

**PITT LAW**

UNIVERSITY OF PITTSBURGH

*Legal Studies Research Paper Series*

**Working Paper No. 2009-15**

**November 2017**

## **The Football as Intellectual Property Object**

*Forthcoming, in A History of Intellectual Property in 50 Objects,*  
Dan Hunter and Claudy Op Den Kamp, eds. (Cambridge University Press)

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- Draft of 28 November 2017 -

## The Football as Intellectual Property Object

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*"The ball is round. The game lasts ninety minutes. This much is fact. Everything else is theory."*[1]

### Introduction

The histories of technology and culture are filled with innovations that emerged and took root by being shared widely, only to be succeeded by eras of growth framed by intellectual property. The Internet is a modern example. The football, also known as the *pelota*, *ballon*, *bola*, *balón*, and *soccer ball*, is another, older, and broader one.

As an illustration of intellectual property laws, all registering in different modes of legal exclusivity, the football is an unorthodox choice. The football serves as emblem, symbol, subject, and object of football's ancient, medieval, and modern forms. It is the one constant in football's story of change. The football's significance lies in its ubiquity and typicality, rather than in its distinctiveness, uniqueness, or novelty. The football may be the most widely recognized cultural object in the world. That status depends partly on its origins as a shared thing and partly on the distinctiveness and exclusivity of its modern attributes.

For centuries, football has knit together social, cultural, economic and political identities and supplied a prism for changes and conflicts among communities, countries, and social classes. It has become a platform for capitalist manipulation, wealth accumulation, and economic exploitation. Football has never been merely entertainment, or "vain games of no value," to borrow the words of King Edward III in 1365. He tried to ban football.

The football lies at the core of football. Intersections between the football and intellectual property law are relatively few in number, but the football supplies a focal object through which the great themes of intellectual property have shaped the game: origins; innovation and standardization; and relationships among law and rules, on the one hand, and the organization of society, culture, and the economy, on the other.

### Origins

Intellectual property laws traces legal rights and obligations to originators and to stories of creation and innovation. The football has origin stories in abundance.

Those origin stories build from multiple, interwoven originating practices. Football begins with the football. Games involving a ball and the feet are among the world's oldest. Pre-Common Era antecedents of football have been documented in ancient China (*cuju*), ancient Greece (*episkyros*), and ancient Rome (*harpastum*), among other places. Mob football, sometimes called Shrove Tuesday or Shrovetide football or festival football, was played in England, Scotland, Ireland, Wales and parts of Normandy and Brittany from the 12<sup>th</sup> century onward.

In medieval times, more formal versions were contested by smaller groups, often organized as clubs attached to taverns. Football was not class- or gender-specific. Both women and men participated,

aristocrats as well as laborers. “Footballe” was promoted during the 16<sup>th</sup> century in England by Richard Mulcaster, headmaster of the Merchant Taylors’ School in London. Play involved kicking, throwing, and possessing a ball. The existence and content of rules themselves is vague. Football was quintessentially local and locally variable.

The football was far from standard, too, lending additional variability to the game. Typically, the ball consisted of stitched cloth or of natural materials (hair, fur, feathers, straw, and leaves) with a leather covering or other animal skin sewn on. Pre-medieval legend holds that some games involved the head of a captured Viking commander. Well into the 19<sup>th</sup> century, inflated pig’s bladders were used inside the covering, lightening the object and adding bounce but leaving it subject to deflating and to irregular shaping and sizing. The oldest leather-covered football still in existence, roughly half the size of a modern ball, was found behind the paneling of the Queen’s Chamber in Stirling Castle, Scotland. It dates from the mid-1400s.

### **Innovation and standardization**

During the mid-1800s, related developments shaped mob football and its domesticated versions into the game’s recognizable modern form. The Industrial Revolution created urban agglomerations of working men, who eventually secured time away from the factory for recreation. In England’s public schools and elite universities, a parallel movement arose to encourage gentlemen to develop and express healthy habits as part of their moral bearing. Across all social classes and with respect to women, too, in part, an ideology of “athleticism” spread through English educational institutions.

Efforts to systematize football gradually distinguished between elements of modern rugby and modern football, depending on whether the football could be possessed and advanced with the use of the hands. Developing and defining the football was central to those efforts, but sharing innovations mattered more than controlling them via intellectual property. The Football Association (FA), formed in London in 1863, published a set of rules that year for the so-called “Association game” (shortened, “Association” generated the label “soccer”). For the first time, the 1863 FA rules formally prohibited handling the ball by carrying or throwing it. Full abolition of the use of the hands followed successive amendments to FA rules and to competing sets of rules of the era, notably the Sheffield Rules, sponsored by Sheffield Football Club (FC).

Until use of the hands was fully prohibited by the FA in 1872, rules for specific matches were often negotiated by the participants. The first competition rule specifying a type of football was used in 1866, for a match under FA rules between Sheffield FC and FA members in London. The teams agreed that the ball should be “Lillywhite’s No. 5.” That designated a leading English sporting goods retailer and a size, No. 5, that the store used to distinguish among footballs on its shelves. The No. 5 ball remains the colloquial label for a match football for adult play.

Early efforts to standardize the football by rule aligned with parallel technological innovations, the most critical of which was the invention of vulcanized rubber by Charles Goodyear. Goodyear secured a US patent on “Improvement in India-Rubber Fabric” in 1844 and put his innovation to use, among other ways, in making inflatable rubber bladders for footballs. Goodyear produced the oldest preserved India rubber bladder football in the US, used in 1863 in an organized game played in Boston.

England and Scotland offered the larger entrepreneurial opportunity, both because of growing interest in football and because Goodyear’s invention was not patented there. The development and production of India rubber bladders for footballs was pursued during the 1860s by Richard Lindon, a producer of leather footballs using inflated pig’s bladders. Lindon named his football the Punt-about

Buttonball. He never patented it, but he adapted it into ovoid forms, for use in rugby, and also spherical forms, for use in the Association game.

The combination of the rubber bladder and a spherical leather covering gave footballs a standard size and shape. That consistency supported the decision of the FA in 1872 to require that balls used in its new FA Cup competition be spherical, with a circumference of 27 to 28 inches. In 1883, the FA extended that requirement to all matches played under FA rules. In 1889, the FA adopted a standard weight of 12 to 15 ounces.

The size and shape of the football have remained unchanged since 1872. International aspects of football propelled further standardization of the rules and of the football. The International Football Association Board (IFAB) was formed in 1886 by the associations of England, Scotland, Wales, and Ireland (later succeeded by Northern Ireland) and assumed responsibility for stating the laws of the game for match play sanctioned by IFAB members. FIFA, founded in 1904, adopted IFAB rules for matches organized by FIFA and FIFA member associations. FIFA became an IFAB member in 1913. The IFAB comprehensively re-stated the Laws of the Game in 1937 and again in 1997. The laws have been added to and modified through to the present day, and game play has changed in large and small ways. Law 2 states specifications for the size, shape, pressurization, and weight of the football. The weight was changed in 1937, to 14 to 16 ounces, and the law now makes allowance for the use of materials other than leather for the cover.

The interplay of new football designs, openness and standardization, and the growth of the game continues through the present. Innovations in the football's size, weight, and materials have helped to establish age-group football, futsal (a form of indoor play), beach soccer, wheelchair football, and robot football. Virtual football, in the massively successful videogame produced by Electronic Arts and marketed worldwide as *FIFA*, relies on a standard virtual ball.

### **Society, culture, and the economy**

Intellectual property and other forms of legal exclusivity do not feature in the origins of football, or of the football. Sharing rather than exclusivity was the guiding framework. As the decades progressed and as football moved toward becoming a global phenomenon, that relationship changed.

The standardization of the football's size and shape contributed to rapid evolution of the game. Footballs acquired consistency and predictability during play. Players could reproduce new maneuvers on the pitch. Football started to feature more passing.

Standardization also facilitated the emergence of the modern game around the world. The football was portable via ship and rail, and football expanded during the late 19<sup>th</sup> century via the dual agencies of empire and trade. British diplomats and merchants carried footballs wherever they went, founded clubs and launched competitions in Europe, Asia, and South America, and laid the foundations for today's global game.

If openness drove the growth of football in its early phases and established its organizational and competitive frameworks, then exclusivity and market capitalism built on those frameworks and drive growth today.

Invention of the spherical ball based on the rubber bladder meant that leather panels for the outer covering could be manufactured according to a standard template. Footballs cost less to produce. Manufacturing scale was possible. From the earliest days of the Association game, manufacturers competed to produce the roundest and most durable footballs. Football manufacturing began with English and Scottish producers, including William Shillcock, maker of the McGregor football in Birmingham; Mitre, in

Huddersfield; and the Greenbank Leather Works, owned by the Thomlinson family, in Glasgow. Intellectual property appeared and advanced the art of football ball design and production. Producers around the world innovated by varying the number and shape of the football's leather panels. Thomlinson secured patents on his football designs during the late 1800s and later marketed the leather quality of his better footballs as "Tugite," to distinguish them from his "T-model."

In 1962, Eigil Nielsen, a former Danish player and founder of the Danish equipment producer Select Sport, developed the 32-panel icosahedron-based football, featuring a cover of hexagon- and pentagon-shaped panels. (In the 1950s, Nielsen developed a method of eliminating the external lacing that used to close the football's leather cover.) The German firm adidas modified that ball design by coupling black pentagon-shaped panels with white hexagon-shaped panels. adidas introduced that black-and-white model, which it christened "Telstar" (evoking the Telstar satellites of the early 1960s), as the official ball of the 1970 World Cup finals. The tournament, held in Mexico, was the first World Cup finals to be broadcast worldwide. The black-and-white ball became an icon of football in part because it offered better visibility to football fans following matches on television.

Adidas has held the exclusive contractual right to supply official footballs to World Cup competitions ever since. Its current contract with FIFA, organizer of the World Cup, runs through the 2030 tournament. FIFA and adidas have modified this relationship from time to time based on intellectual property considerations that implicate the expanding influence of market capitalism on football generally. In 1970, FIFA prohibited adidas from including any brand markings on game balls. For the 1974 World Cup finals, held in West Germany, FIFA removed that restriction. New versions of the Telstar ball were used; the adidas name and logo and the Telstar name appeared on each ball. For the 1974 tournament, FIFA began referring to the competition as the "FIFA World Cup."

For every World Cup finals since 1974, adidas has designed and marketed a new official World Cup football. Football manufacturers now regularly compete with each other to supply the "official" football of clubs and competitions around the world. adidas and other equipment manufacturers pay significant sums to earn marketing exclusivity and design and brand their footballs to distinguish them on and off the pitch. Experts estimate that adidas's contract with FIFA costs adidas US\$100 million per World Cup finals, a figure that adidas recovers several times over via the sale of replica footballs. During 2014, when the World Cup finals were played in Brazil, adidas sold more than 12 million actual footballs, in various sizes. FIFA now adds its own exclusivity by offering certification of match footballs under several marks, including the "International Matchball Standard (IMS)" mark, as part of the FIFA "Quality Program."

In some respects, these systems of exclusivity generate corresponding social benefits in the ways that intellectual property law predicts. Newer balls are innovative. Equipment manufacturers have made substantial investments in and improvements to virtually all aspects of the football. Leather covers and bladders have been replaced by more durable and more spherical synthetic substitutes. Stitching of the panels has been succeeded by heating and molding, further reducing the football's susceptibility to water retention. Ball surfaces have been engineered to produce truer flight and greater control for the player. The newest, most innovative balls may be fitted with "smart" information technology that transmits information about ball performance wirelessly to match officials, coaches, and manufacturers. Footballs bounce better, fly with more accuracy, retain their shape and size, and repel water better than they ever have. The players' ability to control the football means that the game itself is faster and more fluid than ever. Via various forms of legal exclusivity, partly based on intellectual property, football and the football have reached stratospheric levels of popularity and wealth. A steady if slow stream of relevant utility patents, design

patents, and trademark registrations has issued, particularly to the leading equipment producers, adidas and Nike.

Innovation supported by exclusivity and intellectual property comes at a cost.

On the pitch, the lure of financial returns from innovation and brand differentiation has confronted claims that play of the game may be compromised. The 2010 World Cup finals, held in South Africa, were marred by players' complaints that the official match ball, the "Jabulani" supplied by adidas, flew unpredictably. Goalkeepers claimed that they could not predict where shots on goal would go; players could not control the ball as they wished. The 2014 official World Cup match ball, the "Brazuca," was not the subject of similar objections.

Off the pitch, at the top of the economic hierarchy, huge amounts of money and influence now flow to FIFA, the national federations, and the large football equipment manufacturers via their exclusive involvement in professional football and football equipment, with little transparency or accountability and with continuing suspicions concerning corrupt behavior, particularly directed to FIFA.

At the bottom of the hierarchy, those who produce footballs have enjoyed little of the wealth associated with the new designs. Football manufacturing has shifted over the last several decades from local factories to global supply chains dictated by cost. The substitution of synthetic materials for leather beginning in the 1980s improved football quality and reduced production costs, facilitating production in developing countries. By the mid-1990s, a substantial percentage of all footballs produced worldwide (some estimates run as high as 70%) came from factories located in a single city in Pakistan, Sialkot. Hand-stitching was still the norm. Exploitation of low-wage stitchers, including children, was exposed.

Private collaborations to end child labor and increase wages in football production have been undertaken since then, including the Atlanta Agreement negotiated in 1997 among the International Labor Organization, UNICEF, and the Sialkot Chamber of Commerce, and FIFA's launch in 2007 of a match ball certification program that includes manufacturer compliance with a code of conduct relative to labor standards. Concerns about abusive labor practices and low wages continue to be voiced, even as 21<sup>st</sup> century football production depends less than it once did on hand-stitching.

### **Conclusion**

*"Here is the perfect game of the perfect sphere."*[2]

The history of the football relative to innovation and intellectual property is emblematic of a common pattern: innovation coupled with technological and cultural openness, leading to standardization, evolving over time and in the context of better-established institutions in the direction of improvements, differentiation, and wealth production based on claims of intellectual property and related exclusivity.

The story of the football both resembles and conflicts in part with the story of football itself. Both on and off the field of play, for more than a century, football has been linked closely to collective identity and opportunity of many sorts. It has been called "the people's game." Football and the football may be pursued by almost anyone at modest cost, in almost any setting. These social and cultural implications have been essential to football's global cultural hegemony. Yet football's global success created the conditions for inflecting the football with the ideologies and practices of intellectual property and market capitalism, both good and bad. The ethos of the marketplace, in turn, arguably has been essential to continuing to link all who play and watch football in an integrated global narrative. The world, like the football, is round.

### **Endnotes**

- [1] Josef (Sepp) Herberger, manager of West Germany, champions of the 1954 World Cup, quoted in Goldblatt, David & Johnny Acton, 2009. *The Football Book: The Leagues, The Teams, The Tactics, The Laws*. London: Dorling Kindersley.
- [2] From the *Brighton College Football Song*, quoted in *An Old Brightonian*, *Brighton College*, in *Public School Magazine*, vol. 3 (1899).