The Game-Changer: Legal Issues Surrounding Wearable Technology in Sports

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Recommended Citation
THE GAME-CHANGER: LEGAL ISSUES SURROUNDING WEARABLE TECHNOLOGY IN SPORTS

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ABSTRACT

Athletes and teams are always seeking to gain a competitive edge, and the emergence of wearable technology has provided them with biometric data that provides new insights into performance. The market for wearable technology has been growing at a rapid pace in recent years and is projected to continue on an upward trajectory through the end of the decade. Governing bodies of sport at a professional and amateur level have adapted regulations for the use of this new technology and the data it produces. This article provides an overview of these current regulations, and then discusses three pressing legal issues. First, the implications of state and federal data privacy laws on wearable technology and concerns over data breaches are addressed. Next, biometric data’s impact on the recently legalized sports betting market is discussed. The article concludes with an analysis of who owns the biometric data produced by wearable technology, and the importance of why athletes, not teams or leagues, should own it.

I. INTRODUCTION

The wearable technology market has experienced rapid growth in the past few years and is currently valued at over seventy billion dollars.1 The number of devices have increased from under six hundred million in 2018 to over one billion in 2023.2 Among these include offerings from major companies including Apple, Fitbit, Fossil Group, Samsung, and Garmin.3 Although these five brands are the market leaders, the smart wearable market is fragmented as a whole, showing that it is highly competitive.4 The market is showing no signs

https://doi.org/10.25172/smusrtr.27.1.9

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2. Id.

3. Id.

4. Id.
of slowing down, and is expected to increase at a compound annual growth rate of nearly twenty percent over the next five years and reach a value of over one hundred and seventy billion dollars by 2028.5

In a study conducted of the wearable technology market in 2020, it was found that the fitness and sports segment was the market leader by application, holding nearly forty percent of the market.6 The same analysis found that North America was the dominant region, followed by Europe.7 Naturally, teams and athletes across these regions have begun to harness the data produced by these wearables, chasing benefits including improved performance and lower injury risk.8 One clear advantage of wearable technology over other forms of information capture in sport, such as video replay, is that wearables can provide athletes with real-time feedback.9 Additionally, these wearable devices can be worn by athletes in competition and daily training because they tend to be “small, lightweight, wireless, and unobtrusive.”10 This is in contrast with previous data tracking systems that were bulky and required any data collection to occur within a laboratory setting.11 The devices are adept to handle even extreme conditions, and have been successfully utilized underwater to track swimmers and in cold temperatures to provide data to skiers and snowboarders.12

Although wearable technology is now ubiquitous in sport, the first smartwatch was launched only twenty-five years ago, in 1998.13 The Seiko Ruputer could connect to a computer through a docking station and ran various applications.14 Reviewers called it clunky due to its bulk and cumbersome joystick that required the use of a single thumb.15 One year later in 1999, the Austral-

5. Id.
7. Id.
9. Id.
10. Id.
11. Id.
12. Id.
14. Id.
15. Id.
ian Institute of Sport (AIS) sought to take their testing of athlete performance from the laboratory to the field of play. In conjunction with the Cooperative Research Centres, the AIS created a device that was used on rowing boats to measure the row, pitch, and yaw of the boats used by the Australian Olympic team in an effort to track and improve performance. Subsequent iterations of the device were smaller and mounted on athlete’s spines to capture a GPS signal and collect data. The devices were used exclusively by the Australian Olympic team between 1999 and 2006 and helped the country to successful Olympic Games in both 2000 and 2004. In 2006, Catapult was officially launched after obtaining patents for the technology. The device advanced from just tracking GPS to adding other sensors including accelerometers and heart rate tracking. Catapult grew from a startup to a public company listed on the Australian Securities Exchange. The company currently has over four hundred employees working across twenty-four locations. More than 3,800 teams in forty different sports utilize Catapult, including massive name brand programs such as the Golden State Warriors, Paris Saint Germain, and Duke University.

In 2007, one year after Catapult launched, Fitbit founders James Park and Eric Friedman began to raise money for a smart tech wearable. The device launched in 2009, and subsequent models released new features such as 2011’s Fitbit Ultra that added an altimeter and stopwatch. In 2012, the Fitbit One and Fitbit Zip became the first wireless fitness wearables to utilize Bluetooth, allowing the tracker to count steps, floors climbed, calories burned, and sleep patterns.


17. Id.

18. Id.

19. Id.

20. Id.

21. Id.


23. Id.

24. Id.


26. Id.

27. Id.
each successive Fitbit began to track more advanced data, legal problems began to emerge.\textsuperscript{28} In 2014, U.S. Senator Chuck Schumer spoke out about privacy concerns with the data that Fitbit collected and the risk that the data could be sold to third parties without the user’s consent.\textsuperscript{29} Despite these growing data privacy concerns, Fitbit went public in 2015 with a $4.1 Billion initial public offering.\textsuperscript{30} In fact, 2015 was a huge year for wearable technology with two of Fitbit’s main competitors launching their first products.\textsuperscript{31} Apple introduced the first iteration of the Apple Watch, and Xiaomi released the first Mi Band.\textsuperscript{32}

In 2014, Fitbit data was used in support of a legal claim for the first time.\textsuperscript{33} A woman used her device to show evidence that her activity levels had decreased after her alleged injury.\textsuperscript{34} This case began a new age, where biometric data gathered by wearable technology could be used for and against those wearing them.\textsuperscript{35} This case note first addresses the current stances of the major professional sports leagues, National Collegiate Athletics Association (NCAA), and Olympic governing bodies on the biometric data produced by these devices, and how they are to be used. Next, three legal problems are addressed. First, data privacy is analyzed. Second, the impact of biometric data on sports betting is discussed. Finally, an analysis of who owns the biometric data is conducted, including an opinion on whether athletes, teams, or leagues should own it.

\textbf{II. CURRENT POSITIONS OF PROFESSIONAL AND AMATEUR SPORTS ORGANIZATIONS ON WEARABLE TECHNOLOGY AND BIOMETRIC DATA}

\textbf{A. Stance of Major Sports Leagues}

When it comes to professional sports, the National Football League (NFL) is king. The NFL rakes in an estimated annual revenue of $16 billion.\textsuperscript{36} This is

\begin{itemize}
\item \textsuperscript{28} Id.
\item \textsuperscript{29} Id.
\item \textsuperscript{30} Id.
\item \textsuperscript{31} Marshall, supra note 24.
\item \textsuperscript{32} Id.
\item \textsuperscript{33} Sun-ha Hong, Control Creep: When the Data Always Travels, so do the Harms, CTR. FOR INT’L GOVERNANCE INNOVATION (April 12, 2021), https://www.cigionline.org/articles/control-creep-when-data-always-travels-so-do-harms/[https://perma.cc/RZ4R-33CU].
\item \textsuperscript{34} Id.
\item \textsuperscript{35} Id.
\end{itemize}
six billion more than the next league worldwide, the Indian Premier League.\textsuperscript{37} The current NFL collective bargaining agreement (CBA) was negotiated in 2020 and runs through 2030.\textsuperscript{38} It created a partnership between the players and the league where a set of biometric data can be monetized for commercial purposes.\textsuperscript{39} However, Sean Sansiveri, the general counsel and head of business at the National Football League Players Association (NFLPA) emphasized that all data is still owned by the players.\textsuperscript{40} The collection of the data does not change the fact that biometric, bio-specimen, GPS, and all other data is owned by the players and not the league.\textsuperscript{41}

The National Basketball Association and the Players Association came to an agreement in July 2023 on a new CBA that will run through 2030.\textsuperscript{42} Section thirteen of Article XXII on player health and wellness is dedicated to wearables.\textsuperscript{43} The agreement defines wearables as devices worn by players “that measures movement information,” “physiological information,” “or other health, fitness, and performance information.”\textsuperscript{44} The CBA formed a joint advisory committee formed by the league and players association that consists of three representatives appointed by each side.\textsuperscript{45} At least one appointee from each side is required to have three years of experience in sports medicine in the NBA or with a Division I NCAA basketball team.\textsuperscript{46} The committee is tasked with approving wearable devices for use by players, setting cybersecurity standards for the storage of data collected from the wearables, and

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\textsuperscript{39} Friend, supra note 37.

\textsuperscript{40} Id.

\textsuperscript{41} Id.


\textsuperscript{43} Id.

\textsuperscript{44} Id. at 397.

\textsuperscript{45} Id.

\textsuperscript{46} Id.
\end{flushleft}
retaining experts, to conduct work. Teams may suggest that a player uses a wearable in practice, but a player may decline at any time. Players are unable to wear these devices during games. Unlike in the NFL, the data collected by players wearing devices may not be used for any commercial purpose. Interestingly, the NBA has a stated preference that the use of wearables would be required while the Players Association prefers their use remain voluntary. Despite disagreement, both sides continue to negotiate in good faith pending further agreement on wearable devices, and until then, the collected data will remain unavailable to the public.

Major League Baseball’s (MLB) CBA went into effect in March of 2022 and runs through 2026. Similar to the NBA, the MLB outlawed the sale of biometric data collected in practice or training sessions in its CBA. Attachment 56 of the agreement between the league and Players Association is dedicated to wearable technology. The CBA defines wearable technology as “any equipment, program, software, device, or attire that is designed to collect and/or analyze . . . a Player’s health or performance . . . .” The agreement also provides a list of these devices including “electronic bat sensors, biomechanics compression attire,” and activity trackers. Any use of the technology is completely voluntary; players can decline to use any wearable or stop using them at any time. Any data collected from the devices is confidential, and may be deleted at any time at the request of the player. Like the NBA, and unlike the NFL, any commercial use of the data is prohibited. The MLB and the

47. Id. at 397–98.
48. 2023 NBA-NBPA COLLECTIVE BARGAINING AGREEMENT, supra note 42, at 399.
49. Id.
50. Id.
51. See id.
52. See id.
54. Id. at 380.
55. Id. at 362.
56. Id.
57. Id.
58. Id.
59. MLB AGREEMENT, supra note 52, at 363.
60. See id.
Players Association established a Joint Committee on Wearable Technology comprised of two members appointed by each side as well as the parties’ Joint Strength & Conditioning Coordinator. This committee is charged with reviewing the potential use and approval of any new wearable technology and will meet twice a year to discuss issues relating to data privacy, confidentiality, and player safety. The parties agree to meet within forty-five days upon the conclusion of each season to discuss potential changes to the agreement. The phrase “wearable technology” also appears in the CBA’s discussion of salary arbitration. The MLB’s CBA explicitly outlaws the use of statistics and data generated through the use of wearable technology in any arbitration hearings.

In August 2019 the National Hockey League (NHL) and its Players Association agreed on a biometric data policy, and the next year extended their CBA through 2024. Similar to the MLB’s policy, hockey teams are unable to use data gathered by wearables for commercial purposes or in contract negotiations. Additionally, players are unable to use wearables or sensors during games, and any use during practice is voluntary. Data collected may only be used to determine a player’s fitness, performance readiness, and health.

Major League Soccer (MLS) is the fifth largest professional sports league in the United States by revenue, but has experienced rapid growth in recent years, and has received a massive boost in publicity since international superstar Lionel Messi signed with Inter Miami CF in July of 2023. The current CBA between MLS and the Major League Soccer Player Association

61. Id. at 363.
62. Id. at 363–64.
63. Id. at 364.
64. Id. at 21.
65. MLB Agreement, supra note 52, at 21.
66. Friend, supra note 37.
67. Id.
68. Id.
69. Id.
(MLSPA) went into effect in February of 2020 and runs through January of 2028.\textsuperscript{71} Speaking both to performance and biometric data, section 9.11 of the agreement outlines physiological monitoring and testing.\textsuperscript{72} Performance data is defined as “relating to the Player’s movement” while biometric data relates “to the Players biological data, including . . . heart rate,” “blood oxygen,” and glucose. Unlike the other major leagues, the MLS and its teams can require players to wear physiological monitoring devices during training.\textsuperscript{73} However, teams cannot require the use of wearables during games.\textsuperscript{74} Like the NBA, the MLS and MLSPA formed a joint advisory committee consisting of six representatives, three appointed by each side.\textsuperscript{75} While the committee is charged with meeting to discuss issues and findings related to biometric data, the MLS retains final authority over whether to implement the committee’s recommendations.\textsuperscript{76}

### B. Wearables and the NCAA

Unlike the previously discussed professional sports leagues, collegiate athletes are neither protected by a players association nor governed by a CBA.\textsuperscript{77} The NCAA instead formed a committee on athlete biometrics that includes a group of attorneys, athletes, and academics, but has yet to produce clear guidance on the use of wearables or the data they produce.\textsuperscript{78} Athletes are permitted to use wearables in games, however real-time data analytics are prohibited.\textsuperscript{79} Each sport and school has their own policies regarding wearables and data.\textsuperscript{80} For example, Nike has an agreement with the University of Michigan which allows Nike to use personal data gathered from wearable devices used


\textsuperscript{72} Id. at 28.

\textsuperscript{73} Id. at 28–29.

\textsuperscript{74} Id. at 29.

\textsuperscript{75} Id.

\textsuperscript{76} Id.


\textsuperscript{78} See generally id.

\textsuperscript{79} Id.

\textsuperscript{80} See id.
by Michigan student-athletes such as heart-rate monitors and GPS trackers.\textsuperscript{81} Sarah Brown, a professor in the Sport Management program at SMU, believes the NCAA needs to create clear guidelines, regulate the use of biometric data and implement penalties for misuse, and forge a path for student-athletes to commercialize their biometric data through name, image, and likeness.\textsuperscript{82}

C. Biometric Data and the Olympics

The delayed 2020 Olympic Games in Tokyo did not have spectators due to the Covid-19 pandemic, so the Olympic Broadcasting Services used the opportunity to employ new ways to cover the sport.\textsuperscript{83} This included 3D athlete tracking technology which provided real-time insights, such as when runners in the sprint events reached their peak speed.\textsuperscript{84} In archery, the broadcast displayed estimated biometric data gathered from miniature sensors worn by the athletes.\textsuperscript{85} Cameras positioned twenty meters from the archers analyzed changes in skin color due to the contraction of blood vessels to estimate heart rates.\textsuperscript{86} On-screen graphics showed fans the adrenaline rush and heartbeat variations the athletes experienced as they released their arrows towards the target.\textsuperscript{87} This hybrid vital sensing technology seems like a potential workaround to having athletes wear obtrusive devices in competition, but still raises concerns about the limits of this new technology.\textsuperscript{88}

Spectators are also not immune from biometric data collection, as facial scans were widely used during the 2022 Beijing Winter Olympics for security purposes.\textsuperscript{89} However, these biometric collection devices will not return for the 2024 Summer Olympics and Paralympics in Paris due to more rigid French
privacy laws. Instead, France plans to use artificial intelligence to spot abandoned objects and manage crowd movements without facial scan technology. The Olympic Games present unique problems in biometric data collection and the respective governing law since they are a world-wide competition that changes location every two years.

III. LEGAL ISSUES SURROUNDING WEARABLE TECHNOLOGY FOR ATHLETES

A. Data Privacy Concerns

Privacy concerns regarding the data produced by wearable technology are amplified when it comes to biometric data. This is because unlike other personal information, an individual’s biometric data is irreplaceable. To date, only three states have enacted legislation to protect biometric data: Texas, Illinois, and Washington. In all three states, the statutes require notice and consent before biometric data is used in a commercial context with varying degrees of protection. Illinois is the only state that allows for a cause of action to be enforced by individuals through private action, while in Texas and Washington, violations are enforced by the Attorney General. Although other states are following suit in passing biometric data protection laws, the data is vulnerable to commercial exploitation until either every state passes a law or Congress passes federal biometric data legislation.

Another data privacy concern is whether the data produced by wearable technology needs to comply with the federal Health Insurance Portability and Accountability Act (HIPPA). Many sports leagues include provisions in their

90. Id.
91. See id.
92. See id.
94. Id.
95. Id. at 279.
96. Id. at 274.
97. Id. at 273–74.
98. Id. at 279.
CBA’s that lessen the chance they will accidentally violate HIPPA.\textsuperscript{100} Regardless, there is currently a general consensus that HIPPA does not apply to the data collected by wearables.\textsuperscript{101} Explanations given include wearable technology companies such as Whoop and Fitbit are not covered entities under HIPPA, athletes consent to the companies having access to their data, or an employment exception applies.\textsuperscript{102}

Perhaps the most relevant concern for players themselves is the potential for invasive data leaks from these devices.\textsuperscript{103} Many people who use wearable technology leave the devices on at all times, which could reveal personal habits.\textsuperscript{104} This includes the potential for revealing a player’s location late into the night and indicating what they may have been doing.\textsuperscript{105} Collecting data that is only loosely related to performance and could lead to backlash from the public and teams is a problem when it is unlikely that federal privacy laws like HIPPA protect this data.\textsuperscript{106}

\textbf{B. Impact on Sports Betting}

In the 2018 case \textit{Murphy v. NCAA}, the Supreme Court struck down the federal law that made it illegal for a majority of states to have sports betting.\textsuperscript{107} This opened the door for many states to legalize sports gambling for the first time, which has a number of implications for sports leagues, teams, and third-party entities looking to cash in on the new market.\textsuperscript{108} For example, sports books, fantasy sports operators, and casinos will likely seek to use biometric data for a variety of intriguing and seemingly endless opportunities.\textsuperscript{109} While you can already bet on the spread of a game, over or under for a specific player’s points, and parlay other potential outcomes into one bet, imagine if now you could also wager on which player will reach the fastest speed on the court,

\textsuperscript{100} Id.

\textsuperscript{101} Id.

\textsuperscript{102} Id.


\textsuperscript{104} Id. at 124.

\textsuperscript{105} Id.

\textsuperscript{106} Id. at 125.


\textsuperscript{108} Id.

\textsuperscript{109} Id.
or register the highest heart rate? Sports betting operators may also wish to use athlete’s biometric data to set more accurate betting lines, or even provide this information to fans so they can make more informed decisions.

C. Who Should Own all the Data?

In professional sports, leagues and teams generally own the intellectual property produced by the players while in the scope of their employment. Leagues use their status as employers to control their names, performances, and likenesses. In *Baltimore Orioles v. Major League Baseball Players Association*, players sought to challenge the MLB that game telecasts were misappropriating property rights. The court decided that the players performances were in front of a live and remote audience and thus the performance was owned by the teams and league under an assumption that the MLB owned player information in telecasts. Based upon this ruling, leagues across professional sports may attempt to make a similar argument for the use and control of biometric data produced by wearable technology. Leagues could also seek to gather data from players to commercialize it to third parties including television broadcast entities and the aforementioned sports betting operators.

Athletes and players would similarly be interested in getting a share of the profits if the biometric data is commercialized. One example of this currently is the NFLPA’s agreement with wearable technology company WHOOP. The agreement allows NFL players to own, license, and commercialize their individual WHOOP data through a group licensing program. However, the group licensing program is limited and does not extend to player marketing while in team uniforms or for individual player’s brand partnerships. There are other instances where the league and players work together to maximize

110. See generally id.
111. See id. at 554.
112. See id.
113. Id.
114. Id.; *Baltimore Orioles, Inc. v. Major League Baseball Players Ass’n*, 805 F.2d 663, 665 (7th Cir. 1986).
117. See generally id.
118. See id. at 567.
119. Id. at 568.
120. Id.
121. Id.
revenue for both parties, such as the millions of dollars in media rights deals for broadcasts.\textsuperscript{122} Players associations across the professional sports leagues will have to work to give players the option to maximize revenue generated through wearable technology while maintaining ownership over personal data.\textsuperscript{123}

One potential solution involves the creation of a data trust, defined as “an entity with fiduciary responsibility and technical capacity to manage data use rights . . . on behalf of athletes.”\textsuperscript{124} Using a data trust in favor of a statute or bilateral contract would mitigate the advantage that teams and leagues hold over athletes in data use.\textsuperscript{125} This is because leaving the large amount of data in the hands of a small group could shift the focus towards economic benefit and away from security and privacy.\textsuperscript{126} By treating the players as beneficiaries to the trust, they will gain a say in how their data is processed.\textsuperscript{127} Additionally, a data trust would allow researchers access to the data to identify effective injury protection methods.\textsuperscript{128} Issues to be addressed in creating the trust would include contract negotiation, data sharing, location and health privacy, and data security.\textsuperscript{129} The data trust “provides a fiduciary framework which protects the athletes while permitting data to be used for the public good.”\textsuperscript{130} Moreover, some limited biometric data could be released and commercialized for the benefit of players, teams, and leagues.\textsuperscript{131}

\textbf{IV. CONCLUSION}

Since the inception of wearable technology twenty-five years ago, the devices have made great strides. They have evolved from bulky products such as the Seiko Ruputer watch to the sleek items used by many athletes and consumers today like WHOOP and Fitbit. The wide variety and high potential for commercialization of the data wearables produce indicates there is much room for growth in the market. As the fitness and sports sectors continue to embrace the technology, they are projected to remain the largest area of use. Nevertheless, lackluster federal and state protections mean that professional athletes must rely on player’s associations to advocate for them in CBA negotiations.

\textsuperscript{122} Berman, supra note 106, at 569.
\textsuperscript{123} Id. at 570.
\textsuperscript{124} Holden & Houser, supra note 102, at 152.
\textsuperscript{125} Id.
\textsuperscript{126} Id. at 151.
\textsuperscript{127} Id. at 152.
\textsuperscript{128} Id. at 153.
\textsuperscript{129} Id. at 153–54.
\textsuperscript{130} Holden & Houser, supra note 102, at 154.
\textsuperscript{131} Id.
with leagues, while collegiate athletes must be especially careful in absence of any clear guidance by the NCAA. As the technology improves and biometric data works its way into broadcasts and sports books, it is important that the players remain the owners of their personal data. Otherwise, the economic interests of leagues and teams will take priority over athlete safety and privacy. To that end, the creation of a data trust would be a positive step toward prioritizing the interests of athletes.