

THE VIRTUALIZED BODY IN TECHNOLOGICAL RELATIONS WITH SPORTS IN VIDEO GAMES AND INFORMATIONAL MEDIA

O CORPO VIRTUALIZADO NAS RELAÇÕES TECNOLÓGICAS COM O ESPORTE NOS JOGOS DE VÍDEO E MÍDIAS INFORMACIONAIS

Bruno Medeiros Roldão de Araújo^{1,4}, Patrícia de Jesus Costa dos Santos², Priscilla Pinto Costa da Silva³, Ana Raquel Mendes dos Santos⁴ and Clara Maria Silvestre Monteiro de Freitas⁴

¹Universidade Federal de Campina Grande, Sumé-PB, Brasil.

²Unifacisa Centro Universitário, Campina Grande-PB, Brasil.

³Universidade Federal do Rio Grande do Norte, Natal-RN, Brasil.

⁴Universidade de Pernambuco, Recife-PE, Brasil.

RESUMO

A representação esportiva e corporal nos jogos de vídeo e telespetáculo esportivo promovem ressignificações da cultura corporal de movimento. Diante deste cenário, o objetivo da pesquisa foi identificar e analisar o consumo midiático relacionado à virtualização esportiva e sua influência subjetiva na conformação dos corpos. Trata-se de uma pesquisa descritiva de campo, com abordagem qualitativa, realizada com 50 estudantes, na faixa etária da juventude, de 15 a 24 anos de idade, da rede pública de Ensino Médio e do Ensino Superior da Universidade de Pernambuco - UPE na cidade de Recife, PE, Brasil. Os dados foram discutidos à luz da Análise de Conteúdo e os resultados indicaram que a virtualização esportiva midiática é marcada pela reprodução espetacularizada, conduzindo ao entendimento de uma constituição corporal multifacetada tanto no esporte telespetáculo, como na prática corporal e/ou virtual.

Palavras-chave: Corpo humano. Esportes. Televisão. Jogos de vídeo.

ABSTRACT

The sport and body representation in video games and sports telespectacles promotes reinterpretation of the body culture of movement. Given this scenario, the objective of this study was to identify and to analyze the media consumption related to sports virtualization and its subjective influence on body shaping. This was a descriptive, qualitative field study conducted on 50 students in the youth age range of 15-24 years from public high schools and college courses of the University of Pernambuco (UPE), Recife, PE, Brazil. The assessment was made using content analysis. The results indicate that the media sports virtualization is marked by spectacularized reproduction. This virtualization leads to the understanding of a multifaceted constitution of the body both in telespectacular sports and in body and/or virtual practice.

Keywords: Human body. Sports. Television. Video games.

Introduction

The media spectacularization of sports leads to the shaping of bodies and different tastes of consumption. When this process occurs through virtual sports, especially those of the cyberspace, new paradigms arise for contemporary Physical Education since these virtual sports call one's notion of the body into question, surpassing the simple corporeal and biological materiality to evidence a cultural and sociological relation of this body. Within this context, Santaella¹ points to a crisis in cultural tradition, called the crisis of the subject or of subjectivity, which even calls into question corporality and corporeity, a fact that renders the body a complex entity of innumerable distinct facets and without well-defined borders. This has been accentuated by the technological revolution, especially technologies related to microelectronics and Information and Communication Technologies (ICTs), which can be

seen as a new stage of human evolution. According to Ihde², there are three meanings of our body: the first is the body in the emotive, perceptual and motile sense, i.e., the way in which phenomenology understands the human being; the second is the sociocultural body, i.e., the culturally constructed body; the third meaning is related to the dimension of technological relations that permeate the other two in a symbiotic relationship between the human body and technologies, constructed in the cybercultural context.

Such a perspective points to a so-called “new culture” that comes to dominate the time and space that are fundamental to human understanding of the body historically and socially constructed throughout the civilizing process. This culture that germinated in the cyberspace of social networks, television and cinema media spectacles and video games leads to new subjectivities in the shaping of bodies. Not only in its Cartesian aspects, but in its ontological essence, of the sensory, perceptive and affective being, of the body which is not only consciousness or consciousness which is only corporeal, of beings in themselves and the same in all, in which the contraction of time and the expansion of spaces overcome barriers of deterritorialization and loss of historical reference³, since culture can be understood as a human production.

This point of view is described by Le Breton⁴, by revealing the body that does not exist in the natural state, it is a complex of senses, emotions and meanings, which arise according to its communication with the environment that surrounds it. For each action or for each society, the body has a unique shape, visibility and conceptualization. Therefore, the body is a representation derived from its interlocution with society, a relationship between the subject and the world, i.e., the “draft body” that takes the shape that its interaction allows and that is constructed socioculturally.

This relationship demonstrates a new representation of this body through its virtualization in the cyberspace of video games, or its virtual interaction with actual mobility in the physical real world. The draft body presents itself as a virtual body, an information-body, as pointed out by Herold Junior⁵, which implies the incorporation of knowledge derived from communication technologies, enabling an increase in the quantity and speed of the information learned, transcending limited human materiality in a process of humanization beyond the body. This is in line with the theory of Lévy^{6,7}, which proposes a positive view of the virtualization processes and can be fit in the category of the so-called “integrated” authors⁸. The opposite view is found in the “apocalyptic” authors, especially Baudrillard⁹ and Virilio¹⁰, according to whom this conformation of the virtual information-body would be extinguishing human essentiality by destroying their bodies and their notion of identity.

Given these scenarios (integrated and apocalyptic) and pointing out that such dichotomous nomenclature is critically addressed by Eco⁸, leading to the understanding that they are not mutually exclusive, it is necessary to cite Jenkins’ theory of convergence culture¹¹, which proposes an intermediate position in the understanding of virtualization and media influence. The theory of this author is based on three concepts: media convergence (flow of information and content across different platforms), participatory culture (interaction of the media consumer who passes from interaction to constructive media participation), and collective intelligence as coined by Lévy⁷ (consideration of human cognitive capacities from a collective perspective since it would be impossible to exert individual intelligence without the symbols and codes of a collective intelligence). In convergence culture, the consumption of products from the entertainment industry is fundamental for the understanding of the phenomenon of interaction between old and new media, in which convergent thinking has been changing the functioning of social structures and producing new information.

In view of the above considerations, we understand that the new information and the media consumption related to sports virtualization also result in a new understanding of the

body. Le Breton¹² developed the concept of a “supernumerary body”, a diffuse body, an imaginary condition of the body that comprises the view of the precariousness of the flesh, considering that death is always present within the reality of the progressive aging of organs and functions. According to this author, such a condition makes the body a “supernumerary limb” of the human being that ultimately encourages him to discard this body, thus proposing that the desirable one would be a body purely originating from the technoscientific creation.

The present study was conducted within this view of the body since the body of the Cartesian tradition is situated in time and in an objective space, which would take virtualization in cyberspace to its own purpose, something that does not seem to happen, especially when one takes into account the dimension of the positive relations of the body with machinic and information technologies, which can be observed in studies on the cyberspace of video games¹³⁻²⁵, among others. In the words of Merleau-Ponty²⁶, the world is not what we think, but what we live through. The human being also lives in the cyberspace of television electronic media, hypertexts, social networks, and video games. He also exists as a living body in the virtual world, often chaotic but of a new reality, which can lead to a new virtual, libertarian and resplendent body.

Regarding the process of virtualization, Lévy⁷ affirms that the body undergoes reconstruction, becoming increasingly exteriorized and socialized through the self-control of affections and moods by the industrial biochemistry in a process in which economic, technoscientific and institutional circuits are intermingled. To support his thesis, the author cites the perceptions of how the senses are virtualized by ICTs, and thus how virtualized organs emerge, for example, people who see the same television broadcast of a sports event share the “big collective eye”. The author exemplifies that due to digital cameras, one can perceive the sensations of other people, even being in another place and in another time. This is the currently occurring virtualization and collectivization of bodily senses.

Given these scenarios, we question to which extent sports virtualization in video games and sports media exposure act on the understanding and body constitution of the social actors involved. Therefore, the objective of this study was to identify and to analyze the media consumption related to sports visualization and its subjective influence on body shaping.

Methods

This was a qualitative, descriptive field study in which semi-structured interviews were held and questionnaires were applied to 50 social actors (SAs) in the youth age group of 15 to 24 years proposed by the United Nations (UN)²⁷ from public high schools in Recife, PE, and from the University of Pernambuco (UPE). Descriptive statistics was applied to analyze the data derived from the questionnaires using the Statistical Package for the Social Sciences (SPSS) v.10.

The interview data were submitted to content analysis according to Bardin²⁸. Content analysis is a tool for categorical analysis, i.e., the delimitation of the coding unit, assumed by the analyst who, from the totality of a text and in the name of an ideal of objectivity and rationality, verifies the frequency or absence of items of sense based on classification criteria²⁸. The results permitted the creation of analytical categorical tables that were used for the construction of diagrams. Two softwares were used: the AQUAD 7 qualitative data analysis software was used to search for the frequency of words in the statements of the SAs, and the GoDiagram Express for .NET Windows Forms version 2.6.2 (2007) program was used to build the diagrams.

The study was approved by the Ethics Committee on Research Involving Humans of UPE, Recife, PE, Brazil (Approval No. 944.537) under CAAE registration

40214114.1.0000.5207. The free informed consent forms were signed by the parents or legal guardians or by the volunteers in accordance with the ethical guidelines recommended by the National Research Ethics Committee (CONEP), Resolution 466/12 of the National Health Council²⁹.

Results

Among the SAs, 66% were male and 34% were female; 98% were single and 2% were married; 88% lived with relatives (parents and/or grandparents), 8% with friends, 2% with spouses, and 2% lived alone. Forty-eight percent of the participants reported to be Caucasian, 46% brown, 4% yellow/Asian, and 2% black. The reported monthly household income ranged from US\$ 366.00 to US\$ 7,622.00. Eight percent of the participants were catholic, 26% had no defined religion, 22% were evangelical protestants, 12% were spiritists, and 2% had other religions. In addition, 54% of the participants were exclusively dedicated to their studies, 28% worked or were trainees, and 18% were unemployed.

Content analysis of the answers given to the following questions provided the methodological support of the diagrams shown in Figures 1 and 2: “Do you watch sports on TV? Describe”; “What are your favorite programs and/or games?”; “How often do you follow and/or watch them?”; “Do you read or follow sports on the Internet?”; “How often and which sites do you most access?”; “Do you play sports video games? Which ones?” and “Have you ever participated in any video game championship?”.

For construction of the diagrams, the concepts related to the categories, subcategories and analytical variables, the subject of the statements of the SAs, were grouped. Following a logic of expansion, the upper text boxes represent the analytical subcategories of highest representativeness in the statements.

The light gray text boxes refer to the subcategories derived from the main analytical categories “Sports Telespectacle” and “Media Consumption of Electronic Games” (in dark gray). The variables and subvariables linked to the subcategories are given in the white text boxes.

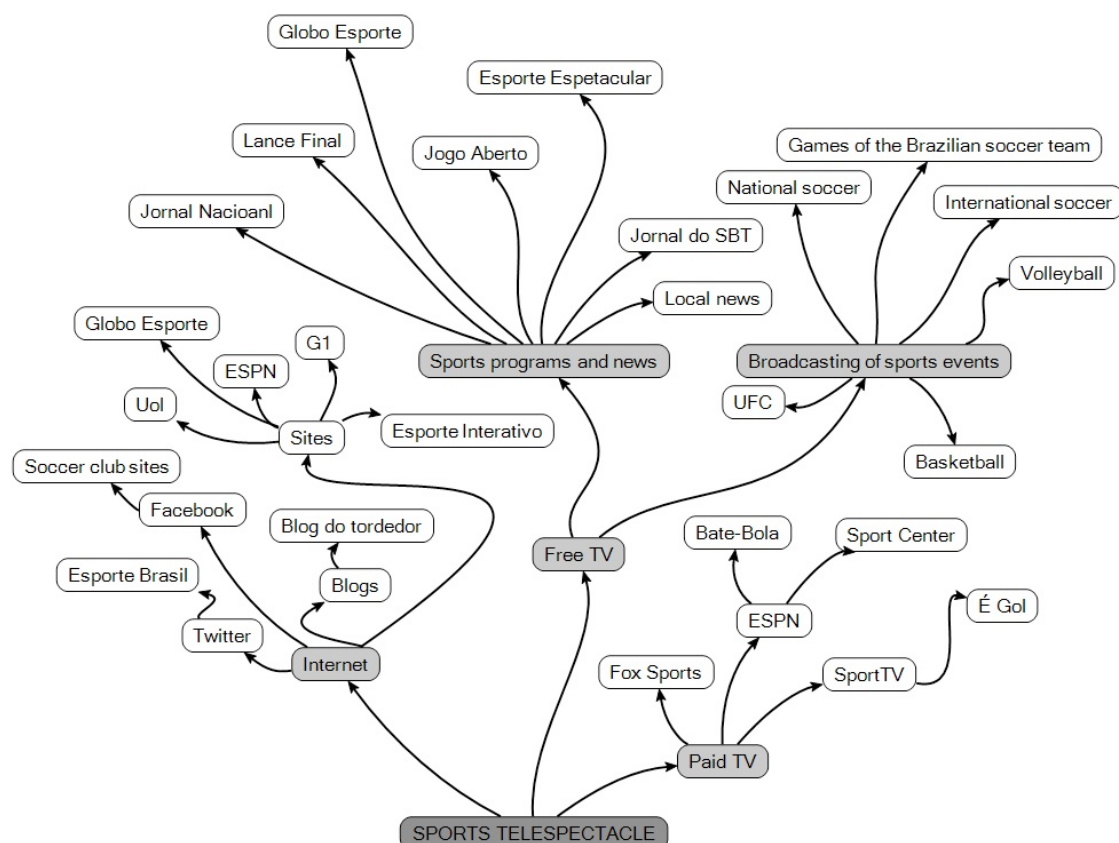


Figure 1. Sports telespectacle in public high schools and college courses of the University of Pernambuco (UPE), Recife, PE, Brazil

Source: The authors

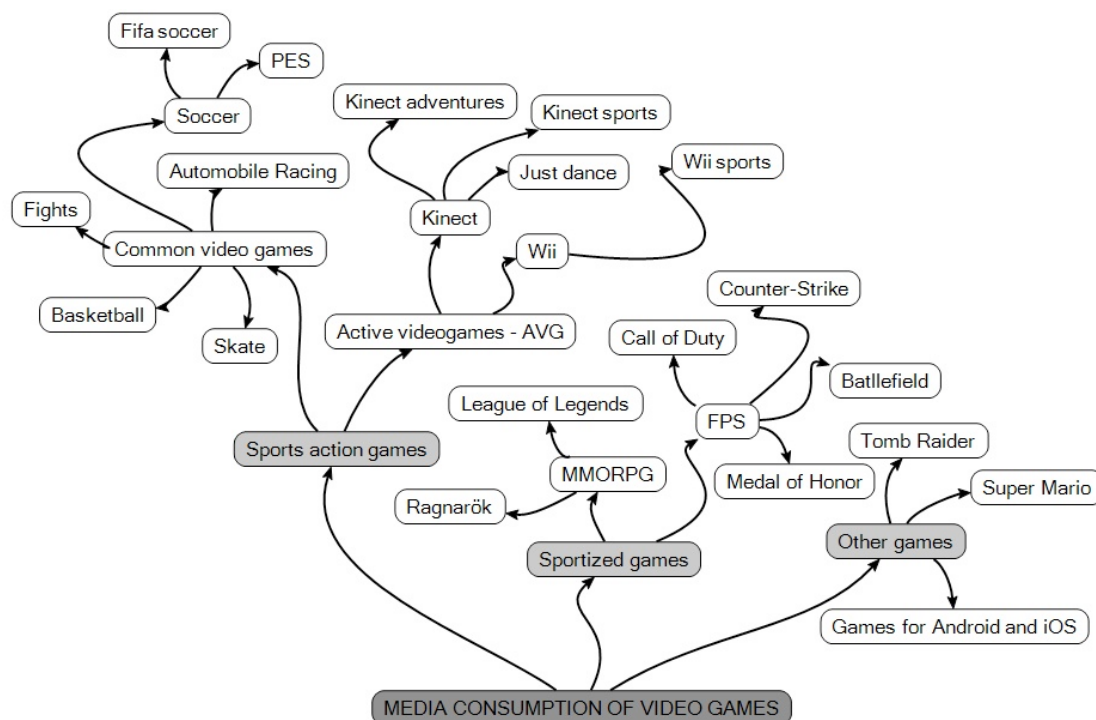


Figure 2. Media consumption of video games in public high schools and college courses of the University of Pernambuco (UPE), Recife, PE, Brazil

Source: The authors

Discussion

Figure 1 shows the taste of sports media consumption regarding television and the Internet (sports telespectacle). The statements of the SAs revealed elements that permitted to identify the following subcategories: paid TV, Internet, free TV, sports programs and news, and broadcasting of sporting events. The Internet appeared in second place after television to search for sports information and to watch games.

The results showed that 86% of the SAs reported to watch the sport on television approximately five times per week, demonstrating that this is a common activity in the daily life of young people. These television broadcasts are understood by Betti³⁰ as sports telespectacle that, together with video games, represents new sports experiences^{30,31}.

When speaking about a sports spectacle, we focus on the following definition:

The spectacle, understood in its totality, is simultaneously the result and design of the existing mode of production. It is not a complement to the real world, a decorative prop. It is the heart of the unreality of real society. In all of its particular forms of information or propaganda, advertising or direct consumption of entertainment, the spectacle constitutes the present model of socially dominant life^{32:16}.

Given this scenario, we live in a society where everything is spectacularized, following the dictates of consumption inherent to the capitalist society. The spectacle permeates the entire social network. For example, spectacular toys can be cited, thus produced to encourage consumption, because we do not see only the production of playful artifacts but particularly of spectacular products. Television series are commissioned, video games are produced, toys are launched, as well as sticker albums and all types of material for consumption derived from the telespectacle. The goal of Neymar is spectacularly repeated numerous times in the news and accessible infinitely on the Internet.

According to Betti³⁰, the sport is spectacularized in sports programs and the very broadcasting of events and championships passes through an editing process of images and sounds. Even though the analysis was made in another temporality when cable TV and the Internet were seminal in Brazil, the author clearly differentiates between the spectator who is present in the stadium and the televiewer who watches the match through edited images and sounds in search of the update of that sporting broadcast. For spectators, the sensation of each shot is immediate and collective, while for the televiewer the sensations are the result of the virtualization that the television tries to make the latest possible.

The collective sensation of spectators is part of the collective intelligence which, according to Lévy⁶, represents part of the virtualization of intelligence. This author states that human beings do not think “alone or without tools. Institutions, languages, sign systems, technologies of communication, [...] and recording all inform our cognitive activities in a profound manner. The whole of a cosmopolitan society thinks within us”^{6:121}. This scenario made it possible to understand soccer stadiums as a place where spectators/fans are connected to the mass of other spectators/fans that are unable to act on the spectacle of the game⁷. At that moment, spectators are linked by a common bond, the passion for the club, or simply by the game itself, as pointed out by Freitas³³.

The sports programs most frequently cited by the SAs of the two teaching institutions were Globo Esporte, Esporte Espetacular, Lance Final, and Jogo Aberto. Analysis of the answers of the televiewers showed that, through the sport programs, the spectacle is seen through the immense “collective eye”⁷, since the SAs watch the same version of the sports

telespectacle in the most popular television programs, as indicated by the following statements:

I watch a lot Globo Esporte, mainly because I often cannot watch the games of my team and then I go to the site, I try to see what happened in the past games, best moments and such, interviews with players, things like that, even news from other teams [...]. (AS No. 3, female, 21 years).

Frequently soccer [...], I watch the programs: Globo Esporte, Segundo Tempo. (SA No. 44, female, 21 years).

Of the free TV sports programs, I only watch Globo Esporte. However, for variety, when it seems to me to be worthwhile, if there is something good available that would hold my attention I watch other programs, although I have better access to paid TV, Amigos do Galvão Bueno [...]. (SA No. 50, male, 20 years).

Within this context, there is the influence of this process on the body culture of movement. Regarding the telespectacle, Daolio³⁴ states that the media continually exhibit and modify “patterns of bodily conducts”^{34:56}. Thus, one can infer the power that these media have on contemporary sports culture, as well as on the body culture of movement.

Regarding gender differences, the observation of differences in the tastes of media consumption and sports virtualization should be emphasized. The modality most cited by female participants was volleyball, which was watched once a week or only in mega-events such as the Olympic Games. On the other hand, the common and priority taste of male SAs was related to the modalities Soccer, Mixed Martial Arts (MMA), notably Ultimate Fight Championship (UFC), and basketball, with a frequency of television viewing of approximately three times per week.

Part of the results obtained in the interview focused specifically on the taste of media consumption related to video games (see Figure 2), which is understood as the practice of games and even sports. Not only sports games were distinguished because the statements of the SAs pointed to the need to discuss the different styles of games.

The most relevant subcategory was that of “sports action games”, linked to the variables “common video games” (sports simulation games) and “active video games” (Active Videogames - AVG or Exergames^{35,36}, which require body movement and physical exercise). Two systems were cited, games for Microsoft Xbox 360 or Xbox One that use Kinect (a system that records body movements and recognizes voice signals) and Nintendo Wii with Wiimote control and sensor bar (devices that transfer the player’s movement for interaction with the electronic game), thus breaking the paradigm of body immobility in video games³⁵.

Again, the tastes of video game consumption differed between genders. In male SAs, sports action games were the most reported styles (92%), a high rate that could mainly be attributed to the soccer video games FIFA Soccer and Pro Evolution Soccer - PES (the most frequently cited). The other modalities reported were automobile racing, basketball, fighting and tennis games. It should be noted that at least on soccer game was reported by these SAs.

Usually football and fighting sports [...]. Well, it is an experience, it is different, because there it is an experience not in the formality of the game. It goes beyond this barrier, it goes beyond this formality of the game. So, we leave a field, a physical field, during the game itself and go [...] to an ah, a virtual field and this is a lot, it's different. (SA No. 38, male, 20 years).

On the other hand, female participants mentioned in their statements the adventure game *Tomb Raider* of the subcategory “other games”. This video game features a female character (Lara Croft), which corroborates the players’ interest in the game as they see themselves in the main character, but also reflecting a logic of female body exploration in video games, in agreement with the study of Gabbiadini³⁷. In the subcategory “other games”, video games for the Android or iOS system (generally played on smartphones and tablets) were categorized together with other styles cited by the SAs (adventure, platform, etc.).

Finally, the analytical subcategory “sports games” that, although it does not involve sports action, was sportized in the form of e-Sports (from Electronic Sports, also known as cyber-sports, played in leagues and tournaments similar to traditional sports)^{25,38,39}. The processes of sportization of video games is characterized by the institutionalization and uniformization of rules, with ranking, organization, remuneration and consequent professionalization of their practices and their players. This process is similar to the transition from a game to sport, which occurred notably in the nineteenth and early twentieth century in Europe.

Among e-Sports, First Personal Shooter (FPS), a first-person shooter game, and Massively Multiplayer Online Role-Playing Game (MMORPG), a role-playing game in which people interact online, should be highlighted. These games can be understood as Social Network Games (SNG)³⁸ since they are based on the online interaction and participation of the players. The most cited was *League of Legends* (LoL), a multiplayer online battle arena (MOBA) game. This game is one of the most widespread and most played e-Sports³⁹, which represents a cyberspace that promotes the interaction with players from all over the planet, in a process that leads to virtualization of social relations and the body, with the avatar representing the expansion of boundaries of the human body beyond the physical and territorialized body.

Taken together, the results demonstrated differences in the taste of media consumption and sports virtualization between genders. However, when seen based on the cultural and educational nature of telespectacles and video games, they reveal unity. From this perspective, the cultural conformation of new cyberculture generations leads to the incorporation of current concepts and types of sports experiences, marked by the spectacular reproduction of the sport in electronic media and in virtual sports video games. Emphasizing that virtual sports media consumption has been updated in the body culture of movement³⁵, it is up to educators to take a stand in response to these processes since they cannot be excluded from today’s ludic culture.

Thus, from this point of view, virtual spaces become extremely important, with new forms of body perception arising from them. This is the case, for example, for sports experiences, especially the virtual ones linked to videogames and telespectacles (television and Internet) which, by means of the process of body and sports virtualization, have led to new paradigmatic designs since in the world mediated by computers an individual is fluid, with a multiple “ego” consubstantiated by network interactions⁴⁰, promoting sociocultural changes that give origin to new forms of understanding and, in this specific case, to the understanding of human movement.

Conclusions

With the advent of new ICTs, sociocultural transformations are occurring that are the result of the process of virtualization and that are increasingly present in every sphere of life of society. This process promotes new experiences, which happen in cyberspace linked to the virtual worlds of the Internet and video games and due to different modes of communication and mediatization. In the information age, personal, commercial, political and educational relations are increasingly organized around networks, which constitute the new social morphology of our society and the diffusion of its logic substantially modifies the operation and the results of productive processes, experiences, power relations, and culture. This new and dynamic era of information writes a new chapter in the history of human civilizations, a new stage in its evolution, i.e., the stage of technological revolution, especially technologies linked to microelectronics.

Given this scenario, the new paradigms of human movement that emerge from the media sports virtualization lead to the understanding of a multifaceted body and extended frontiers, which both in telespectacular sports and in real and/or virtual practice demonstrate an understanding of the new sports experiences in cyberculture, as well as in the conception of which body, which sport manifestation and what body culture of movement Physical Education/Sports Science must address in terms of the contemporaneity of the constant information and virtualization society. Within this context and because this is a proactive study, it is expected that new studies will consolidate the role of this field and of professionals in response to new ICTs concerning sports virtualization that result from the influence of the media as a new frontier for understanding the body, sports, e-Sport and, consequently, Physical Education.

References

1. Santaella L. *Corpo e Comunicação: sintoma da cultura*. 3rd ed. São Paulo: Paulus; 2008.
2. Ihde D. *Bodies in technology*. Minneapolis: University of Minnesota Press; 2002.
3. Guattari F. *Chaosmose*. Paris: Galilée; 1992.
4. Le Breton D. *L'Adieu au corps*. Paris: Métailié; 1999.
5. Herold Junior C. Do Corpo-Motor ao Corpo-Informação: corporeidade e trabalho no capitalismo. *Rev Bras Ciênc Esporte* 2009;30(2):107-122.
6. Lévy P. *Becoming Virtual: reality in the digital age*. Trans. Robert Bononno. New York: Plenum Trade; 1998.
7. Lévy P. *Cibercultura*. Trad. Carlos Irineu da Costa. São Paulo: Editora 34; 1999.
8. Eco U. *Apocalípticos e integrados*. 7th ed. São Paulo: Perspectiva; 2015.
9. Baudrillard J. *L'échange Impossible*. Paris: Galilée; 1999.
10. Virilio P. *O Espaço Crítico: e as perspectivas do tempo real*. Trad. Paulo Roberto Pires. 2nd ed. Rio de Janeiro: Editora 34; 2014.
11. Jenkins H. *Cultura da convergência*. Trad. Suzana Alexandria. 2nd ed. São Paulo: Aleph; 2009.
12. Le Breton D. *A Sociologia do Corpo*. Trad. Sonia M. S. Fuhrmann. 3rd ed. Petrópolis: Vozes; 2009.
13. Garney W R, Young A, McLeroy KR, Wendel ML, Schudiske E. A qualitative examination of exergame motivations in geocaching. *Games Health J* 2016;5(1):34-39. Doi: 10.1089/g4h.2015.0025.
14. Knights S, Graham N, Switzer L, Hernandez H, Ye Z, Findlay B, et al. An innovative cycling exergame to promote cardiovascular fitness in youth with cerebral palsy. *Dev Neurorehabil* 2016;19(2):135-140. Doi: 10.3109/17518423.2014.923056.
15. Retondar JJM, Bonnet J C, Harris ERA. Jogos eletrônicos: corporeidade, violência e compulsividade. *Rev Bras Ciênc Esporte* 2016;38(1):3-10. Doi: 10.1016/j.rbce.2015.12.006.

16. Steenbergen L, Sellaro R, Stock AK, Beste C, Colzato LS. Action video gaming and cognitive control: playing first person shooter games is associated with improved action cascading but not inhibition. *PLoS ONE* 2015;10(12):1-15. Doi:10.1371/journal.pone.0144364.
17. Cavichioli FR, Reis LJA. World of warcraft como prática de lazer: sociabilidade e conflito “em jogo” no ciberespaço. *Movimento* 2014;20(3):1083-1109.
18. Chaput JP, LeBlanc AG, Goldfield GS, Tremblay MS. Are active video games useful in increasing physical activity and addressing obesity in children? *JAMA Pediatr* 2013;167(7):677-678. Doi:10.1001/jamapediatrics.2013.2424.
19. Colzato LS, van den Wildenberg WP, Zmigrod S, Hommel B. Action video gaming and cognitive control: playing first person shooter games is associated with improvement in working memory but not action inhibition. *Psychol Res* 2013;77(2):234-9. Doi: 10.1007/s00426-012-0415-2.
20. Peng W, Crouse J. Playing in parallel: the effects of multiplayer modes active video game on motivation and physical exertion. *Cyberpsychol Behav Soc Netw* 2013;16(6):423-427. Doi: 10.1089/cyber.2012.0384.
21. Schwartz GM, Santiago DRP, Kawaguti CN, Tavares GH, Figueiredo JP, Palhares MFS, et al. Apropriação das tecnologias virtuais como estratégias de intervenção no campo do lazer: os webgames adaptados. *Licere* 2013;16(3):1-26.
22. Straker LM.; Abbott RA.; Smith AJ. To remove or to replace traditional electronic games? A crossover randomised controlled trial on the impact of removing or replacing home access to electronic games on physical activity and sedentary behaviour in children aged 10–12 years. *BMJ Open* 2013;3(6). Doi: 10.1136/bmjopen-2013-002629.
23. Barnett LM, Hinkley T, Okely AD, Hesketh K, Salmon J. Use of electronic games by young children and fundamental movement skills? *Percept Mot Skills* 2012;114(3):1023-1034. Doi: 10.2466/10.13.PMS.114.3.1023-1034.
24. Baracho AFO, Gripp FJ, Lima MR. Os exergames e a educação física escolar na cultura digital. *Rev. Bras. Ciênc. Esporte* 2012;34(1):111-126. Doi: 10.1590/S0101-32892012000100009.
25. Seo Y. Electronic sports: a new marketing landscape of the experience economy. *J Mark Manage* 2013;29(13-14):1542-1560. <http://dx.doi.org/10.1080/0267257X.2013.822906>
26. Merleau-Ponty M. *Phénoménologie de la Perception*. Paris: Gallimard; 1997.
27. Organização das Nações Unidas [Internet]. Informe sobre la juventude mundial 2005. Asamblea General Consejo Económico y Social. A/60/61-E/2005/7. 6 December 2004. [accessed 11 October 2016]. Available at: http://www.cinu.mx/minisio/UNjuventud/docs/A_60_61.pdf
28. Bardin L. *Análise de Conteúdo*. Trad. L. de A. Rego e A. Pinheiro. Lisboa: Edições 70; 2011.
29. Brasil. Conselho Nacional de Saúde. Resolução 466/12. Brasília; 2013.
30. Betti M. *A Janela de vidro: esporte, televisão e educação física*. Campinas: Papirus; 1998.
31. Feres Neto A. Produção de subjetividades, subjetivação e objetivação: algumas contribuições de Félix Guattari e Pierre Lévy para a Educação Física. *Motriviv* 2001;0(17):06-17.
32. Debord G. *A sociedade do espetáculo*. Rio de Janeiro: Contraponto; 1997.
33. Freitas CMSM. As classes sociais na sociedade do espetáculo: o olhar dos torcedores de futebol. *Rev Port Cien Desp* 2005;5(3):329-334.
34. Daolio J. Corpo e Identidade. In: Moreira WW, editor. *Século XXI: a era do corpo ativo*. Campinas: Papirus; 2006, p. 49-62.
35. Araújo BMR, Freitas CMSM, Caminha IO, Silva PPC. Virtualização esportiva e os novos paradigmas para o movimento humano. *Motriz* 2011;17(4):600-609. Doi: 10.1590/S1980-65742011000400004.
36. Wojciechowski AS, Natal JZ, Gomes ARS, Rodrigues EV, Villegas ILP, Korelo RIG. Effects of exergame training on the health promotion of young adults. *Fisioter. Mov.* 2017; 30(1):59-67. Doi: <http://dx.doi.org/10.1590/1980-5918.030.001.A>.
37. Gabbiadini A, Riva P, Andighetto L, Volpato C, Bushman BJ. Acting like a Tough Guy: Violent-Sexist Video Games, Identification with Game Characters, Masculine Beliefs, & Empathy for Female Violence Victims. *PLoS One* 2016;11(4):1-14. Doi: 10.1371/journal.pone.0152121.
38. Jin K, Igarashi T. The effects of narcissism and self-esteem on immersion in social network games and massively multiplayer online role-playing games. *Jpn J Psychol* 2016;87(1):1-11. Doi: 10.4992/jjpsy.87.14033.

39. Bertrand E, Chamarro A. Videojugadores del league of legends: el papel de la pasión en el uso abusivo y en el rendimiento. *Adicciones* 2016;28(1):28-34.
40. Turkle S. *The second self: computers and the human*. Cambridge: MIT Press; 2005.

Acknowledgements: We thank Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - CAPES (Programa de Formação Doutoral Docente - Prodoutoral) and Conselho Nacional de Desenvolvimento Científico e Tecnológico - CNPq (MCTI/CNPQ/Universal – grant: 443529/2014-0).

Received on Oct, 11, 2016.

Reviewed on Jun, 23, 2017.

Accepted on Jul, 15, 2017.

Author address: Bruno Medeiros Roldão de Araújo, Rua Gustavo Teixeira Vilarim, 80 “E”, Bodocongó, Campina Grande-PB, CEP 58.430-350. bruno.rol@gmail.com