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Stats Entertainment: The Legal and Regulatory Issues Arising from the Data Analytics Movement in Association Football. Part One: The Development of Data Analytics and Property Rights in Data

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Data analytics has become a critical part of professional football. Data analytics brings with it a number of challenging legal questions, brought into sharper focus by the reported ‘Project Red Card’ legal action, in which the legality of the systematised use of player performance data has been called into question. Focusing on the position in English law, this two part article takes a holistic approach to assessing the legal issues presented by the data analytics movement.

Part One sets out contextual information on the development of data analytics in football, before examining whether the data produced in football are capable of ownership, either in raw format or after manipulation, taking into account the nature of property and intangible assets, relevant intellectual property laws, and non-IP protections.

Part Two of this article will go on to consider the position in respect of data protection law (including FIFA’s Data Protection Regulations). Finally, some broader legal issues are considered, including competition law and the regulation of artificial intelligence.

The conclusions of Part One and Part Two together are that the intellectual property rights position is broadly positive for data analysts, with legal protections capable of application in many circumstances. However, data protection law presents a more complicated problem, with a number of challenging compliance obligations for the analytics community, albeit with scope to exploit player performance data where those obligations are met.

Keywords: Analytics; Football; Data; Ownership; Intellectual Property; Trade Secrets; Confidentiality

1. Data analytics in football

Professional association football¹ is in the midst of a data revolution. The manifestations of data in sport are multi-farious—data are exploited for commercial purposes (Fried and Mumcu 2016), betting (Glanz and Armendariz 2018), fantasy sports,² and medical purposes (Sikka et al 2019)—and, in common with most industries,³ have grown to become ‘not only normal, but a vital part of any team’s decision making process’ (Alamar in Fried and Mumcu 2017).

One revolutionary use of data in football comes in the form of quantitative analytics performed on the activities which take place on the field of play. Analytic methods ‘use data to draw conclusions and make decisions’ (Severini 2020) with the intention of yielding improved playing results.

The application of data to football is not an entirely new phenomenon in European football: Charles Reep began collecting match data in the 1950s (Anderson and Sally 2013: 15), and more modern data collection and analysis came about in the 1990s with the founding of sports data companies *Prozone* (which began ‘Football’s transformation into a game of numbers’ (Biermann 2019: 125)) and *Opta Sports* (‘the first of these companies to emerge’ (Anderson and Sally 2013: 10)) in the UK. However, the depth and sophistication with which data are applied to football has now significantly developed, with Biermann (2019: 6) suggesting the game has now ‘reached its digital tidal point’. It is well documented that Liverpool Football Club relied heavily on data-driven methods as they won the 2019 Champions League, 2019 Club World Cup, and 2020 Premier League.⁴ Data analytics has become a critical part of the modern game, used in player recruitment and retention, opponent analysis, player performance optimisation, and beyond. Reportedly, Kevin de Bruyne eschewed the services of an agent in favour of data analysts when agreeing to a new contract with Manchester City (Lee 2021). Terms such as ‘expected goals’ have become common parlance in football, moving from use in small analytics communities to featuring on BBC’s flagship football highlights show *Match of the Day* (Stanton 2017).

Frodl (2015) examines the market players in the generation of data in football, delineating the parties who collect and utilise data into three categories: 1. Specialist data-orientated private companies; 2. Sports governing bodies (SGBs); and 3. Clubs. As is made clear by Biermann (2019), there is an important additional category to consider; the ‘fanalyst’ who collects or analyses performance data for the purposes of private enjoyment or *ad hoc* consultancy to the football industry. The delineation of the participants in the sports data ecosystem, and the broadening of those categories to encompass ‘fanalysts’ is important when considering the legal and regulatory framework in which the data analytics movement sits (see Part Two of this article, at section 1.4).

The use of data in sport was recently brought into sharper focus by ‘Project Red Card’ (Ornstein 2020), under which it is reported that legal action has been initiated by ‘More than 400 current and former players...[against] betting and data-processing companies who utilise their personal statistics without consent or compensation’ (Ornstein 2020).

From a legal and regulatory perspective, the data analytics movement raises a number of complex issues, principally in respect of:

- i. ownership rights in data;
- ii. data privacy law;
- iii. the regulatory responses to data issues of the relevant SGBs; and
- iv. the sundry other issues which may arise in the context of the specific structure of the football data analytics industry, such as competition law.

Whilst the commercial value of data may have taken on increased sporting significance to football clubs, the legal issues concerning ownership rights in data remain a complicated patchwork without an underpinning *sui generis* right in item-level data. These issues are explored in section 2.

Conversely, the data boom in football coincides with a significant evolution in personal data privacy law outside the game of football in the form of the European Union (EU) General Data Protection Regulation⁵ (the GDPR). The impact of the GDPR on data analytics in football will be examined in Part Two of this article, as will the introduction of the Fédération Internationale de Football Association (FIFA) Data Protection Regulations. Part Two will also consider some of the broader legal issues that may be faced now and in the future by football data analysts, such as the application of competition law, and the future regulation of artificial intelligence.

The focus of both parts of this paper will be the legal position under English and EU law, given the significance of England as a location and market for professional football, and given that the UK is an epicentre of the football data analytics movement, with key football data analytics consultancies such as Opta,⁶ StatsBomb, Analytics FC, and Twenty First Group located in the UK. However, it must be recognised that each of the football and the data analytics communities are truly global, and as a result, there could be significant variance in the legal position from data set to data set, club to club, and analyst to analyst.

Furthermore, whilst the focus of this paper will be data analytics as applied to professional football in England and Wales (and Europe more broadly insofar as the legal and regulatory issues are transversal) and this research seeks to reflect the legal, regulatory and commercial specificities of football, many of its conclusions can readily be applied to other sports to which quantitative research and analysis methods may be applied.

2. The legal status of data

In the Premier League, one million pounds spent in salary is estimated to be worth around 0.45 points (Pelechrinis and Winston 2021). The international player transfer market is worth around £5-7 billion per year (FIFA 2020a). The gross Premier League wage bill is in excess of £3 billion per year (Maguire 2020). Consequently, the data analytics which help teams to score more and concede less, trade players more efficiently, and maximise points per pound spent on wages, has a clear sporting and commercial, and thus monetary, value.⁷

It follows that those who collect and manipulate data would seek proprietary rights in such data in order to protect any competitive advantage it may derive. Conversely, other participants may wish to assert proprietary rights over data—for example, the players who generate such data, competitor teams, or the leagues who organise the tournaments in which the data are generated.

In order to establish how proprietary rights may attach to data, first it is important to separate data into two categories: In the first category is raw, unrefined, unprocessed, uncategorised unstructured data. Consider, for example, a supporter watching a game who keeps a mental note of the number of shots her favourite centre forward takes. That number—immanent, undocumented, unmanipulated—is comprised in this first category of data. This will be referred to in this article as ‘Raw Data’.

By distinction, consider data which is collected and then processed in some way—for example, by addition to a structured database, by combination with other data or manipulation, or on which other operations are performed. This will be referred to in this article as ‘Structured Data’.

The distinction between Raw Data and Structured Data is important for intellectual property rights purposes, as the structuring process may in itself attach certain IP protections. Before considering the rights which may apply to

Structured Data (by dint of its being structured), it is important to consider whether any property rights reside in Raw Data. It follows axiomatically that if property rights reside in Raw Data, the same rights will reside also in those data when they become Structured Data.

2.1. The legal status of Raw Data

There is no statutory framework for ownership rights in Raw Data.⁸ So, an examination of the legal status of Raw Data entails broad conceptual questions as to the nature of property and the nature of information. These are, however, not *new* questions; the issues presented by the juxtaposition of property rights and intangible assets are by no means novel to English law,⁹ and as a consequence there is an established common law framework for the treatment of Raw Data ownership in law, albeit one that has, necessarily, not developed at the pace of the development of data usage in society generally.

Quite apart from elite sport, the speed of development in data usage creates foundational legal and regulatory questions. A report published by the UK national data protection regulator, the Information Commissioner's Office (the ICO), says:

'Big data, AI and machine learning are becoming part of business as usual for many organisations in the public and private sectors...driven by the continued growth and availability of data' (ICO, 2017:9)

This has seen regulatory responses in some data rich industries.¹⁰ The development of data and technology has also brought about technologies which precipitate new legal paradigms. One of the most significant examples of the revolutionary uses of data is in the development of blockchain, smart contracts and crypto assets. The relevance of the invention and proliferation of these technologies to data analytics in professional football may not be immediately obvious; however, the dematerialised nature of blockchain technologies has raised questions as to the status of crypto assets (and smart contracts) in law. In response to those conceptual challenges, in 2019 the UK Jurisdiction Taskforce¹¹ produced a comprehensive legal statement on crypto assets and smart contracts (UKJT 2019). The conclusions of that statement in respect of crypto assets in particular are highly relevant to the legal status of Raw Data, given the examination of the legal status of 'assets' which exist predominantly as information alone.

Despite its name, the UKJT statement does not, in and of itself, have the force of law, but the analysis contained in it was endorsed by Bryan J in *AA v Persons Unknown* [2019] EWHC 3556 (comm).

While the conclusion of the UKJT (2019) was that there is scope for crypto assets to be treated as property in English law, under the analysis set out therein it is clear that Raw Data are not capable of ownership (in the absence of further developments in the law).

The particularly salient parts of the UKJT statement (2019) in relation to Raw Data for present purposes are the examination of the nature of property and the nature of information.

2.1.1. The nature of property

It is stated above that 'those who collect and manipulate data would seek proprietary rights in such data' (emphasis added). That rights in Raw Data would be proprietary rather than some other legal interest is important, because a proprietary interest denotes control. As the UKJT says, 'The fundamental proprietary relationship is ownership: the owner of a thing is, broadly, entitled to control and enjoy it to the exclusion of anyone else' (UKJT 2019: 4). Thus, if a statistic were the property of the player who generated it, the rights in that Raw Data would be to the exclusion of a third party data collector, or a league, and so on.

However, this conception of 'property' is unduly narrow. In *Yanner v Eaton* [1999] HCA 53, it is stated that:

'The concept of "property" may be elusive. Usually it is treated as a "bundle of rights". But even this may have its limits as an analytical tool or accurate description... Because 'property' is a comprehensive term it can be used to describe all or any of very many different kinds of relationship between a person and a subject matter' (Yanner, paragraphs 17–20).

There is 'no general or comprehensive definition of property in statute or case law' (UKJT 2019), and, as *Yanner v Eaton* shows, property is a flexible and amorphous concept. Moreover, the UKJT contends that 'A thing may be property for one legal purpose but not for another; and some statutes expressly broaden or narrow the scope of what they treat as property.' (UKJT 2019: paragraph 38.)

In the context of certain Raw Data, this is important, as certain Raw Data will have the rights and protections of applicable data protection law¹² (as detailed further in Part Two). Whether those rights imply proprietary rights will depend on a holistic assessment of the characteristics of property.

The lead authority on the general characteristics of property is *National Provincial Bank v Ainsworth* [1965] AC 1175, in which it was stated that property should be 'definable, identifiable by third parties, capable in its nature of assumption by third parties, and have some degree of permanence or stability.'

In respect of intangible property, the more recent case of *Fairstar Heavy Transport NV v Adkins* [2013] EWCA Civ 886 states that:

'The claim to property in intangible information presents obvious definitional difficulties, having regard to the criteria of certainty, exclusivity, control and assignability that normally characterise property rights and distinguish them from personal rights' (Paragraph 47.)

The UKJT finds that a thing may be capable of being property if it satisfies the indicia of property in *National Provincial Bank* and *Fairstar Heavy Transport* 'unless there is some special legal reason to disqualify [it]' (2019: paragraph 40).

2.1.2. The nature of information

The UKJT finds a potential disqualifying factor in the very nature of information, positing that 'courts have historically been reluctant to treat information in itself (as opposed to the medium in which it is recorded) as property' (2019: paragraph 59). Whilst using the nature of information as a disqualifying factor in determining whether information is capable of ownership does seem to beg the question, *petitio principii*, it is true to say that courts have been reluctant to treat information as capable of ownership.

The basis of the supposition that there is no property in (confidential) information is *Oxford v Moss* (1979) 68 Cr. App. R. 183 QBD, a criminal prosecution concerning the alleged 'theft' of the confidential information contained in exam scripts by a student. It was decided, in that case, that confidential information was not 'intangible property' within the definition of 'property' in section 4(1) of the Theft Act 1968, and thus the student had not stolen any property.

The reluctance of the courts to recognise information as property capable of ownership has extended to commercial contexts. For example, in *Your Response Ltd v Datateam Business Media Ltd* [2014] EWCA Civ 281, Lord Justice Floyd, by way of *obiter*, stated that, 'Although information may give rise to intellectual property rights, such as database right and copyright, the law has been reluctant to treat information itself as property' (paragraph 42).

Working out what this means for Raw Data involves defining what data are. In English law, there is no universally applicable legal definition of 'data'.¹³ There are, though, definitions of facets of data. For example, there is a definition of the narrower concept of 'personal data' in the GDPR (and by proxy the Data Protection Act 2018). This does not provide a working definition of 'data' in its broader sense, but the GDPR definition of 'personal data' does provide a useful framework from which to derive an understanding of what data are understood to be. Article 4 of the GDPR defines personal data as 'any information relating to an identified or identifiable natural person...'. Absent the 'personal' element, we are left with data being 'any information'. Kemp (2020a) points to a direct definition found in the International Organisation for Standardisation's 'terms and conditions' section of ISO/IEC 2382-1:1993(en) Information technology: Vocabulary: Part 1: Fundamental terms:

'Data is a reinterpretable representation of information in a formalised manner suitable for communication, interpretation, or processing [which] can be processed by humans or by automatic means.'

The conclusion is, however, the same: Data are information. Thus, if information is disqualified from being property, it follows that Raw Data are incapable of ownership.

Taking aside the circularity of not classifying information (and by implication Raw Data) as property on the mere basis it is information, if we were to apply the indicia of property in *National Provincial Bank* and *Fairstar Heavy Transport*, we would be left with a mixed picture. Raw Data may be 'definable', 'identifiable by third parties', 'stable' and 'certain'. Given the suite of rights described in Part Two of this article in respect of personal data, *certain* Raw Data may confer 'control'. What Raw Data does lack in respect of the *National Provincial Bank* and *Fairstar Heavy Transport* indicia of property is exclusivity. Data exist and are capable of observance by multiple parties at once. There can be no exclusivity in the information that Michael Owen did not score 20 league goals in a single season,¹⁴ simply because those data are independently discoverable by every person who observed Michael Owen's league matches.

The lack of exclusivity in Raw Data is a compelling reason as to its incompatibility with ownership, given that 'The fundamental proprietary relationship is ownership: the owner of a thing is, broadly, entitled to control and enjoy it to the exclusion of anyone else.' (UKJT 2019: paragraph 35.)

The most compelling reason to conclude that Raw Data (i.e. information) cannot be owned is simply that the courts have repeatedly treated it so, however circular this position. There is scope for a departure from this orthodoxy—as Gray (1987) once quite presciently asserted 'if property is a relationship, it is a dynamic relationship; the content of the relationship is liable to change. The 'subjects' of property may differ from one social era to another'—but it would require a departure from the existing body of common law; and, as Murray (2010: 85) suggests, 'Recognising a proprietary interest in raw information is...potentially very damaging for competition as it creates an exclusionary effect of preventing third parties from using the information'.

In this author's view, the non-exclusive nature of Raw Data in sport, and the paradoxical nature of trying to assert monopoly over such inherently non-exclusive information, means it surely cannot confer proprietary rights *per se*, and any departure from that position would be difficult to justify, likely only further to statutory intervention.

2.2. Establishing ownership in data

There being no property in Raw Data is problematic for various participants in the sports data ecosystem. Players do not own Raw Data concerning their play; clubs cannot assert exclusivity over Raw Data which may give them a competitive advantage; third party data collectors do not as an automatic right own the Raw Data they collect.

The good news for some—but not all—of those participants is that intellectual property rights may apply to Structured Data. The rights which may apply will depend on the nature of the structuring. The main rights of relevance to data analytics are copyright, patents, and database rights. Other non-proprietary protections which may be available in certain circumstances to Structured Data include the laws relating to trade secrets and confidentiality.

2.2.1. Patents, copyright, and database rights

Patents give protection to inventions. In most cases, neither Raw Data, nor Structured Data will be an invention, and thus will fall outside the ambit of patentability. The test for patentability is set out at section 1 of the Patents Act 1977 (PA 1977). The invention must (a) be new; (b) involve an inventive step; (c) be capable of industrial application; and (d) not fall into the list of exclusions from patentability.

It is conceivable that data-adjacent mechanisms of analytics, such as an innovative database, a data interrogation tool, or an application of artificial intelligence, could meet parts (a) to (c) of the test for patentability. However, even so, the exclusions in the PA 1977 will exclude much of the data analytics ecosystem, the following being excluded from patent protection:

- (a) a discovery, scientific theory or mathematical method;
 - (b) aesthetic creations;
 - (c) a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;
 - (d) the presentation of information.
- (section 1(2), PA 1977).

Moreover, patents do not apply as of creation, instead requiring proactive registration in order to take effect (section 7 PA 1977). Consequently, would be Structured Data owners must identify and then apply for a patent in respect of the patentable invention within which the Structured Data are contained and owned.

There is, however, *some* scope for patentability in data analysis and big data adjacent services, with paths having been created through the exclusions listed above. For example, European Patent Office guidance in respect of database management systems and information retrieval (Euoprean Patent Office 2021: Part G, Chapter 2, 3.6.4) and artificial intelligence and machine learning (Part G, Chapter 2, 3.3.1) imply that such mechanisms may be patentable, dependent on their particular structure and application.

In UK law, software and business methods can be patented where the application in question can satisfy the four stage test in *Aerotel Ltd v Telco Holdings Ltd (and others) and Macrossan's Application* [2006] EWCA Civ 1371, by (i) properly identifying the subject and scope of the patent; (ii) identifying the contribution to the state of the art; (iii) ensuring that the patent application is not of an expressly excluded subject matter; and (iv) ensuring that the contribution made by the subject matter is technical in nature. It is notionally possible for data analytics tools or processes to satisfy this test. In practice, multi-jurisdictional meta-analysis by Saheb and Saheb (2020) shows that 'big data' technologies are subject to patent protection around the world (albeit that the scope of patentability will vary from jurisdiction to jurisdiction); and there are examples of UK patents for inventions which rely on or have application to player performance data, such as sports technology company Catapult Group International Ltd's patent for 'a system and software relating to ball throwing for sports such as cricket, baseball and tennis serves' (Catapult Group International Ltd, 'Sports Throwing Measurement' 2017). As the state of the art in football data analytics moves towards real time player and ball tracking, patents for underlying technologies and processes in support of that advancement may be found.

Nevertheless, whilst specific advancements in sports data technology may be capable of patent protection, most ordinary analytics processes and procedures will not. Moreover, on a practical level, technical innovators who work directly within football may be reticent to seek patent protections for their inventions, given that obtaining patents requires the public disclosure of information relating to the underlying advancement, which could undermine the competitive advantage derived from the relevant innovation.

Conversely to patents, copyright 'arises automatically' (Murray 2010: 87) by operation of law and requires no formal registration. In the UK, the statutory basis of copyright is found in the Copyright, Designs and Patents Act 1988 (CDPA 1988) and it protects:

- '(a) original literary, dramatic, musical or artistic works,
 - (b) sound recordings, films or broadcasts, and
 - (c) the typographical arrangement of published editions'
- (section 1(1) CDPA 1988).

Section 3(1) CDPA 1988 goes on to state that the ‘literary works’ protected by copyright include:

- (a) a table or compilation other than a database,
- (b) a computer program,
- (c) preparatory design material for a computer program; and
- (d) a database’.

Copyright exists in ‘original’ works of authors’ creation (Section 1(1)(a) CDPA 1988). Originality in the context of literary works is generally thought to bear a low threshold, encompassing most works into which there is a degree of human thought or curation, although Rahmatian (2013) argues that ‘the UK originality concept is not without contradictions and irregularities.’ One such inconsistency of particular relevance to sports data relates to the copyright protection afforded to databases. Implemented in order to create and codify rights relating to the more functional information contained in databases, protections for which did not exist in all European Union jurisdictions at the time, the Database Directive (96/9/EC) created a suite of rights relating to the protection of such. One of the manifestations of the Database Directive’s implementation into UK law¹⁵ was the creation of a copyright specific to databases (section 3A, CDPA 1988).

The threshold for database copyright is higher than that which applies to other works. A database is defined in the CDPA 1988 as ‘a collection of independent works, data or other material’ which are searchable and ‘arranged in a systematic or methodical way’ (section 3A(1) CDPA 1988). Section 3A(2) of the CDPA 1988 states that a database will be original for copyright purposes: ‘if, and only if, by reason of the selection or arrangement of the contents of the database the database constitutes the author’s own intellectual creation’.

Originality, and what constitutes ‘the author’s own intellectual creation’ remains an important question for those who wish to interrogate, exploit, and protect sports data for analytics purposes. A leading precedent relating to the test for what constitutes an ‘intellectual creation’ emanates from the exploitation of sports-related data. *Football DataCo v Britten Pools* [2010] EWCA Civ 1380¹⁶ related to the use of football fixture information by third parties who had not obtained a licence from the claimants,¹⁷ who purported to hold a proprietary right to fixture lists. This was claimed on the basis of database copyright, of a *sui generis* database right, or in the alternative table or compilation related copyright, and literary copyright.¹⁸ The claimants were ultimately unsuccessful on each of these bases; however, the question of what constitutes an original creation attracting database copyright was referred to the European Court of Justice (‘ECJ’).¹⁹ The ECJ held that in order for a database copyright to apply, the author must express their ‘creative ability in an original manner by making free and creative choices’ (*Football DataCo and others v Yahoo! UK Ltd and others*, Case C-604/10, 1 March 2012: paragraph 38). This is not guided by the effort and industry that goes into the creation or arrangement of the underlying data itself. It was clear in *Football DataCo* that ‘very significant labour and skill’ (paragraph 19), guided by prescriptive parameters, went into the production of the fixtures (paragraphs 12–19). However, the effort and skill put into creating the data comprised in the database were irrelevant in the context of copyright protection; the database copyright applies to the curation of the *database* rather than the *data* of which it is composed (paragraphs 30–31). Rather, the author of the database must select or arrange the database creatively, with the author’s ‘personal touch’ (paragraph 38).

There was, consequently, no database copyright in football fixtures. This is an important point of precedent for football data analytics—as some, but manifestly not all, databases may attract database copyright. For example, a database of carefully selected, innovative player metrics, presented in a standard database format may not attract copyright protection; whereas a database presented as a sophisticated and original searchable visualisation may.

Database copyright and literary copyright may exist cumulatively.²⁰ There is, accordingly, scope for Structured Data to attract copyright, albeit that it is the arrangement or curation of the data that attracts protection rather than the underlying data comprised therein. Additionally, section 4(1) of the CDPA 1988 states that copyrightable ‘artistic work’ includes ‘a graphic work...irrespective of artistic quality’, again bringing data visualisations used by the data analytics community (see Perin et al 2018) within the ambit of copyright protection.

However, it is clear that while Structured Data may in some circumstances attract (database) copyright, the scope of that protection is limited. There is also a potential issue in that the primary infringing act in respect of copyright protected works is copying (Section 16(1)(2) CDPA 1988), which in the context of commercially sensitive or business critical data may not be a sufficient protection—although there are also a range of secondary infringing acts such as transmitting copyrighted works (Section 24(2) CDPA 1988) or possessing infringing copies (Section 23 CDPA 1988).

2.2.2. Database rights

A final, important, intellectual property right protection that may be afforded to sports data is that of the *sui generis* database right,²¹ which, like database copyright, is a child of the Database Directive, implemented into UK domestic law by the Copyright and Rights in Databases Regulations 1997 (SI 1997/3032) (the Database Regulations), which amended the CDPA 1988. The *sui generis* database right applies to a defined class of databases²² in which there has been ‘substantial investment in obtaining, verifying or presenting the contents of the database’ (Regulation 13, Database Regulations), and operates to prevent the extraction or reutilisation of ‘all or a substantial part of the contents’ of that database

(Regulation 16). The Database Regulations explicitly state that ‘repeated and systematic extraction or re-utilisation of insubstantial parts of the contents of a database may amount to the extraction or re-utilisation of a substantial part of those contents’ (Regulation 16(2)). Databases are owned by their ‘maker’ (Regulation 15), the ‘maker’ being defined by Regulation 14 as being ‘the person who takes the initiative in obtaining, verifying or presenting the contents of a database and assumes the risk of investing in that obtaining, verification or presentation’.

Broadly speaking, the structure of these rights carries in favour of dedicated sports data companies, who are geared towards gathering Raw Data, converting it into Structured Data and maintaining it thereafter. Conversely, those participants in the sports data economy who only passively receive and process Raw Data—or those participants such as the athletes who are the source of that Raw Data—are unlikely to benefit from protection.

Even so there are gaps, and as with the database copyright, there have been leading ECJ cases emanating from the exploitation of sports data: *Case C-338/02 Fixtures Marketing Ltd v Svenska Spel AB [2004]* (relating to football fixtures) and *Case C-203-02 British Horseracing Board Ltd and others v William Hill Organisation Ltd [2004]* (relating to various horse racing data). In those cases, there was no *sui generis* database protection because the data in question were ‘created’ by the party seeking to assert the database right—that is to say the Raw Data were produced in the course of business—which was viewed as diminishing the level of investment into the relevant database below the ‘substantial’ threshold required by Regulation 13 of the Database Regulations.

As stated in *Fixtures Marketing*:

‘the expression ‘investment in...the obtaining...of the contents’ of a database must...be understood to refer to the resources used to seek out existing independent materials and collect them in the database, and not to the resources used for the creation as such of independent materials’ (Paragraph 24).

From a proprietorship perspective, this is potentially problematic for organisations that generate Raw Data such as teams and leagues. By analogy in *Fixtures Marketing*, ‘Finding and collecting the data which make up a football fixture list [does] not require any particular effort on the part of the professional leagues’ (paragraph 33) because these activities are ‘indivisibly linked to the creation of those data’ (paragraph 33). By contrast, aftermarket data analytics firms, who typically put greater levels of investment into the curation of data, have greater scope for creating a database protected by the *sui generis* right, although this will of course remain fact dependent.

2.2.3. IP rights in sports data—conclusions

Taken overall, the intellectual property regime in the UK offers a limited patchwork of protections to players, clubs, leagues, and even specialist data analytics companies. There is scope for intellectual property protection to apply, particularly where Raw Data are conscientiously collected, structured, and processed, and where significant investment goes into that process. However, those protections are not universal, and may not even apply to some core tools of the data analytics industry, such as basic algorithms, unless they can be structured in such a way as to fall within the bounds of the protections described above. Generally, the position becomes more complicated—although not necessarily with a greater degree of protections available—where more advanced modalities of data analytics are performed.

For example, the traction gained by artificial intelligence²³ (‘AI’, the collision of software and large data sets) in sport does not automatically confer an intellectual property right on the AI system creator (although often AI systems will attract some intellectual property),²⁴ and any intellectual property in the insights yielded by the AI system will themselves be subject to complex formulation when trying to establish ownership in the absence of direct human intervention (see for example Kemp 2020b).

The conclusion that it is difficult to establish ownership rights in Raw Data, that facts are not capable of ownership *per se*, may make sense intuitively. However, it is a point of friction for third party data collection participants in the analytics community, where what sets one company apart from another may simply be the fidelity of their data. Analogously to the race for the fastest order communication systems in the high frequency trading financial markets (see Lewis 2014), there is a competitive advantage to clubs in having the highest quality data; however, nuances in the accuracy of the Raw Data collected are unlikely to be protectable under an ownership right without further steps being taken.

As with many areas of law, the UK’s exit from the EU further complicates things, given ‘There is no area of IP law that does not feature EU legislation or CJEU case law. In fact, it may be the most ‘Europeanised’ area of private law’ (McDonagh and Mimler in Dougan Ed. 2017). For example, in respect of database rights, Brexit bifurcated the available protections by the creation of a UK-centric right available for UK databases.²⁵ This points to a further issue in assessing the intellectual property rights that may be associated with sports data; namely, the territorial nature of intellectual property law. The sports data industry is a transnational affair.²⁶ Consider for example the Raw Data emanating from the 2020 UEFA Champions League Final: a team from Germany faced a team from France, in Portugal, in a game organised by a confederation based in Switzerland, featuring players from four continents, observed by viewers across the globe. The intellectual property laws of any number of jurisdictions could have been engaged depending on what happened—and critically *where* any collecting and manipulation of data may have happened—to the Raw Data arising from that match.

This territoriality complicates matters for football data analytics. Laws diverge from jurisdiction to jurisdiction, so the same data sets may not attract the same protection from location to location. Whilst there is some harmonisation at EU level,²⁷ intellectual property remains a matter of domestic law, so what might attract proprietary rights in France may not be protected in Germany and vice versa.²⁸ This represents an added layer of difficulty for participants in sports data analytics, and tilts the competitive edge yielded by analytics in favour of those with the resources to develop, register and protect their intellectual property on a multi-jurisdictional basis.

In the context of Project Red Card, the conclusion of this author is that in the UK at least, players will generally not have any proprietary intellectual property right over ‘their’ data by mere participation in the matches in which those data were produced. Even if there were a consensus that players should enjoy intellectual property rights relating to their participation in sport, it is hard to see how such a right could easily be structured, given the lack of intellectual property protections available in the case of Raw Data. In actuality, it is typical for employers to take the benefit of any intellectual property ‘developed’ by their employees in the course of their employment anyway. In the case of Premier League football, this has an additional regulatory layer, as the standard form of employment contract between players and clubs is defined by the Premier League (Premier League, 2020: 219) and that standard form of contract grants to the club certain rights to exploit the ‘Player’s Image’ (a defined term in the standard form contract (Premier League, 2020: Form 15, Clause 1)) and acknowledgement by the player as to collecting, sharing and other processing of the player’s personal data.²⁹

2.2.4. Non-IP protections

2.2.4.1. Confidentiality and trade secrets

Whilst there are sizeable holes in the intellectual property protections available to participants in the data analytics ecosystem, there are further useful and versatile protections available in respect of information which is not generally known and has not been made available in the form of confidentiality and trade secrets law, with legal protection coming in parallel from the common law duty of confidentiality and the Trade Secrets (Enforcement, etc.) Regulations 2018/597 (the ‘Trade Secrets Regulations’).³⁰

Common law confidentiality is assessed using the three part test in *Coco v AN Clark (Engineers) Ltd [1968] F.S.R.* The information in question must have:

1. the ‘necessary quality of confidence’, meaning it is not ‘already common knowledge’;
2. been imparted under conditions of confidence; and
3. been used without permission.

The definition of a ‘trade secret’ under the Trade Secrets Regulations is similar, albeit not identical, being defined as:

- (a) is secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among, or readily accessible to, persons within the circles that normally deal with the kind of information in question,
- (b) has commercial value because it is secret, and
- (c) has been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret’ (Regulation 2, the Trade Secrets Regulations).

The central difference is that trade secrets apply only to commercial information, whereas the equitable doctrine of confidentiality has broader application. In the context of data analytics, given the commercial and competitive application of sports data, sensitive data and methods may be either confidential (in the legal sense), or trade secrets, or both, if the applicable tests are met. There are variances in the protections offered under the Trade Secrets Regulations and the common law of confidentiality, but each offers the holders of misused confidential information the right to injunctive relief, damages, and an account of profits.

As with the intellectual property rights described above, sports data has found itself at the centre of disputes concerning confidential information, the English courts having heard a dispute relating to the use of sports betting data (*The Racing Partnership Ltd and others v Sports Information Services Ltd [2020] EWCA Civ 1300*, for analysis see Higgins, 2021). There have also been other situations in which the exploitation of potentially confidential information has been considered in the context of football, such as the use by players of information relating to player availability for the purposes of fantasy football as analysed by Daly (2021). Most interestingly from a data analytics perspective is the reported dispute between Manchester City and Liverpool concerning the latter club’s alleged hacking of the former’s scouting database, which, it is reported, led to a £1m settlement between the two clubs (Ziegler, 2019) and the scrutiny of the Football Association (Ziegler and Dickinson, 2019). However, given the private and (ironically) confidential nature of the dispute, the facts and allegations have not been particularised in the public domain for analysis.

Ultimately, whether data will be confidential or a trade secret will depend on the facts and the application of the relevant legal tests. Much basic Raw Data, being inherently public as a result of its production in matches, will not be

protected; however, more complex analytics methods may attract protection, including in circumstances whereby an intellectual property right does not apply to the information (or method) in question.

The distinction between (i) IP rights on the one hand, and (ii) the protections afforded to confidential information and trade secrets on the other does therefore have some significance. As Murray (2010: 85) states: 'Property law is about excluding others from access to your property by enshrining protection for its boundaries in a series of legal principles. Confidentiality is about excluding others from access to your property by removing it from public knowledge'. It may not always be practical for those who wish to exploit sports data to keep the products of their labour confidential, meaning that in circumstances whereby no IP right applies to the relevant data or its usage, it may not attract any protection. Nevertheless, some applications of data in football analytics will attract useful protections of common law confidentiality or as trade secrets even where no IP right applies; for example, in algorithms the products of which may be shared without the sharing of the (confidential) underlying source material.

From a sporting perspective, there is a competitive consequence to the fact that certain data analytics methodologies may attract protection only on the basis of confidentiality or trade secrets law, in that it will have a cooling effect on data analysts' willingness to share their insights, on the basis it may denude them of their only means of protecting their work for commercial exploitation, which has a deleterious effect on the state of knowledge of the game.

2.2.4.2. 'House' rights

Frodl (2021) and van Rompuy and Margoni (2014) describe a 'house right', which is construed as applying to sports events (rather than data *per se*) as a negative contractual 'right', under which event organisers and owners of stadia 'exclude unauthorized individuals or media from the venue and to allow entry subject to specific contractual conditions' (van Rompuy and Margoni 2014). This, notionally, could put event organisers in a monopoly position in respect of the collection of data relating to the events they organise, as they can, by contract, foreclose other participants from collecting data in respect of those events. A corollary of the 'house right' is 'courtsiding', the real-time relaying of match information for data collection purposes, which gives rise to its own legal issues as analysed by Moore (2019).

As Frodl (2021) notes, in an age in which a majority of elite level matches are broadcast, it is impracticable to prevent third parties from collecting and analysing data even if that may be in breach of the terms of the applicable event ticket or broadcasting access licence. That having been said, the 'house right' may still influence the data analytics industry where it serves to exclude data which may not form a part of a broadcast, such as tracking data, which may necessitate access to special equipment or views of players which do not form part of the relevant broadcast. Thus, while the 'house right' may be limited in its scope to protect very basic data, it may yet have an influence on the development of more advanced forms of data analytics.

3. Ownership and confidentiality in football data analytics—conclusions

The proliferation of data collection and exploitation in sport, as in society more broadly, creates novel legal problems. This is true for those who wish to collect and exploit player performance data, given the lack of unitary protection available, and the gaps that exist even where protections are notionally available; and it is acutely true for players, on whose endeavours the entire football data industry is built.

There may be circumstances in which player data may constitute a trade secret or may attract a common law duty of confidentiality. This could operate in favour of players: Consider, for example, a club performing monitoring and statistical analysis on player training data in circumstances whereby those data, over a period of time, reveal underlying medical issues. This private and sensitive medical information, if released into the public domain, may affect a player's prospects of a lucrative transfer and thus her future earning potential. Given the habitual sharing of player medical information with media outlets and fans, there is the possibility of confidences being breached (although this will of course be heavily fact dependent).

Confidentiality has already become an issue of regulatory concern for SGBs. In 2019, Derby County and Leeds United became embroiled in a 'spygate' scandal in which it was alleged that delegates of Leeds United had observed and reported on Derby County training, with the apparent aim of gaining competitive advantage (see Hay and Conway 2020). Absent a detailed regulatory regime for such breaches of confidence, it was reported that the EFL in its regulatory action had to rely a catch-all provision pursuant to which clubs must 'behave towards each other...with the utmost good faith' (Regulation 3.4, the EFL Regulations). Evidently a more prescriptive regulatory regime could, as a corollary, impact the confidential information that subsists in any data analytics insights; however, given the reliance on large data sets in data analytics methodologies, even a change of regulatory regime is unlikely to manifestly change the legal framework for football data analytics. To the degree that data analytics were caught by any relevant regulatory measure, it would nevertheless remain the case that much data analytics work takes place outside of SGBs' direct regulatory perimeter and may therefore not be caught by the applicable rules.

As data analytics takes root in society more generally, with the UK government having 'identified big data as one of the "eight great technologies" that will lead the UK into economic prosperity' (Saheb and Saheb 2020), and given the lack of dedicated IP rights associated with it, there may be reformulations of IP law to accommodate innovations. This is particularly relevant for innovations arising from the application of AI, with the UK's Intellectual Property Office having consulted on potential reforms to UK intellectual property law in that regard (Intellectual Property Office 2021).

However intellectual property law may develop and shape the data analytics space in the coming years, any further legal protections under IP law are likely to fall in favour of the innovators acting in the analytics space—or their AI creations. This is, of course, the central purpose of intellectual property law: to foster innovation and creativity. Nevertheless, in the specific case of sports data analytics, the intellectual property regime disenfranchises the athletes whose data the analytics movement revolves around. UK intellectual property law is simply not geared towards empowering data subjects with rights in respect of the data on which insights and innovations are built.

There is, though, a field of law dedicated to precisely such issues; namely, data privacy law, which itself is a field that has undergone significant development in recent years, and which is a critical consideration for the football data analytics movement. Part Two of this article will explore in detail the intersection of the data analytics movement and data privacy law in the UK and EU, examining the paradigm shift in legal rights in players' favour. Part Two will also consider some of the other legal issues confronting football's data analysts, such as competition law and the regulation of AI, before drawing conclusions on the overall legal framework in which the analytics movement sits.

Insofar as ownership rights go, given the pace of development in data analytics (in football and more generally), further research and analysis will be required as the industry matures and as policy makers react to societal changes. For now, it can be concluded that Raw Data are not owned by any participant, and are unlikely to be protectable unless those data are confidential. Structured Data, and certain systems and processes which relate to Structured Data, may be protectable under UK intellectual property law, but even so, substantial gaps in the available protections remain, and thus leagues, clubs, analysts, and other participants in the football economy who are developing innovations in the applications of data, will need to carefully consider the protections available to them in order to retain their competitive advantages.

Notes

- ¹ 'Association football', otherwise known as 'soccer', 'football', 'futbol'. The author is agnostic as to the nomenclature, but will for convenience refer to the game as 'football' in this paper. For debate on the 'correct' term, see Szymanski, S. and Weineck, S. 2018. *It's Football, Not Soccer (And Vice Versa): On The History, Emotion, And Ideology Behind One Of The Internet's Most Ferocious Debates*. Amazon.
- ² Itself a source of legal friction, see for example Evans, S. 2007–2008. 'Whose Stats Are They Anyway? Analyzing the Battle Between Major League Baseball and Fantasy Game Sites', *Texas Review of Entertainment and Sports Law* 9 (2): 335–51; Trenk, M., Brand, R., Colton, G., O'Sullivan, J. and Mancino Marsh, M., 2018. *Daniels V. Fan Duel—Another Freedom Of Speech Win For The Fantasy Sports Industry—Lawinsport*. [online] Lawinsport.com. Available at: <<https://www.lawinsport.com/topics/item/daniels-v-fan-duel-another-freedom-of-speech-win-for-the-fantasy-sports-industry>> [Accessed 6 July 2020].
- ³ 'The explosion of data has affected virtually every industry and every part of our lives.' Foreword by Ben Alamar, Fried, G. and Mumcu, C., n.d. *Sport Analytics: A Data-Driven Approach To Sport Business And Management*. 1st ed. New York: Routledge.
- ⁴ 'The owners have insisted on a data-driven approach to football's multibillion pound transfer market.' Ahmed, M. and Burn-Murdoch, J., 2020. *Why Jürgen Klopp's Liverpool Are On Cusp Of Premier League Glory*. [online] Ft.com. Available at: <<https://www.ft.com/content/4640e9d7-58e5-47d9-92a1-2ff3bdef51ce>> [Accessed 7 July 2020].
- ⁵ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).
- ⁶ Opta is now a part of the US-based Stats Perform group.
- ⁷ Additionally, it is clear that data have value beyond the self-contained sports ecosystem; consider, for example, its significant value to the gambling industry, see for eg Glanz and Armendariz (2018).
- ⁸ To the extent that such Raw Data is not captured by the ownership rights discussed elsewhere in this article.
- ⁹ See *Colonial Bank v Whinney (1885)* 30 Ch D 261 (CA), 28, in which personal property is divided into two categories: choses (rights) in possession, and choses in action; intangible property falling into the latter category.
- ¹⁰ See, for example, in relation to financial services: The European Banking Authority 2020. *EBA Report On Big Data And Analytics*. [online] Available at: <https://eba.europa.eu/sites/default/documents/files/document_library/Final%20Report%20on%20Big%20Data%20and%20Advanced%20Analytics.pdf> [Accessed 15 August 2020]; Bank of England and Financial Conduct Authority, 2019. *Machine Learning in UK Financial Services* [online] available at <<https://www.fca.org.uk/publication/research/research-note-on-machine-learning-in-uk-financial-services.pdf>> [Accessed 15 August 2020]; Financial Conduct Authority, 2016 *FS16/5 Call for Inputs on Big Data in retail general insurance*, [online] <<https://www.fca.org.uk/publication/feedback/fs16-05.pdf>> [Accessed 15 August 2020].
- ¹¹ The UK Jurisdiction Taskforce is a taskforce of the LawTech Delivery Panel, which was 'established by the UK Government, the Judiciary and the Law Society of England and Wales and has as its overarching objective the promotion of the use of technology in the UK's legal sector' (UK Jurisdiction Taskforce 2019. *Legal statement on cryptoassets and smart contracts*. Available at: <https://35z8e83m1ih83drye280o9d1-wpengine.netdna-ssl.com/wp-content/uploads/2019/11/6.6056_JO_Cryptocurrencies_Statement_FINAL_WEB_111119-1.pdf> [Accessed 15 August 2020] p4.

- ¹² Noting that such rights generally attach only to ‘personal data’, of which not all Raw Data may be composed.
- ¹³ The position is similarly uncertain in other jurisdictions. For example, in respect of Germany, see Gärtner & Brimsted (2017) Let’s Talk About Data Ownership, *European Intellectual Property Review* 2017, 39(8), 461–466.
- ¹⁴ ‘0—Michael Owen never managed to score 20+ league goals in a single season for any of his clubs. Guarantee.” @OptaJoe (2013) 19 March, available at: <https://twitter.com/OptaJoe/status/313955141764149248?s=20> (accessed 24 August 2020).
- ¹⁵ Pursuant to the Copyright and Rights in Databases Regulations 1997 (SI 1997/3032).
- ¹⁶ The appellate history of this case being *Football DataCo Ltd and others v Britten Pools and others* [2010] EWHC 841 (Ch); *Football DataCo Ltd v Britten Pools Ltd and others* [2010] EWCA Civ 1380; and *Football DataCo and others v Yahoo! UK Ltd and others*, Case C-604/10, 1 March 2012.
- ¹⁷ The claimants here being The Football Association Premier League Limited, The Football League Limited, The Scottish Premier League Limited, The Scottish Football League, each of whom organised football matches in the United Kingdom; and Football DataCo Limited and P A Sport UK Limited, who exploited data relating to those matches.
- ¹⁸ Noting that literary copyright can exist cumulatively with database copyright.
- ¹⁹ *Football DataCo and others v Yahoo! UK Ltd and others*, Case C-604/10, 1 March 2012.
- ²⁰ Each type of copyright was asserted in *Football DataCo*.
- ²¹ Noting that in *Football DataCo* the question of sui generis database right in fixtures was not referred to ECJ as it was felt that the ECJ had already clearly determined in prior cases that no such right subsisted, relying on *Fixtures Marketing Ltd v Oy Veikkaus AB* (C-46/02) EU:C:2004:694, [2004] E.C.R. I-10365, [2004] 11 WLUK 205, *Fixtures Marketing Ltd v Organismos Prognostikon Agonon Podosfairou* (OPAP) (C-444/02) EU:C:2004:697, [2004] E.C.R. I-10549, [2004] 11 WLUK 204, and *Fixtures Marketing Ltd v Svenska Spel AB* (C-338/02) EU:C:2004:696, [2004] E.C.R. I-10497, [2004] 11 WLUK 203.
- ²² Section 3A CDDPA defines a database as ‘a collection of independent works, data or other materials which: (a) are arranged in a systematic or methodical way, and (b) are individually accessible by electronic or other means.’
- ²³ See for example Deloitte’s prediction for 2021 that ‘Video footage, twinned with ever more capable AI, provides a powerful, accurate and objective complement to a human coach’, Calugar-Pop, C. and Lee, P., 2021. TMT Predictions 2021. [online] Deloitte United Kingdom. Available at: <<https://www2.deloitte.com/uk/en/pages/technology-media-and-telecommunications/articles/tmt-predictions.html>> [Accessed 8 March 2021].
- ²⁴ Intellectual property in software being notoriously fragmented and complex in UK law. See for example on software patents (p.246 *et seq*) and software copyright (p.291) Lloyd, I., 2020. *Information Technology Law*. 9th ed. Oxford University Press.
- ²⁵ See: Primary Source, Intellectual Property (Copyright and Related Rights) (Amendment) (EU Exit) Regulations 2018 (SI 2019/605).
- ²⁶ Indeed, matters of jurisdiction and IP law have arisen in sports data disputes—see *Football DataCo Ltd and Others v Sportradar GmbH and Sportradar AG*, Case C-173/11, 18 October 2012.
- ²⁷ See for example the treatment of the question of ‘reutilisation’ on a cross-border basis for the purposes of sui generis database rights in *Football DataCo Ltd and Others v Sportradar GmbH and Sportradar AG*, Case C-173/11, 18 October 2012.
- ²⁸ See for example Coors, C. 2015; Frodl, C. 2015; Frodl, C., 2021. For a US perspective, see Barbara Osborne and Jennie L. Cunningham, *Legal and Ethical Implications of Athletes’ Biometric Data Collection in Professional Sport*, 28 *Marquette Sports Law Review* 37 (2017).
- ²⁹ See Premier League, 2020: Form 15, clause 12, but noting that this particular clause is intended to relate to data protection rather than IP ownership, and overall the standard form PL contract does not deal exhaustively with the IP relationship as between player and club.
- ³⁰ The Trade Secrets Regulations being another product of EU law, representing the UK’s implementation of the Trade Secrets Directive ((EU) 2016/943).

Competing Interests

The author has no competing interests to declare.

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How to cite this article: Flanagan, CA. 2022. Stats Entertainment: The Legal and Regulatory Issues Arising from the Data Analytics Movement in Association Football. Part One: The Development of Data Analytics and Property Rights in Data. *Entertainment and Sports Law Journal*, 19: 1, pp.1–14. DOI: <https://doi.org/10.16997/eslj.1163>

Submitted: 24 September 2021 **Accepted:** 24 September 2021 **Published:** 18 January 2022

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