The future of sports law in the metaverse: a look at the potential for individual sports participation

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Law Dr., Professor **S.M. Mironova**[1]
Postgraduate student **M.S. Sitnikov**[1,2]
[1]Volgograd Institute of Management - branch of the Russian Presidential Academy of National Economy and Public Administration, Volgograd
[2]Volgograd State University, Volgograd

Corresponding author: mironova-sm@ranepa.ru

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Abstract

Objective of the study was to assess the legal implications of incorporating the metaverse into the world of sports.

Methods and structure of the study. The fundamental approach to this research is the experimental method. The researchers employed specialized equipment, including a virtual reality headset (MetaOculusQuest – 2), to fully immerse themselves in the realm of virtual reality. This allowed them to recreate a boxing simulation that closely resembled the real thing.

Results and conclusions. The creation of immersive virtual reality simulations of individual sports events demands a substantial mental and physical investment from the user, akin to the effort required for real-world sports. Given the metaverse's potential to encompass numerous virtual worlds, it is reasonable to anticipate that one of these will be dedicated to the realm of sports. The primary legal challenges in integrating the metaverse into the sports industry revolve around issues of identity verification and cheating.

Keywords: *metaverse and sports, virtual sports, digital avatar of an athlete.*

Introduction. It is unlikely that anyone will not agree that all further development of the sports industry will be under the influence of technological progress. Over time, ideological innovations arise that are successfully integrated into the field of sports. Perhaps the greatest interest from the latest digital trends is caused by such a phenomenon as metaverse.

The theme of the symbiosis of the metaverse and sports industry is interested in scientists from around the world. In the vast majority of cases, scientists are interested in the question of the commercial component of integration of the sport in the metaverse. S.S. Chen and D. J. Zhang conducted a study on the key mechanic, which affect consumer demand in sports metavated. As a result, they came to the conclusion that virtual interactions were the most important factor in market demand affecting the intentions to visit the metaverse [2]. Developing a thought presented by the authors, I would like to dwell on the forms of virtual interaction. Throughout the history of the sports sphere, the main catalyst for attracting the audience was the characteristics of the athletes themselves (strength, speed, creativity, perseverance, self -control, etc.) regarding their confrontation during the competition. In this case, we can talk about both team and individual sports. In this regard, there is a clear need to determine how high the connection of the sports competitions held in the metaverse sports competitions with the real world is high, that is, is it possible to consider sport in the metaverse and real world with similar phenomena?

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The data of the experiment

<table>
<tr><td colspan="2"><u>Subject data:</u>
Paul-husband., Age-26 years old, social status-graduate student, teacher, height-174, weight-66, sports experience-7 years of amateur sports (boxing), weekly activities with active sports (mini-football).</td><td>Means</td><td>Simulation app</td></tr>
<tr><td><u>Physical indicators to:</u>
Condition: excellent;
Pulse: 60 beats. in min.
Muscle weakness: absent.</td><td><u>Monday. Physical indicators after:</u>
Characterization of the fight: 3 rounds of 2 minutes, break - 1 min., The level of complexity is average.
Condition: somewhat tired (small sampling).
Pulse: 131 beats. in min.
Muscle weakness: Small.</td><td rowspan="3">Oculusquest 2 (virtual reality glasses + two joystick joysticks)</td><td rowspan="3">The Thrill of the Fight</td></tr>
<tr><td></td><td><u>Wednesday. Physical indicators after:</u>
Characterization of the fight: 3 rounds of 3 minutes, break - 1 min., The level of complexity is high.
Condition: shortness of breath.
Pulse: 141 beats. in min.
Muscle weakness: essential.</td></tr>
<tr><td></td><td><u>Saturday. Physical indicators after:</u>
Characterization of the fight: 5 rounds of 3 minutes, break - 1 min., The level of complexity is high.
Condition: Strong shortness of breath.
Pulse: 150 beats. in min.
Muscle weakness: high.</td></tr>
</table>

late a virtual boxing match using a virtual reality headset. One of the authors acted as a subject (see table).

Results of the study and discussion. Despite the use of a symptulator in offline mode, it is safe to say that the created situation is close to a full-fledged boxing match. In addition to the technical skills of conducting a fight, among which, setting hands and racks, speed and accuracy of shocks (this skill can also be tested in training mode with a boxing bag), the ability to evade the opponent's attacks, to win various tactical schemes (for example, the translation of attacks from the body to the head, dive and entry at an angle, etc.).

The only aspect that needs to be made significantly is to integrate tactile sensations from the opponent's strokes (development in this area is carried out). It may seem that the implementation of this provision occurs only in fantastic cinema and literature, since there is no «sports» component.

On the other hand, not everything is so simple. Here, a study of the large team of Asian scientists who, using special nanogenerators installed on the subjects showed the objective possibility of transforming the human energy produced in the world of virtual reality into the metaverse [4], are very interesting [4].

Thus, scientists have revealed an objective possibility of transferring human energy to a metaverse.

One of the few scientific articles in which attention is drawn to the issues of sports law in the conditions of the development of the metaverse is the study of A.V. Minbaleeva and E.V. Titova, which revealed the general problems of transformation of the legal regulation of the sports industry in the metaverse. Among these are they identified are spheres such as, in particular, the protection and protection of personal data of athletes and the legal regime of virtual stadiums and houses of fans [1]. The most discussed issue in science regarding the subject of sports and metaverse is the protection and confidential data. In this regard, it is very reasonably indicated that the sports industry is important to solve problems and ensure the responsible and ethical use of the metaverse [3].

We are invited to consider this issue in terms of identification of athletes. The peculiarity of conducting sports competitions in the metaverse is determined by the lack of a single physical space. In this understanding, each of the athletes can physically be in familiar conditions. Here the most important question arises of how to identify the personality of the athlete.

In modern society, it acquires/gained popularity of using biometric data in order to certify the individual. The idea of biometric identification of athletes in the metaverse looks very attractive and reliable, provided that the most suitable method is selected. Given the

specifics of the equipment used for access to virtual reality (virtual reality headset) could be proposed to use the retina, which should be fixed on the device throughout the length of the sports distance. In this case, a clear connection with the security and confidentiality of the data is visible, since the retina, like any other biometric data, is one of the forms of personal data.

Another potential problem of conducting sports competitions in the metaverse can be cheating. In essence, cheating suggests an unfair acquisition by the player of any advantages from the use of unauthorized software. It is far from the first decade that the problem of cheating in the field of e -sports has been actively discussed by scientists and e -sportsmen. It is very likely that this problem will gain a new degree of relevance in integration of sports into a metaverse. In the future, it is impossible to exclude the possibility of direct use of cheat codes in the metaverse to increase the sports characteristics of the competition participant. For example, the use of cheat codes will increase the strength and/or speed of the blow or make the participant completely invincible.

A universal and probably the only possible option to avoid the possible use of cheating lies in the proper functioning of the information system, on the basis of which the competition is held. The main role of law is reduced, first of all, to the establishment of a direct ban on the use of cheating and, accordingly, sanctions for its violation. In addition, the use of legal mechanics will establish uniform requirements that the information system must satisfy. Here, the idea arises of establishing the responsibility of the organizers of the competition to obtain a certificate of conformity of the information system with the established requirements, without which it is impossible to conduct legal and recognized competitions.

Conclusions. Metaverse, being one of the main digital trends of the modern world, is fraught with great opportunities for the sphere of sports. A number of scientific research clearly show the objective possibility of transferring the produced human energy to the world of virtual reality. Based on the experiment (the simulation of virtual boxing fights), the authors showed that sports competitions in virtual reality are as close as possible to sports competitions held in the real world. Integration of sports in the metaverse will entail some transformations related to legal regulation.

In this work, two problem areas are identified, which will face sports law: identification of the athlete (proposed to use the retina while using the virtual reality headset) and cheating (indicated to ensure the safety of information systems).

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