

# The case of AI in sport: Some ethical concerns at play

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## Abstract

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Artificial intelligence (AI) has recently burst into sport, but it already plays an important role. It is assumed that AI will become a decisive driver of change in sport in the coming years. Indeed, AI's revolution in sport is already underway by the gradual replacement of humans by AI and high-tech systems, as is happening in refereeing and coaching. There are many benefits that AI can provide to sport, such as training improvement, assisted coaching, doping monitoring, injury prevention and so on. However, AI applications in sport are not without risk. Among them, the manipulation of athletes and competition are probably the most pressing. This paper is aimed at distinguishing among different AI uses in sport suggesting a normative and ethical framework that leads to an adequate use of AI in sport and consistent with the human values with which the Olympic Movement is committed.

## Keywords

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Artificial Intelligence, sport governance, human rights, sport ethics.

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## **Introduction**

The summer of 2021 was filled with major sporting events. It was an excellent opportunity to witness the growing importance of AI and high-tech in sport. For first time, the main sponsors of UEFA 2020 and Copa América were TikTok™ and Kwai™. Two leading Chinese brands focused on social networks and fan engagement at major sporting events. On the other hand, Intel™, one of the worldwide Olympic partners, has been using AI systems to track athletes and facial recognition to enhance Olympic experience. In particular, Intel™ deployed the so-called 3D Athlete tracking (3DAT) technology, which has been improved these last years with the collaboration of amateur athletes.

AI has also played an important role in Tokyo Olympics. Apart from robots welcoming athletes and carrying Olympic torch, smart cars were used to transport and assist athletes and staff in Olympic legacies. Despite being a highly controversial matter, AI systems of facial recognition were also used to identify athletes, coaches, volunteers and other people involved in Olympics to allow them access to restricted areas.

But the 108th edition of Le Tour de France has been by far the sporting event in which AI has played the most important role. In fact, NTT™, the official technology partner of Le Tour de France has created a facsimile of the whole race generating a digital twin of the course. This technology allowed directors to have real-time information, including live tracking data of the cyclist and augmented reality experiences and even a “fantasy gaming” sponsored by Tissot™.

This paper aims to analyse the different uses and applications of AI in sport to distinguish

among acceptable and unacceptable applications from an ethical perspective. That distinction would enable us to draft a normative and ethical framework for trustworthy uses of AI in sport. The roadmap of the paper is as follows. In section 2, some of the most common AI uses in sport are presented. Section 3 provides a short introduction to AI in a broad sense but focused on sport. Section 4 analyses some AI uses and misuse in sport and provides a rough classification of them on a risk approach based. In section 5, are presented some basic commitments to human rights that all AI applications in sport must respect. Finally, section 6 deals with some of the most relevant ethical concerns raised by AI in sport.

## **AI in sport**

Artificial Intelligence is becoming more and more important in daily life. Sport is not an exception, quite the opposite. Sport is probably the field in which AI applications are increasing in a dramatically and uncontrolled way. AI systems are the perfect tool to assist training, coaching, data storage and many other tasks. In what follows, I shall briefly explore some of the most common uses.

i) Training preparation. The importance of AI in training is increasing every day in both professional and amateur sports. Certainly, nowadays the use of Apps and technology powered by AI systems have become very popular among amateurs. In professional sports, machine learning methods for clustering and classifying sport-specific data, like sequence movement evaluations, endurance, performance and the increasing use of

Neural Networks for analytical evaluation and predictive solutions, are nowadays of increasing use (Baca, 2012; McCullagh, 2010; Novatchkov, 2014). New companies devoted to exploring AI uses in sport are working together with athletes to improve AI applications and results. Athletes are always interested in improving performance and results. With this goal in mind athletes are feeding, while training, companies' data collection. Companies use machine learning systems to collect hundreds of millions of data –jumping, throwing, balancing and so on- and test them. That is how the 3D Athlete tracking technology works. In fact, Intel hired in Asthon Eaton the two Gold Olympic medalist to test and improve 3DAT technology as other companies are hiring different athletes to improve their systems. Therefore, it is not surprising that major sporting events are a suitable arena to test the results of these systems. Most Olympics sports, if not all, are using them to improve tactics, predict how atmospheric circumstances can affect athletic performance and enhance athletic performance near to ideal levels.

ii) Assisted and extended coaching. AI systems manage large databases containing information. Traditionally coaches have relied on their experience to make decisions. But they have always welcomed external advice and help. AI systems enable coaches to be almost omniscient. AI systems evaluate athlete's skills, endurance and consistency. In sport teams, they analyze passes among players, who is passing and receiving, and also their frequency and accuracy. AI systems are used to develop and improve strategies. Apps informing coaches in real time and even taking decisions on player contribution,

predicting the game evolution in the next few minutes, interacting with several variables, changing strategies and players or putting more or less pressure on the opponent, are already in use in football, basketball, rugby, cycling and so on. The fast progress of AI systems and applications makes Louis Van Gaal's use of data in the 2014 World Cup final seem very distant and perhaps naïve in today's eyes. As may be recalled, Van Gaal unexpectedly changed the goalkeeper in the 120th minute, just before the final penalty shoot-out. This change confused the Costa Rica shooters, who did not have information about the new goalkeeper available at that moment, and this handed the 2014 FIFA World Championship title to the Dutch team. This change would probably not have the same outcome nowadays, given that the lack of information could have been quickly solved. In fact, Gareth Southgate, one of the most renowned coaches for his success with the England national team in the UEFA 2020 Championship, has recognized that AI plays an important role in seeking for marginal benefits in current football competitions. Indeed, Southgate tried a Van Gaal-like tactic by introducing Rashford and Jadon Sancho as skilled penalty takers in the last minute of the match. Unfortunately, this time data did not correlate with penalties success and England was beaten by Italy. Since then Southgate has been at pains to explain what he appreciates most, namely: how data analyses by AI system provides empirical evidence and support tasks, decisions and improve coach-player communication<sup>1</sup>.

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<sup>1</sup> <https://www.forbes.com/sites/stevemccaskill/2019/11/27/gareth-southgate-how-big-data-and-cloud-helps-england-prepare-for-euro-2020/> Accessed: 6 August 2021

iii) Doping monitoring. Wearable devices are already helping WADA to monitor doping. Even if the use of some high-technology wearable devices to geolocalize athletes has led to several disputes, WADA has made continuous efforts to fight doping with the help of high-tech and AI systems. Not coincidentally, WADA is right now funding at least four research projects about AI with this end. A couple of them aim to make EPO detection more precise. The others are aimed at doing the same for steroids. Although the pandemic situation has forced a slowdown in this research, they are aimed to flag suspicious athletes making sure they are thoroughly tested, Olivier Niggli, WADA director revealed.

iv) Injury prevention. AI can help to improve prediction of injury and injury risk in individual athletes as well as in teams. These systems, based on machine learning algorithms, allow the forecast of injuries, avoiding terrible consequences for individual athletes and teams, as well as preventing losses for sport management. Some companies are developing AI systems with this aim. These AI companies usually work to prevent injuries in three steps. 1. Collecting data through the technology used during training; 2. Analysis of an athlete's risk of injury; and 3. Making recommendations to coaches and doctors that help to predict and prevent them. This is particularly important in COVID times when athletes need to be back to competition after significant time without having appropriate training and coaching.

v) Assisted refereeing Video Assistant Referees (VAR) is already a common feature in many sports. As usual football is one of the sports

in which technology takes the longest to be incorporated. FIFA officially implemented VAR in the 2018 world championship, one of the cleanest in history, according to FIFA itself. But even if VAR is not always welcomed by fans, it has become a decisive tool in modern football. The problem, though, is that it is sometimes too precise for football purposes. For that reason, the English Premier League is adjusting VAR next session 2021-22 in order to avoid razor thin calls, which happen when a fraction of the body of a player – the toes, armpit—is behind a defender. However, FIFA's aim seems to be the opposite. Previous to the pandemic, FIFA announced the creation of a department to study the replacement of linesmen with robots, cameras and computers to avoid mistakes ruling offsides and throw-ins. FIFA has recognized that the complete substitution of humans with robots could happen in the near future. The question is if that would be good for football.

Apart from the previous applications, there are several more uses of AI in sport, such as nutrition data collection by high-technological systems that are able to inform in real time about variables such as lactic acid, oxygen and other indicators that, adequately combined with machine learning systems, allow athletes to improve and personalise their nutrition in order to improve endurance and performance. AI in sport media also has several uses such as broadcast coverage, fan engagement, personalized experiences and so on. Of course, not all uses, and applications of AI are focused on the health and performance of athletes. AI is a powerful tool for sport business and fans engagement. As we have seen above Le Tour de France is leading digitalization and AI applications, but also Wimbledon 2021 edition was using IBM's cloud and AI technology to

create new digital services to analyze matches, statistic and players fitness in order to make predictions and engage fans in an edition with limited access due to pandemic restrictions. Of course, one of the major uses of AI in sport are predictive apps as a tool for betting. Consider as instance Quarter4, an AI-backed prediction platform for sport bettors that has raised \$1.6 million in seed funding. Quarter4's machine learning algorithms analyze athletes and team's performance data to predict statistical outcomes. Users get this information by text or email giving them betting guidance.

Finally, the use of AI systems in major sport events for safety and security issues is on the rise. Although these uses are so controversial since they may negatively affect privacy rights and lead to biased decisions, they are justified for their efficiency in preventing harm and avoiding risks. That is, for utilitarian reasons.

If something is clear at this stage is that all of the AI uses in sport mentioned above are very different among them. Therefore, it is important to distinguish between them. And perhaps the first step is looking more depth at what AI is.

### **What is AI and why is it so popular?**

AI has been evolving since the last third of the twentieth Century. It includes a vast range of elements, devices and technology. It could be said that AI is an umbrella concept. Consider the following definition from the European Commission:

*“Artificial intelligence (AI) refers to systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals. AI-based systems can be purely software-based, acting in the virtual*

*world (e.g. voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g. advanced robots, autonomous cars, drones or Internet of Things applications).”<sup>2</sup>*

AI is an ambiguous term that can lead to some key misconceptions. To avoid this it is important to disambiguate it, distinguishing at least between AI in the form of machine learning and AI as autonomous systems<sup>3</sup>.

In the first sense, AI usually refers to the development of computer learning systems, machine learning, artificial networks, processing data and analysis systems. In other words, artificial systems that imitate human intelligence perform the tasks that humans usually do but in a more efficient and faster way. AI machine learning systems are those usually deployed in sport as we have seen above.

The increasing popularity of Mechatronic, a multidisciplinary field that combines several types of engineering, particularly robotics and electromechanical engineering, already provides a sophisticated range of robotics and high-tech systems. This is the technology behind Tokyo Olympics robots to welcome athletes, transport them and staff around Olympic venues and so on. This high-tech system are also behind Robocup,

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<sup>2</sup> Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on Artificial Intelligence for Europe, Brussels, 25.4.2018 COM(2018) 237 final

<sup>3</sup> See European Group on Ethics in Science and New Technologies (2018), “Statement on Artificial Intelligence, Robotics and Autonomous systems”, p. 6. Available at [https://ec.europa.eu/research/ege/pdf/ege\\_ai\\_statement\\_2018.pdf](https://ec.europa.eu/research/ege/pdf/ege_ai_statement_2018.pdf). Accessed: 6 August 2021

the worldwide robots soccer players, whose inventors have stated the ultimate goal of this initiative as follows:

“By the middle of the 21st century, a team of fully autonomous humanoid robot soccer players shall win a soccer game, complying with the official rules of FIFA, against the winner of the most recent World Cup”<sup>4</sup>.

The risk with these smarter systems is that the more autonomy and ability to perform a task independently they have, the less humans have control over them. In this sense, it is worth noting that since the goal of reinforcing machine learning is to maximize positive reward and adapt their behavior, then, the joining of autonomous systems and robotics could easily be out of control in the near future.

A promising future is to be found in the ever-closer interaction between humans and machines, such as Digital Twins and Cyborgs. The former, the digital replica of the living and non-living physical entities, was successfully tested at the 108th edition of Le Tour de France as we have seen before. Cyborgs, the integration of smart machines inside the human body, are also a fact in sport. Human-machine interaction places us in a win-win situation in which the cooperation between humans and AI performs better than either of them separately. But if human-machine integration is possible at all the question is, who has the ultimate control over it?

### **Distinguishing among AI acceptable and unacceptable uses in sport**

Technology is neither good nor bad by itself. AI and high-tech systems are not an

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<sup>4</sup> <https://www.robocup.org/objective> Accessed: 6 August 2021

exception. AI has a lot of good applications in athletes, coaches and referees' everyday life. AI systems have an important role in fighting doping and illegal betting, but they also may negatively affect privacy rights and lead to biased decisions (Fierens & De Bruyne, 2020). Not to mention that the most powerful AI is by now opaque to us and could pose a serious risk for humans.

In fact, the previous applications of AI in sport have a hidden side as well. Most of them could lead to misuses such as cheating, illegal betting and particularly, to manipulating competitions and dismissing the human value of athletes. Because of this, the increasing use of AI must be guided by an ethical reflection that enables us to assess all of these uses. In this sense, it is worthy to note that AI and advanced technological devices are here to stay in the field of sport and there are no objective reasons to oppose them. A safe and ethical use of AI can improve sport in several ways. Indeed, AI will surely contribute to athletes flourishing and strengthen the Olympic motto, *Citius, Altius, Fortius*. However, it is important to ensure that it is used in a fair way and aimed at promoting distributive equality as well as human and planetary wellbeing.

On the other hand, we must also be aware of the several ethical challenges that AI raises. Large databases containing important information may easily put individual privacy at risk, particularly when data are related to the health of athletes. Another important matter for sport Government Bodies (SGB) is the impact that AI can have on decision making processes hampering the emerging process of democracy in sport Governance. Finally, it is important to remember that the increasing assistance of AI systems is going ahead so

fast and could soon be out of human control. Because of this, it is extremely important to prevent its impact on people's lives now, before it could become unmanageable. In order to face these ethical challenges in the most efficient way a clear distinction between different uses is needed. Indeed, it hardly needs to go into much depth to realise that some uses do not compromise human rights while others are highly controversial. In other words, due to the generality, vagueness and ambiguity of AI, a proper distinction and classification of its uses is necessary. In fact, that is the path taken by political institutions such as the EU, which has recently launched several initiatives aimed at ordering and classifying AI uses and applications<sup>5</sup>. With this aim different AI uses and applications are distinguished according to a risk-approach basis in three different categories, namely i) unacceptable risk, ii) high risk and iii) low or minimal risk. The first ones are absolutely prohibited in the EU, the second are uses subject to compliance with mandatory requirements and finally the third ones only need to observe some basic guidelines (COM, 2021, p. 13). The governance of AI in sport is an important and pressing issue. In this sense a clear distinction is appropriate to follow the path taken by the EU by classifying and organizing the AI uses in sport clearly stating which,

i) Are strictly prohibited, for instance those

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5 [https://ec.europa.eu/commission/sites/beta-political/files/political-guidelines-next-commission\\_en.pdf](https://ec.europa.eu/commission/sites/beta-political/files/political-guidelines-next-commission_en.pdf)  
European Commission, White Paper on Artificial Intelligence - A European approach to excellence and trust, COM(2020) 65 final, 2020. European Council, Special meeting of the European Council (1 and 2 October 2020) – Conclusions, EUCO 13/20, 2020,. European Parliament resolution of 20 October 2020 with recommendations to the Commission on a framework of ethical aspects of artificial intelligence, robotics and related technologies, 2020/2012(INL).

involving children, aimed at distorting or modifying individual behaviour or taking profit from some physical or mental disability.  
ii) Involve a high risk and need to comply with strict requirements, such as those uses in which confidential data concerning the health and privacy of athletes are collected and may compromise their present and future careers.  
iii) Are reliable but need to follow appropriate and adhere to the ethical standard of sport good governance.

In other words, we need to create a responsible environment of AI systems in sport that cohere with the principles of sport good governance and respect Human Rights.

### **A basic commitment with Human Rights**

Respect of Human Rights is a basic moral commitment for any legitimate SGB. It is not by chance that the Olympic Charter recognizes the practice of sport as a Human Right that must be enjoyed without discrimination of any kind<sup>6</sup>. Since there is no doubt that AI can have an important impact on some basic Human Rights of athletes and other stakeholders, it is important to make sure that AI applications in Sport are aimed at respecting and reinforcing at least the following basic rights<sup>7</sup>.

i) Human dignity. The equal worth of any human being, as it was defined long ago by Kant (1997, p. 433-436), is a moral categorical

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6 Olympic Charter. Fundamental Principles of Olympism. Principle 4. Available at <https://stillmed.olympic.org/media/Document%20Library/OlympicOrg/General/EN-Olympic-Charter.pdf>. Accessed: 6 August 2021

7 High-Level Expert Group (2019), Ethic Guidelines for Trustworthy AI. Available at <https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai> Accessed: 6 August 2021

imperative. The goal of Olympism, according to the second Fundamental Principle of the Olympic Charter, is “to place sport at the service of the harmonious development of humankind, with a view to promoting a peaceful society concerned with the preservation of human dignity”. Human dignity could be understood in two different but related senses. On the one hand, the positive one, the principle of human dignity obliges the SGBs to observe and preserve it in any action they take. On the other hand, the negative one, it imposes on others the moral duty of respect without illegitimate intromission. Regarding AI’s uses in sports, to dismiss the importance of human dignity can lead to disregarding the intrinsic value of every human being as a moral person. Indeed, some misuse of AI can lead to transforming athletes into objects that can be manipulated as merely a means to obtain medals, make money and, even worse, be used as human guinea pigs to test the integration of technological devices inside the human body. In short, human dignity requires the duty to protect both the physical and psychological integrity of athletes and other stakeholders in sport.

ii) *Autonomy and protection of the self.* Autonomy is probably one of the most precious values of people. Each human being should enjoy it to carry out her/his own life plans without any unjustified intrusion of governments and institutions. As is the case with dignity, a serious commitment to autonomy entails a double requirement. On the one hand, it obliges institutions to protect individual autonomy by both promoting it through fair opportunities and imposing duties to respect the autonomy of others. This is particularly important with AI systems because they can easily affect individual autonomy by

imposing unjustified and unfair surveillance, as well as physical and psychological manipulation that led to a loose self-identity. Note that the principle of autonomy applies to AI manipulations by coaches, doctors and so on, as much as to SGBs, as is the case of WADA wearable devices to monitor doping and comply with whereabouts rules.

iii) *Equality.* Basic equality is a political requirement that justifies the existence of social institutions aimed at setting up and promoting some basic rights, as Hobbes (1991) and Hart (1994, 193 ss) argued. It was probably Kant who best expressed the idea of basic equality through the human transition from natural accidents (*homo phaenomenon*) to moral beings (*homo noumenon*). That is, the recognition of the equal dignity of every human being, which imposes, at the same time, the duty of respect for each other as we have seen previously (Kant, 1997, p. 433-436). The consolidation of the idea of basic equality or deep equality, as Dworkin calls it (Dworkin, 1985, p. 273), is according to Scanlon the most important moral progress of humankind (Scanlon, 2013, p. 5). Even if equality is a tricky concept, it is so important in sport (Carrio, 2021). Not only because the practice of Sport is a human right that does not admit any discrimination, but because the idea of fair play in sport implies a strong commitment to equality of opportunities. However, AI may lead to dismissing this requirement since development in technological devices and AI systems are extremely unequal and they can lead to unfairly biased outputs. Because of this, AI applications in sport must be extremely committed to the principles of solidarity, non-discrimination and protection of vulnerable groups, such as women, intersex and disabled athletes. On the other hand, AI systems

rely on gathering and processing massive data. As these data are mainly from male athletes pursuing their careers in developed countries, they can lead to biased decisions and unjustified discrimination.

iv) **Democracy.** Democracy is another basic principle of legitimate institutions. The Olympic Charter, IOC Code of Ethics and IOC Principles of Good Governance require democratic processes and free democratic elections from all of their members. However, this formal principle should be complemented with a strong commitment to democracy as non-domination which requires (Bessons & Martí, 2018, p. 7): a) the effective control of the power by stakeholders, b) political equality among them and, c) deliberative contestability. AI systems can improve democratic processes, making them safer, avoiding fraud and corruption and, as much as they process individual preferences, they can help people to make their decisions and increase participation. But they can be a serious threat to the democratic process as well. The increasing use of AI systems in minor automated decisions could be expanded. On the other hand, AI systems can alter the equal value of an individual vote by discriminating against groups of people, athletes, federations and so on, who did not have voice in previous election processes. As a consequence, AI systems may lead to the undermining of human deliberation, transforming democratic voting systems completely.

### **Ethical principles guiding AI uses in sport**

Apart from the commitment to Human Rights, it is necessary to frame an ethical and trustworthy application of AI in Sports. That is also the purpose of the European Group on

Sciences and New Technologies (EGE), the AI High-Level Expert Group (AIHLEG) and the Declaration of Montreal for a Responsible development of Artificial Intelligence<sup>8</sup>. Each of these organizations has proposed a set of basic ethical principles as a minimum requirement for a safe and liable use of AI. Following the recommendations of these organizations as well as the basic principles of bioethics as stated by Beauchamp and Childress (2008), I propose the following set of principles as a minimum requirement for a liable application of AI in Sports.

- i) Principle of respect for human autonomy,
- ii) Principle of nonmaleficence,
- iii) Principle of beneficence
- iv) Principle of justice.
- v) Principle of transparency and accountability.

In what follows, I shall try to provide a brief explanation of the importance of each of these principles.

— The principle of respect for human autonomy is a basic ethical requirement to put AI at the service of human flourishing, to keep human self-determination intact and to avoid the subordination of humans to an uncontrolled development of AI. According to this, the allocation of AI systems in sport must be human-centered, promoting meaningful experiences in sport and physical education, and not hampering human creativity and enjoyability in sports practice and competitions. On the other hand, this principle also requires human oversight of AI automated decision-making processes and the ultimate control of their application in sports governance.

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<sup>8</sup> <https://www.montrealdeclaration-responsibleai.com/the-declaration>. Accessed: 6 August 2021

— The principle of nonmaleficence imposes the ethical duty to not cause harm by intentionally injuring athletes, whether or not the harm is real or potential, and either by commission or omission. Negligent uses and applications of AI in sport could cause serious damage to the health of athletes, their life plans and legitimate aspirations in sporting careers. This principle especially affects doctors, scientific research, nutritionists and trainers. It is particularly important in youth and disabled sports.

— The principle of beneficence implies that SGBs have the duty to employ AI to benefit athletes and other stakeholders in sport. This principle could be seen as the reverse side of the previous principle of nonmaleficence. But while the nonmaleficence is a general duty to not cause harm, the principle of beneficence is usually understood in a more limited scope. This is definitely true in health care systems but not in AI applications. Certainly, the principle of general beneficence is a consequence of human equality and a condition of the principle of fairness. Consequently, the goal of providing benefit could be applied to individual athletes and stakeholders as well to the sustainability of Sports.

— Principle of fairness. The applications and future development of AI in Sports must be fair. On the one side, the principle of fairness requires that SGB bodies ensure an equal distribution of AI benefits among all the stakeholders. On the other side, it requires them to avoid any use of AI that can lead to individual and group discrimination, unfair bias and opportunities. If all of this unfair distribution is avoided, the use of AI in sport may be beneficial and can increase global fairness. Consider for example fighting

doping, training improvement and injuries prevention. Fairness also informs the principle of proportionality in all these uses since an uncontrolled use of them will lead to an abuse of AI, increasing the risk of athletes' manipulation. Finally, fairness also has a procedural side related to the principle of transparency and accountability.

— Principle of transparency and accountability. Transparency and accountability are a couple of basic principles of good governance. As explained previously, the procedural side of fairness requires the possibility to contest and get an adequate redress against the decisions of the SGBs. To do it in a proper way, the SGBs must be transparent, share information and of course be accountable to the decisions and actions they put in practice. These basic requirements are essential to build and maintain trust in SGBs. Lack of transparency is usually associated with corruption, which unfortunately has a long and negative impact on Sports governance. Given the impact that AI applications have in Sports, the process of incorporating AI into Sports needs to be transparent, adopt an effective and open communication about the purposes and offer a clear explanation of the effects they may have. That is particularly important since AI systems are not transparent and most algorithms are "black box" types. Consequently, AI applications require a permanent transparent communication and accountability of the negative impact they may have due to erroneous outputs.

## **Conclusion**

As in all other areas of human life, high-technology and AI applications in Sport are bad or good depending on the aims

and purposes they have. An ethical use and deployment of AI may have many benefits in Sports. Because of this, there is no reason to oppose AI applications. High-technological devices and AI systems are not responsible for people's aims. At the end of the day, AI systems are much better than humans in learning processes and making efficient decisions that are of main importance in Sports. But, since ethics is much more than algorithms, we must retain control over AI systems. Indeed, ethics and fairness are concepts that AI systems neither can understand nor, as yet, be learned by algorithms. An uncontrolled and unfair use of AI could enable a nonsense arms race in Sports with unforeseeable consequences. On the other hand, we must also bear in mind that the increasing autonomy of AI systems makes it impossible to have a clear understanding of their learning improvement which will put all of us in a subordinate position. Fortunately, or unfortunately, Sports have always been a testing ground. Let's play safe and fair in this new game.

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