of modernity however is in its teleology and focus on prediction. To start with the first of these, Partnow notes what has become an acknowledged failing of analytics in basketball: the difficulty it finds in assessing defence. There are multiple reasons for this I will not explain here, but analytics has been much more effective in assessing offensive production. While Partnow carefully discusses the reasons why defence is so difficult to assess analytically, he ends up offering the classically modern notion that it is inevitable that scientific ways of measuring defence will become available, since we just need to wait 'until we get to the point where we can [statistically] actually see players affecting and influencing offensive choices'

(Partnow 2021, 158) it is simply a matter of time as our skills, technology and knowledge increase. Therefore, there is an innate faith here in the increase of scientific knowledge being an unstoppable force:

> Every discovery along any of these paths will increase the universe of what is knowable little by little. But what will grow even more rapidly is the area of that universe which we know exists but can't yet see into. Every question leads to three more next steps (Partnow 2021, 234)

He argues such measures will inevitably also account for what have traditionally been considered unquantifiable attributes, such as 'feel' or 'basketball IQ' (Partnow 2021, 226). These attributes are akin to the mastery of the game that Bourdieu saw as central to the habitus. Therefore, for Partnow, the inevitable end of analytics is as a quantitative measure, in a contradiction, of our amount of habitus.

The second element is prediction. Partnow sees the virtue in analytics to be its ability to predict optimal outcomes for teams. This includes strategy (for example, when is the optimal time to try a 'two for one', the attempt to get two shots up before the end of a quarter while the opponent can only attempt one, Partnow 2021, 159–172), evaluation of players, ways of managing player health and optimal ways of presenting information to fans. A good example here is Partnow's suggestion that 'people analytics', the quantifying of personality types to indicate who would click with who as teammates, would help winning since:

> While it stands to reason that the lessons of industrial psychology would require some modification to be applicable to as selective an endeavour as professional basketball, building and maintaining team cohesion is the focus of intense study and investment across many elite organizations…is life in the NBA really that much different than in other high-pressure, elite organizations such as Navy SEAL teams? (Partnow 2021, 234)

The claim here is that analytics is a predictive science which can make behaviour predictable and controlled as we learn what outcomes are more likely than others, and understand the 'laws' which govern the game and the people who play it.

We can see here how a text like *The Mid-Range Theory* reflects the logic of modernity and, to use Carroll's language, gives us a story to narrate the game. This story emphasises quantitative understanding rather than heroism. Partnow is a sophisticated watcher of the game and acknowledges that analytics cannot explain everything (at least not yet), but his book emphasises that starting with these statistical measures is appropriate since 'concepts like probabilistic thinking and understanding the practical implications of variance and expectation are incredibly useful for comprehending what's going on in basketball' (Partnow 2021, 4). Importantly, this ought to be taken on board by players who, when playing the game, should consider these questions of efficiency. Therefore, analytics is not just how we narrate the game, but also changes the game itself. Indeed, Partnow, someone who started as a journalist then worked for a team, is a personification of this move from analytics as epistemology to technology. This in turn furthers the valorisation of winning at all costs as central to sport, or, as Partnow (2021, 234) ends his book: 'the goal…is to try to get and stay a step or two ahead of the next team. That is the very essence of competition, and the contest extends further past the floor than ever before'.

Whereas Elias and Dunning (1986) saw sport as an area where the controlled release of passion and tension was encouraged as an attempt to contrast the control elsewhere in society, this perspective is one which argues that sport should involve greater control and

application of rationality to make them more efficient and well-understood. Sport becomes less an athletic world of achievement, though it remains that for Partnow, but more an intellectual question, waiting for proper quantitative study. It is the application of the logic of modernity to an area that it previously saw as beyond the bounds. While, in many ways, this expansion continues the ever-closer embrace of sport and capitalism, with the focus on 'winners' and 'losers' attached to instrumental rationality, it also suggests a qualitative change in how the sport is discussed and played. It is therefore perhaps inevitable that the analytics represented in Partnow's text attracted a response.

Opposition to analytics and the critique of modernity

In 2015 Charles Barkley, a former NBA player and now a prominent analyst known for his outspoken opinions, offered the view that:

> The NBA is about talent…All these guys who run these organizations who talk about analytics, they have one thing in common—they're a bunch of guys who have never played the game, and they never got the girls in high school, and they just want to get in the game (Barkley, quoted in Paine 2015)

Barkley also argued that teams who uses analytics do not win championships and suggested that 'I wouldn't know Daryl Morey [a basketball executive who advocates analytics] if he walked into this room right now' (Barkley, quoted in Paine 2015). These comments, reflecting on questions of the demographics of those advocating analytics, the talent of players which analytics seemingly cannot grasp and why teams win reflect the varied critiques of analytics which can, I suggest, be linked to the critique of modernity we saw earlier. To understand these critiques, we need to start with the question of race.

Basketball is a predominantly black sport. In 2021, 73.2% of NBA players were black, while only 16.8% were white. However, it has been noted on frequent occasions that analytics is a heavily white field. To some extent, this reflects an earlier point, that most prominent analytics writers and team employees have had university level education, in many cases to postgraduate level[7] and therefore analytics advocates emerge from a sample which skews white[8]. Partnow, based on his own survey, suggests that 75% of full-time analytics staff in the NBA are white (Partnow 2021, xix). It seems that this lack of diversity is stark even given its sample population and especially in a field, basketball, which is otherwise largely made up of people of colour (Benbow 2021). This inequity then perpetuates racist hierarchies in two ways. Firstly, those hired to work in analytics departments, which assess players and therefore have some hand in deciding what contracts primarily black players should be offered, are largely white. Secondly, working with teams has traditionally been a successful post-playing career for retired players; as knowledge of advanced statistical techniques becomes an increasing requirement for such posts, it limits former players' opportunities. This, in turn, increases the disparity between the racial makeup of players and those judging them from managerial positions.

Therefore, as Partnow notes in his book, there is an inherent racial inequality in how analytics is being implemented, as he puts it in a way which echoes modernist language: 'if a discipline which is supposed to be about unlocking secrets and broadening understanding is instead seen as exclusionary, there is much work to be done' (Partnow 2021, xx). To understand this sociologically, we can return to the work of Echeverría (2019). For him,

modernity presupposes an idealised actor who embodies 'whiteness' (*blanquitud* in the original Spanish). This is an actor who subscribes and reproduces the belief that 'the logic of the accumulation of capital dominates the logic of concrete human life and imposes on humans every day the need to self-sacrifice' (Echeverría 2019, 51). For Echeverría (2019, 170) part of this capitalist modernity is the very acceptance of calculation and predictability, of the 'mathematising' of knowledge mentioned previously. While this is not an exact replica of racial whiteness (*blancura*), for Echeverría it has historically been linked to it and continues to be reproduced in dominant institutions, such as Business and Law Schools, which require this particular 'white' disposition as a habitus. A similar point is made by Appadurai (1996), who highlights the role of calculation in colonial rule. As he details in the Indian case, the use of statistics had both a disciplinary and pedagogical role in creating a certain Indian population and politics which bore the markers of colonial rule. Statistics started from the premise that 'the bodies of certain groups are the bearers of social difference and moral status' (1996, 119) which could be codified and ranked. Indeed, for Goldberg (1993) a key element to modernity was precisely the ordering of racialised bodies. Therefore, we can argue that what we are seeing here is a continuation of the link of modernity to 'whiteness' as an order of ranking and directing non-white bodies which, while not intimately link to white ethnicity is more likely found among this group as dominant actors. This, in turn, reflects a longer trend of the NBA policing black bodies, as found for example in its imposition in 2005 of a dress code to counter 'hip-hop' styles of dress (Lorenz and Murray 2014).

Away from this criticism which, as I note, is one shared, at least in part, by the advocates and critics of analytics, there are four main criticisms offered of analytics. Here, rather than use a text-based approach by looking at a book such as *The Mid-Range Theory*, I have drawn upon a broader knowledge of the criticism of analytics. I will, in discussing these critiques, highlight how they draw upon similar themes to the critique of modernity.

Analytics as a way for the athletically ungifted to get into basketball- put in characteristically colourful language by Barkley above, one claim here is that the invention of analytics is a way for those without the athletic talent to become part of a basketball team and, in turn, tell those more talented than them what to do. Here we have an almost Nietzschiarian claim of the ethos of the weak being used to limit the prowess of the strong, for Wagner a key figure in the 'self-cancellation of modernity' critique (Wagner 1994, 7). What is the 'correct' way to play should, in this logic, be determined by those with the ability to play, rather than those without the talent; to paraphrase an earlier quoted phrase from Weber, it should be the specialists *with* spirit and the sensualists *with* heart. In a way, this critique could also be said to reflect, in reverse, the (justified) fear that Collins (2013, 27–37) noted advocates of amateurism had in a previous era, namely that the entrance of professionalism would lead to their losing their position of status and success. Here, the athletically gifted who were advantaged by professionalism, who occupy the positions of what Bourdieu (1993, 124) terms the 'connoisseur' who 'has schemes of perception and appreciation which enable him to see what the layman cannot see', now contest the entry of new (athletic) 'amateurs', who share the privileged class position of the old amateurs.

Analytics means 'everyone plays the same way'- As noted earlier in this article, analytics encourages efficiency in shots which, for most players, means taking a diet of roughly similar shot attempts. As we also saw, this then had a direct impact on style of play. This led to the critique that all teams employ roughly the same style of play now, with a focus on too many

threes being taken. Here we find a similar critique to the homogenising impacts of modernity, think of Lefebvre's claims about the boredom produced by the homogenised new town – the 'pure essence of boredom' found in the deadening and homogenising institutions of modernity (Lefebvre 1995, 116–126) – as an example. We can also see something similar in how C.L.R. James (1963, 217) argued that cricket had increasingly adopted a 'welfare state of mind' with players like 'functionaries in the Welfare State' practising a rejection of the 'essentially artistic and therefore individual' pursuit in favour of security. We can identify an 'analytics state of mind' as reflective of the logic of modernity; rather than emphasising security, this emphasises efficiency. This is also akin to how James criticised this style of play for seeking to lessen the margin of error; therefore, like him, many critics of analytics, to paraphrase James, await the 'young Romantic [who] will extend the boundaries of basketball style with a classical perfection' (cf. James 1963, 222). Perhaps this is a DeMar DeRozan who masters the analytically derided 'long two'.

Analytics cannot capture the key elements of 'winning'- This is the claim that there is some ethereal element, an element of desire or dedication, that truly successful basketball players and teams have, which cannot be quantified. In many ways, it was recognition of this ethereal element that led Partnow to place his faith in the quantifiable 'people analytics' emerging from industrial psychology. It could be argued that in Partnow's invocation of behavioural ethics we see a repeat of what Elias noted earlier, the desire for French intellectuals to improve, modify and adapt individuals through the use of psychological measures. Indeed, for Bauman's modern intellectuals often took their key mission to be the shaping of humanity and, as a result, 'were accused of imposing one, "middle-brow", homogenized standard' (Bauman 1992, 18) over the diversity of human life. Therefore, the notion that analytics can capture these ethereal, personal or even spiritual elements of 'winning', produces a similar response to the modernist argument that intellectuals can remake individuals against that of the heroic athlete whose talents come from some innate physical gifts. This critique reminds us once more of the 'self-cancellation of modernity', a common goal is shared, in this case winning – an attribute which can unite the demands of capitalism, modernity *and* the original focus on sport as perfection of the body (Gruneau 2017) – but there is divergence on the cultural emphasis needed to achieve it. This critique also shares Appadurai's (1996, 133) claim that much as maps with territory, statistics 'flatten and enclose' human experience, making it fit preconceived ideas without reference to the spiritual, echoing romantic notions of how modernity views the individual.

Analytics rob the game of emotion- As we saw, for Elias and Dunning, what was significant about sport under modernity, was that it was a moment where emotional release, kept under check in our everyday life, was able to run free. The argument here is that, for those both watching and playing the game, the use of analytics removes the build-up of emotional tension and release. The excitement of seeing two teams of athletes compete to the end of a competitive game, with one team coming out on top via a last-minute score, is somewhat lessened if we are told that actually the game was won when the victorious team took a higher percentage of their shots from three-point range over the course of a game. By subjecting the analysis of the game to numbers, by demystifying it, we remove what makes it sport.

These points reflect the ways in which this argument about analytics reflects a broader conflict over the encroachment of modernity. Indeed, what all of these critiques share is similar to the concerns Weber raised about the iron cage of rationality in modernity. While

Weber condemned the 'technical and economic conditions of machine production which today determine the lives of all the individuals who are born into this mechanism' as part of the iron cage of rationality (Weber 1992, 123), with analytics we can see the critique of an iron cage of efficiency. For critiques of analytics it is the sameness, rationalising, demystifying and cold changes brought by both how we speak about, and play, basketball, which has created this new iron cage where, rather than the emotion of the game and athletic achievements shaping how it is viewed, we get the valorising of efficiency. Here, there is a condemnation of the impersonal, homogenising and dehumanising invocation of statistics – the 'mathematising' of modernity – to something previously seen as impervious to such modernist consideration. Weber also spoke of how the disenchantment of modernity involved the suspension of 'magic' including encouraging a 'negative attitude…to all the sensuous and emotional elements in culture' (Weber 1992, 62). With its focus on the modern precepts of rationality, predictability and control, the iron cage of efficiency constructed by analytics is, in effect, continuing this modern mission into the cultural realm of sport. This is the contrasting story of basketball offered by the critique of analytics.

Conclusion

We have seen in this article how advocacy of analytics in basketball, and opposition to it, reflects the debate around the encroachment of the logic of modernity on other areas of social life. Whereas sport was traditionally seen as somewhat beyond the reach of modernity, that has changed as the increased quantification offered by analytics becomes increasingly common. I have suggested that modernity, and the critique thereof, offer two different stories, or ways of narrating the sport, a sport which has itself been changed by analytics; these stories sit in a mutually antagonistic relationship. Guttman (1978, 40–42) has argued that basketball, the rare sport where we can identify its exact date of birth – 21st December 1891 – and inventor – Dr James Naismith – is an innately 'modern' sport given it came into the world codified as a set of rules which reflected modernist rationality. Therefore, it is perhaps possible that basketball is particularly receptive to the further encroachment of modernity via analytics. But, as we have seen analytics actually begins in a game that Guttman notes emerged prior to modernity, and whose appeal is partly based upon this, baseball. Furthermore, the romantic critique of modernity via analytics is stronger in basketball than its modern birth would suggest. Therefore, the processes identified here are likely to occur across global sport more broadly.

It is notable that this conflict is emerging at exactly the same point as the logic of modernity is seen to be losing appeal. The rise of populist movements around the world are seen to suggest a move away from the rational, calm expertise of modernity and towards a more emotionally driven, subjective form of politics. While, as some have pointed out (Bluhdorn and Butzlaff 2019), the relationship is much more complex than a simple linear move away from modernity, the rise of populist movements certainly suggests some of the key emancipatory elements of a modern project which put its trust in expertise and knowledge have been eroded. In the case of analytics and basketball, we can identify an exact opposite movement. This should, as Wagner pointed out, make us aware of the need to think through the many different forms that modernity can take – it can be a political formation and way of narrating life. These two may overlap, but we can identify them in different situations.

I would like to end by returning to DeMar DeRozan. In the 2021/22 season something remarkable happened: suddenly everyone liked DeRozan. In his first year with the Chicago Bulls, analytically inclined analysts started to point out that he was having a positive impact on winning. His plus/minus of +5.1 was not only his first positive plus/minus for ten years, but also way outpaced a team which was outscored by −0.4 points per game. DeRozan was now bringing up his teammates. He averaged a career-high 27.9 points per game, which was fifth in the league and also did a first in NBA history by hitting game winning shots in back-to-back games. All of this seemed to be leading to a fairy tale season of both exciting play *and* statistical efficiency; he was winning 'on the stats sheet' and through dramatic moments. For nearly half the year, the Chicago Bulls were among the top teams in the league, until a large number of injuries lessened their chances. Nevertheless, the Bulls won 46 games, their largest number for seven years, and DeRozan was in consideration for Most Valuable Player in the NBA throughout the season. While the Bulls took a step back in the 2022/23 season, partly due to the continued impact of injuries, DeRozan's plus/minus remained higher than the team's overall performance.

Such success left analytics advocates in a quandary: why was DeRozan suddenly so successful? The answer came quickly. He was still taking shots that were, on the whole, inefficient, he was just making a higher percentage of them. At this point, the obvious question comes, is this a marker of improvement, that DeRozan has now mastered his game and, therefore, has through his singular athletic achievements, been able to make the inefficient efficient? Or, was he just statistically 'lucky' and at some point we will see a 'regression to the mean' as DeRozan shoots the percentages he shot previously? As we have seen in this paper, these notions reflect the conflict between different stories of basketball, of the advocacy and critique of modernity which, DeRozan, unwittingly, has become the personification of.

Notes

1. All of the basketball statistics in this paper are taken from Basketball Reference (https://www.basketball-reference.com/) and are accurate through the conclusion of the 2022/23 NBA regular season.
2. This is a phrase used to indicate the ability to create scoring opportunities for your teammates.
3. The three-point arc (so called given its shape) is a line drawn at each end at the court. Shots from beyond it are worth three points. In the NBA, the arc is 23 feet 9 inches away from the rim at the top and 22 feet away in the two corners.
4. All emphasis in this paper is the author's own.
5. While an explanation for the lack of a critique of the NBA's ultra-capitalist ethos sitting alongside these romantic notions of Jordan, and other players', success is beyond the scope of this article, one possible suggestion relates to Guttman's (1978) claim that basketball is somewhat unique as a sport invented in modernity. Without any significant traditions before the connection of capitalism and sport, there is not the same kind of romanticised ethos of basketball as a sport 'for the people' later corrupted by capitalism as found in, for example, football/soccer (Collins 2013).
6. Indeed, it is notable that basketball players and analysts will, on occasion, invoke the 'basketball Gods' who reward or punish players who 'play the right way' (e.g. Tynan 2022)
7. For example, Partnow has a postgraduate qualification in Law.
8. Indeed, one of the most prominent commentators of colour who uses analytics, Bomani Jones, began a PhD programme in economics before turning to sport journalism. It is nota-

ble, as Jones details in an interview, that the one time he was invited to the 'Sloan Sports Analytics Conference', an annual meeting focused on analytics and basketball, he was asked to be on a panel discussing activism, rather than the use of statistics (Chotiner 2019).

Acknowledgments

I am very grateful to Andy Smith who read a draft of this article and provided valuable comments and reading suggestions. My thanks also to the two reviewers provided by *Sport in Society* who wrote excellent, thought-provoking, reviews which have improved this paper.

Disclosure statement

No potential conflict of interest was reported by the authors.

ORCID

Matt Dawson http://orcid.org/0000-0002-0649-676X

References

Appadurai, A. 1996. *Modernity at Large: Cultural Dimensions of Globalization*. Minneapolis: University of Minnesota Press.
Bauman, Z. 1973. *Culture as Praxis*. London: Sage.
Bauman, Z. 1978. *Hermeneutics and Social Science*. Oxford: Routledge.
Bauman, Z. 1986. "The Left as a Counter-Culture of Modernity." *Telos* 1986 (70): 81–93. doi:10.3817/1286070081.
Bauman, Z. 1991. *Modernity and Ambivalence*. Cambridge: Polity Press.
Bauman, Z. 1992. *Intimations of Postmodernity*. Oxford: Routledge.
Benbow, J. 2021. "The Sports Analytics Community is Overwhelmingly White and Male. What is Being Done to Make it More Diverse?" *Boston Globe*, February 19. https://www.bostonglobe.com/2021/02/19/sports/sports-analytics-diversity-mlb-nba/
Bluhdorn, I., and F. Butzlaff. 2019. "Rethinking Populism: Peak Democracy, Liquid Identity and the Performance of Sovereignty." *European Journal of Social Theory* 22 (2): 191–211. doi:10.1177/1368431017754057.
Bourdieu, P. 1993. *Sociology in Question*. London: Sage.
Carroll, J. 1980. *Sceptical Sociology*. London: Routledge and Kegan Paul.
Carroll, J. 1998. *Ego and Soul: The Modern West in Search of Meaning*. Sydney: HarperCollins.
Carroll, J. 2018. "Response." In *Metaphysical Sociology: On the Work of John Carroll*, edited by S. James, 156–167.Oxon: Routledge.
Chotiner, I. 2019. "Bomani Jones on the N.B.A., Analytics and Race." *New York Times*, June 17. https://www.newyorker.com/news/q-and-a/bomani-jones-on-the-nba-analytics-and-race
Collins, T. 2013. *Sport in Capitalist Society: A Short History*. Oxon: Routledge.
De Silva, V., M. Caine, J. Skinner, S. Dogan, A. Kondoz, T. Peter, E. Axtell, et al. 2018. "Player Tracking Data Analytics as a Tool for Physical Performance Management in Football: A Case Study from Chelsea Football Club Academy." *Sports* 6 (4): 130.
Echeverría, B. 2019. *Modernity and 'Whiteness*. Cambridge: Polity Press.
Elias, N., and E. Dunning. 1986a. "Introduction." In *Quest for Excitement: Sport and Leisure in the Civilizing Process*, edited by N. Elias and E. Dunning, 19–62. Oxford: Basil Blackwell.
Elias, N. 1986b. "The Genesis of Sport as a Sociological Problem." In *Quest for Excitement: Sport and Leisure in the Civilizing Process*, edited by N. Elias and E. Dunning, 126–149. Oxford: Basil Blackwell.

Elias, N. 2000. *The Civilizing Process*. Oxford: Blackwell.
Elias, N., and E. Dunning. 1986. "The Quest for Excitement in Leisure." In *Quest for Excitement: Sport and Leisure in the Civilizing Process*, edited by N. Elias and E. Dunning, 63–90.Oxford: Basil Blackwell.
Goldberg, D. T. 1993. *Racist Culture: Philosophy and the Politics of Meaning*. Oxford: Blackwell.
Gouldner, A. 1962. "Anti-Minotaur: The Myth of a Value-Free Sociology." *Social Problems* 9 (3): 199–213. doi:10.1525/sp.1962.9.3.03a00010.
Gruneau, R. 2017. *Sport & Modernity*. Cambridge: Polity Press.
Guttmann, A. 1978. *From Ritual to Record: The Nature of Modern Sports*. New York: Columbia University Press.
James, C. L. R. 1963. *Beyond a Boundary*. Durham, NC: Duke University Press.
Lefebvre, H. 1995. *Introduction to Modernity*. London: Verso.
Lewis, M. 2003. *Moneyball: The Art of Winning an Unfair Game*. New York: W.W. Norton and Company.
Lorenz, S., and R. Murray. 2014. "Goodbye to the Gangstas": The NBA Dress Code, Ray Emery and the Policing of Blackness in Basketball and Hockey." *Journal of Sport and Social Issues* 38 (1): 23–50. doi:10.1177/0193723513491750.
Memmert, D., and D. Raabe. 2018. *Data Analytics in Football*. London: Routledge.
Mills, C. W. 1940. "Situated Actions and Vocabularies of Motive." *American Sociological Review* 5 (6): 904–913. doi:10.2307/2084524.
Paine, N. 2015. "Charles Barkley Doesn't Love Analytics, But Analytics Sure Love Him." *FiveThirtyEight*, February 11. https://fivethirtyeight.com/features/charles-barkley-doesnt-love-analytics-but-analytics-sure-love-him/
Partnow, S. 2021. *The Mid-Range Theory: Basketball's Evolution in the Age of Analytics*. Chicago, IL: Triumph Books.
Richardson, L. 1990. "Narrative and Sociology." *Journal of Contemporary Ethnography* 19 (1): 116–135. doi:10.1177/089124190019001006.
Tynan, M. 2022. "Keldon Johnson's Spurs Have Basketball Gods Smiling." *Corporate Knowledge*. October 31. https://matthewtynan.substack.com/p/spurs-beat-timberwolves-recap-keldon-johnson
Wagner, P. 1994. *A Sociology of Modernity: Liberty and Discipline*. London: Routledge.
Wagner, P. 2008. *Modernity as Experience and Interpretation: A New Sociology of Modernity*. Cambridge: Polity Press.
Weber, M. 1978. *Economy and Society*. Berkley: University of California Press.
Weber, M. 1992. *The Protestant Ethic and the Spirit of Capitalism*. London: Routledge.