Bypassing the magic circle: sport in the midst of gamification

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Abstract: This paper aims to present the concept and the fundamentals of gamification in an attempt to show its presence in the world of body practices. It analyzes two distinct cases that demonstrate the presence of that phenomenon in the context of physical activity and sport: the Nike+ product line and the online game Cartola FC. Finally, it considers the implications of gamification for the roles played by that game as well as the opportunities it offers to human movement in addition to conventional video games.

Keywords: Gaming. Physical Education. Gamification. Sport.

INTRODUCTION

In recent decades, new information and communication technologies have caused significant impacts on individuals’ relations to culture, giving rise to a new set of social practices. It was precisely in the midst of that movement that digital games emerged – a phenomenon that has drawn the attention of the academic field, becoming the center of numerous questionings and investigations.

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Because it is increasingly rooted in contemporary leisure, much has been asked about existing interfaces between games and traditional games. From the perspective of body practices, the rise of digital games raises a number of suspicions that, in general, seem to be directly and indirectly linked to their implications for classical forms of playing.

One of the hypotheses resulting from this scenario is that games would be gradually “replacing” traditional games, leaving the body and movement more and more in the background.

Often anchored in technophobic and apocalyptic perspectives, such arguments have lost strength as the entertainment industry launches new devices that amplify the presence of corporeity within games. The most notorious examples of this approximation effort include Nintendo Wii – a pioneering console using interfaces that are sensitive to physical gestures, and Kinect – a device of the X-Box 360 console, which stands out for its ability to capture movements performed by players without the use of any joysticks.

Despite the pressure and expectations surrounding such technologies, it is essential to recognize the emergence and spread of new playful modalities in the arena of games. On other occasions, the need to debate hybridism forms between human and digital technologies was clarified in order to identify the influence exerted by such combinations in establishing new access roads to the universe of movement culture (CRUZ JUNIOR; DA SILVA, 2010, CRUZ JUNIOR, 2013).

Therefore, one particular phenomenon has been changing the ways of experiencing games, sports and physical practices. That is gamification – a movement that, in general, aims to readjust “reality” so that it can be experienced as a (digital) game. It can be said that one of its main mottos is: if something (a task, circumstance or activity) can become an experience similar to a

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2The English word game is used in Brazil to refer to electronic videogames, while its Portuguese translation is jogo. Therefore, “game” is used here in italics when it is like that in English in the original and “game” is used for jogo – NT.
game, gamification will do it. Therefore, this paper aims to present
the basic principles of gamification, describing some of the ways in
which the process touches the universe of body culture and sport.

1 GAMES, “GAMES” AND GAMIFICATION

Like many discussions in the academic field, games are
controversial and devoid of single definitions and absolute
truths. The topic is addressed in several disciplines (Psychology,
Anthropology, History, Sociology, Philosophy). As such, it tends
to be absorbed by their respective theoretical and methodological
clashes, giving rise to a myriad of views and interpretations.

The most prominent references within the Humanities include
Johan Huizinga listed (2008) and Roger Caillois (1990), authors
whose efforts have served as a reference for many studies about
issues of playfulness. For them, playing a game in its broader
sense is an action that is 1) voluntary – it depends on consent by
its participants; 2) circumscribed – it takes place in a dimension
apart from everyday life, protected by a kind of “magic circle”;
3) unpredictable – its outcome is always a mystery as it depends
on players’ choices (s); 4) fantasy-based – it often resorts to make
believe, giving life to narratives and imaginary universes; 5)
reversible – after it is finished, it restores the previous configuration
of reality.

Besides representatives of the “classical” strain, it is worth
mentioning the studies seeking to recognize existing common traits
between traditional games and their latest manifestation, games.
In this work, we adopted the characterization suggested by Jane
McGonigal (2011), in which all games are made up mainly of: 1)
goals; 2) rules; 3) voluntary participation; 4) feedback systems –
they will be addressed later. It is worth mentioning that the author
bases her understanding on the perspective of Canadian philosopher
Bernard Suits (2005), for whom playing is the same as voluntary
attempting to overcome unnecessary obstacles.
From the conceptual point of view, it is also relevant to discern three ideas included in the notion of “game” which are different but treated as synonyms, giving rise to misunderstandings. They are: a) videogame; b) computer game; c) digital game. According to Mary Ulicsak and Ben Williamson (2010), the first of them covers both consoles, i.e., electronic platforms specially designed for consuming games (Playstation 3, X-Box 360 and Nintendo Wii) and that work only when plugged to a TV set, and portable video games (Nintendo 3DS, PlayStation Vita and PSP). These have a screen attached to their structure and do not require that type of equipment. The second manifestation relates to software played on personal computers. The third one, in turn, refers to any type of game that mobilizes digital technologies or is based on them. In other words, this category includes both videogames and computer games.

Knowing the extent of the digital game concept is crucial since playful forms emerge from it that do not necessarily correspond to the terms “computer game” and “videogame”. The most important of those forms include that which has drawn increasing attention during the last decade and is the subject of this article: gamification.

Despite the recent expansion and diversification of its field of discussion, gamification can be understood, in short, as the process of applying game mechanics in non-game situations, which, in general, aims to enhance the engagement of individuals in a given circumstance. Its main goals is to give activities (which are not so attractive by themselves) the pleasure, motivation and fun commonly associated with digital games. For this, gamification resorts to knowledge, methods and techniques from a variety of disciplines, especially Game Design, Social Communication and Positive Psychology.\(^{3}\)

By the term “game mechanics” we understand what Zichermann and Cunningham (2011, p. 36, our translation) describe

\(^{3}\)To McGonigal (2011), it is the branch of psychology that investigates the aspects of “human flourishing”, that is, everything that concerns people’s happiness.
as “[... ] a series of tools that, when used correctly, promise to yield meaningful (aesthetic) responses from players”. These resources are responsible for creating a playful atmosphere by triggering modes of acting and thinking similar to those we experience under normal game situations, whether they are digital or traditional. The intention is to make individuals act as if they were playing, even though the circumstances in which they find themselves are not presented to them as such: individuals involved “play” in a subliminal way, that is, without full awareness of the nature of ongoing actions and behaviors (CRUZ JUNIOR, 2012).

Therefore, gamification uses different types of resources that vary according to the nature of times and spaces that are the target of the process. Among the concepts of game design that are most widespread in this activity, Zichermann and Cunningham (2011) highlight:

- **Points**: primary reward that, besides providing immediate recognition for significant actions performed in the game, serve as a “cue” to players, showing them the kinds of efforts that respond directly or indirectly to the game’s goals. In a fighting game, players gets points when they hit their opponents, which suggests that their main goal is to knock them out;

- **Levels and stages**: they mark the exact degree of evolution of the player within the game, serving as a kind of progress scale, whether it is for characters or for the challenges that must be overcome. By winning a race in a racing game, the player is automatically transported to another circuit to compete, i.e., another “stage” that should be completed;

- **Achievements**: it is a system consisting of meta-chal-
challenges that, although they are not requirements for players to advance in the game, serve as a stimulus for them to test and expand the limits of their abilities. If the main goal of a game is to pass all stages, a plausible achievement would be to complete them within a stipulated time or to do it without failing at any level;

- Badges: directly linked to achievement systems, they are secondary forms of reward that are usually used to reward players’ outstanding achievements and symbolize them. In the current generation of consoles, the trophies have been acting as the main emblem of players’ achievements;

- Leaderboards: instruments used to measure, compare and rank each player’s performance in the tasks proposed by the game. This can be observed in ranking systems, mechanisms that provide classifications of all players in a given game, listing them in a descending order of points obtained.

Such mechanics are closely linked to the aforementioned feedback systems intrinsic to videogames. In a sense, we could even see both elements as related. For authors such as McGonigal (2012), they are what digital games have of most unique in comparison to playful activities that preceded them. According to her, this

\[...\] variety and intensity of feedback is the most important difference between digital and non-digital games. In computers and videogames, the interactive loop is satisfactorily tight.

There seem to be no gap between your actions and the game. You can literally see in the animations and count on the scoreboard your impact on the game world. you can also see how extraordinarily
attentive the game system is to your performance.

It only gets harder when you’re playing well, creating a perfect balance between hard challenge and achievability (MCCONIGAL, 2012, p. 33-34).

When we wonder about the specificities of games compared to “traditional” media such as TV, interactivity is often brought up. However, although relatively effective in terms of media comparison, the idea of interactivity, when taken as a distinctive feature of digital games over traditional games, can give rise to reductionism and misunderstandings. Even when we do not use high-tech devices, non-digital playful activities are as interactive as games, after all, the actions performed in them also trigger specific responses that vary according to their respective codes of conduct and internal normatizations.

Thus, what seems to distinguish traditional games from digital games is not the “interactivity” factor, but the amplified perception about the impact of our actions within the game – an ability that is guaranteed to digital games for their multiple and effective feedback systems. Such attribute is a major contributor to games’ potential for immersion, motivation and engagement, also being a vital basis for gamification.

Judging by the tone and the directions of the discussions under its scope, the concept of gamification tends to take on diverse connotations, according to the positions held by the authors and scholars who have been addressing the process. In a sense, this seems to be a symptom of its fertility, that is, of its ability to adapt to the interests and demands from different areas of knowledge and fields of activity.

Currently, the segments where gamification spreads more quickly include advertising, business administration and marketing. Some famous brands and companies have used gamification as a way to promote their products and services, which include
Google, Facebook, Groupon\(^4\) and Nike. For reasons like this, gamification is often associated with market interests, arousing ethical controversies and Manichean views – after all, is it “good” or “bad”? 

Next, we examine two cases of gamification that strongly influence sports and bodily practices – elements that are dear to the field of Physical Education: the Nike+ product line and Cartola FC game.

2 Nike+ (Fuelband)

“Life is a sport. Make it count “

(Nike)

Considered one of the world’s most popular brands, Nike has a special presence in the sports arena, largely due to its diverse product line that covers a wide range of practices and procedures. Although it enjoys a certain prestige when it comes to high performance, Nike also invests considerable effort in individuals for whom sport is not a profession; it is rather a merely casual activity. One evidence of that is the company’s growing commitment to provide “ordinary” people with consumption of equipment so far restricted to elite athletes.

Nike+, an equipment line for physical activity, was launched in 2006 and can be seen as one of the initiatives included in this scope. That line, in addition to all the traditional clothing (shoes, shorts, shirts and watches), has a number of less conventional accessories, among which is the Nike+ iPod Sport Kit. It consists of two interdependent devices: a small oval sensor and a receiver compatible with any iPod. Their functions are relatively simple: the former, when placed under the insole of the user’s shoe, monitors and transmits information related to the activity, such as distance traveled, number of steps, pace, duration and calories burned;

\(^4\)One of the largest collective shopping websites on the planet.
meanwhile, the latter captures the data gathered by the sensor and displays them on the iPod’s screen.

Years later, in 2010, the Nike+ Running App was launched. It brought together and complemented the functions of the Nike iPod Sports Kit. In addition to the above features, the application also works as a tracking mechanism, eliminating the presence of the previous sensors or receivers. For this, it uses geolocation technologies (GPS) present in smartphones, allowing users to view the trajectories of their runs with reasonable accuracy. In addition, Nike+ Running App includes MotionX, a motion detection technology platform that enables users to check all the basic information on the activity – distance, time, pace, etc. The application also offers an opportunity to share results on Facebook or even on the social media network created by Nike+ itself, where all users can create profiles, interact with each other, see their respective averages and statistics, or suggest trajectories they already ran or would like to run.

Even with all these products in the market, only in 2012 did Nike take its biggest step toward gamification by launching another rather peculiar accessory: Nike+ Fuelband.\footnote{Its video release, with the motto “game on world”, makes this intention explicit: http://www.youtube.com/watch?v=SjpYA95oxyA} It is a bracelet made up of several accelerometers, i.e., devices to measure acceleration that, besides being sensitive even to users’ faintest movements, also collect key data about their efforts, converting them into NikeFuel – a universal metric unit of activity created by Nike, which numerically measures the intensity of any actions or tasks that put the body to “work” – from brushing teeth to a basketball game.

In other words, Nike+ Fuelband is an accessory that turns movements into numerical values shown on the display’s own bracelet, which, besides a watch, is also some sort of scoreboard. It is fair to say that NikeFuel plays the role of a scoring system, working as a form of feedback to reward individuals for exercising:
the more active their lifestyles are, the more points they get. To do that, users define, through a cell phone device compatible with the Fuelband\(^6\) application, their daily NikeFuel goals. This causes individuals to readjust their own activities so that their schedule allows them to succeed in this task.

This “mission” can be accomplished in two ways: 1) individually – when the goal is just to reach the stipulated amount of NikeFuel; 2) collectively – after choosing one or more friends who also use Fuelband on the Nike+ social media network, users can propose disputes to them over obtaining NikeFuel. In line with conventional games, these tasks keep individuals in constant tension by directing their forces to clear and achievable goals, thus preventing them from losing focus and drop out of the activity (Csikszentmihalyi, 2000). Moreover, competition is a component that raises the level of unpredictability in games, giving each match varying degrees of difficulty, depending on who one is playing against.

Another important aspect about Fuelband is its appropriation of achievement systems. Besides setting their own goals in terms of NikeFuel, users can also invest their time (and energy) in advanced challenges created by Nike: getting 8, 10 and 20,000 points; exceeding a goal by 50%, 100%, 150%, 200% and 300%; using the bracelet (playing) nonstop for 30, 50, 100 and 200 days (Figure 1). Those who succeed in some of these challenges receive a coat of arms – a trophy – which symbolizes the achievement. The reward is then exposed in their personal profiles on the Nike+ social media network, visible to other members.

\(^6\)Usually Iphones and models using the Android operating system.
Figure 1 – Achievements and badges


Note that badges are a secondary form of reward whose main role is to encourage players to aim for more ambitious goals than those that are restricted to self-managed achievement of NikeFuel. Actually, the system of achievements and badges is a strategy that has been applied since Running App. In the latter, the primary scoring unit is based on the miles travelled by each individual, allowing for challenges such as running 24, 40, 80 or 160 miles in a single month (running high mile); running on five different days of rain or snow (Stormproof); running five times between midnight and 3 a.m. (Night owl).

Also in this application, there seems to be another aspect that is inspired by the logic of the games: powersong. During running sessions, it is natural that physical fatigue cause sudden drops in performance, which prevents individuals from maintaining their
pace, thus reducing their chances of overcoming their own records. To deal with this state, Running App, through its powersong function, allows users to activate a pre-selected “special” song from their cell phone playlists, in an attempt to provide the necessary motivation to avoid performance drops during activity. This feature is similar to what is called power-ups in videogames: items or skills that enhance a character’s capabilities, making him or her stronger, more agile and intelligent – for example, mushrooms and stars of the Super Mario Bros series.

3 CARTOLA FC

Created in 2004 by SporTV – a Brazilian pay TV channel affiliated with Globosat – Cartola FC is a gamification of Brazil’s A League Football Championship (the so-called “Brasileirão”, or “Big Brazilian Tournament”). With about one million fans and players in the country,7 Cartola FC is a Fantasy Game – a game in which participants must take on the role of owners or managers of teams that, once created, must compete against other players’ teams. Such disputes are based on obtaining and comparing statistical data relevant to the performance of teams and/or athletes in real world competitions (championships and matches).

Created by US journalist Daniel Okrent, the first Fantasy Game – also called Sport Fantasy or Owner Simulator – appeared in the 1980s. “Rotisserie” – a French restaurant that Okrent used to attend assiduously – is also the name of one of the first games of the category whose sport reference is baseball. In its early days, these games used to be made in popular establishments, which are usually gathering places for friends and co-workers: bars, cafes and restaurants. At first, Rotisserie was not very popular, being known only to Daniel and his closest acquaintances. However, when it spread among his fellow journalists and sports columnists, the game became a frequent topic for newspapers, magazines

7Information taken from their official website (http://sportv.globo.com/site/cartola-fc/), and which refers to the amount of Facebook users who like (subscribe) the game website on the social network. Accessed on: 25 March 2013.

and news programs, which contributed decisively to its popularization.

Anyway, the “boom” of Fantasy Games would only come in the 1990s, coinciding with the emergence of the internet. Because of advances brought by the World Wide Web, among which we highlight those relating to the circulation of information, such games were able to obtain the results of each match more expeditiously, thus becoming more dynamic, realistic and engaging. In addition, the Internet has also allowed individuals in different regions to promote and participate in this type of activity by providing for the establishment of deterritorialized spaces of interaction (LEVY, 1996), such as discussion forums, mailing lists and blogs.

It is precisely in cyberspace that Cartola FC takes place. The game is free and can be played by all Internet users, even if they are not subscribers of the channel that promotes it. To do that, they must register on the game’s official website so that players’ personal information is recorded on Globosat servers.

When registering, users must create their fictitious teams with professionals belonging to football clubs playing in the A League of the year’s “Brasileirão” (Brazilian Football Championship). For this, they receive the equivalent of 100 cartoletas (C$) – the game’s official currency, with which they should hire eleven players and one coach.

Players have specific values which vary according to their respective performances (scores) in each round of the championship (FIGURE 2). There are deadlines for purchases and sales. The market usually closes a few hours before the start of a new round, opening again as soon as all the results are computed and transferrer to the teams of all users.
Each athlete’s performance is assessed according to criteria contained in scouts that mix data from official match report published by football federations and surveys conducted by SporTV itself during their broadcasts. These criteria and their scores are listed in the regulation of Cartola FC, and cover team’s defense and attack:

Source: <http://cartolafc.globo.com/#!/time>

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8Image from author’s personal profile in the game.
To reward special achievements, Cartola FC also has its achievement system. Its operation consists in establishing special challenges that, when overcome, unlock badges symbolizing each achievement.

Such tasks are divided into four different difficulty levels: 1) Basic – including the “waiter” achievement obtained by making two passes in the same round; 2) Professional – including the “silver glove” achievement obtained by making six difficult saves in the round; 3) Super-crack – including the “golden boot” achievement, obtained by scoring nine goals in
the same round; 4) special - including the “Forlán” achievement, acquired by those who selected Uruguayan athlete Diego Forlán in his debut match for Sport Club International.

Another important aspect is that many of these challenges work not only as sources of motivation for players, but also as marketing strategies. Several achievements present in Cartola FC have names and badges that refer to sponsors’ products. One example is automaker Fiat, which owned 12 of the 65 achievements present in the game’s 2012 season while the other three belonged to fast food chain Burger King (FIGURE 3). Moreover, some of them require players to participate in special events sponsored by advertisers, as is the case of leagues belonging to sponsors: to be obtained, the “new Fiat Uno” achievement requires users to participate in the Fiat league – a space where ads linked to the company are usually shown.

**Figure 3 – Achievements and Badges**

Source: http://cartolafc.globo.com/#/halldafama

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10Image from author’s personal profile in the game.
Leagues are internal competitions including fictitious teams created by players based on specific criteria and organizing them in distinct arrangements. When users register with Cartola FC, they are automatically enrolled in three different leagues: the national league, which brings together all registered participants; the regional league, which brings together all the participants in one state; the “team of the heart” league, which gathers all the fans and supporters of a particular club reported at registration. There are also private leagues, for whose creation and administration users are responsible, and sponsors’ leagues, which vary according to the advertisers present in each season.

One of the main functions of leagues is to allow ranking performances of each participant (Figure 4). Establishing itself as a ranking system, leagues serve as parameter to determine teams’ ranking – a process that takes as a reference not only their scores, but also the different game cycles: the position of each team is given according to the performance of its athletes at the end of each round, month, shift and/or season.

*Figure 4 – Round ranking (National League)*

Cartola FC has a dedicated section on the SporTV website, which, in turn, is hosted by Rede Globo portal. Several types of information relevant to the game are conveyed, such as: good business hints—“good and cheap” athletes and coaches; sweepstakes and betting among sports commentators and journalists of those stations; and reviews containing the main results of the round, as well as athletes with highest scores during matches.

Apparently, the Cartola FC official website, as well as other websites and blogs dedicated to it, has a strategic role with regard to disputes that occur within the game. To avoid the risk of selecting an athlete who will not play in that round, which would prevent users from scoring points, they have to be constantly informed about the news in daily lives of clubs in which they have some “stake”. Such monitoring allows them to know in advance, for instance, athletes who are injured, selected for the national squad, “barred” or even dismissed from the team.

From the institutional point of view, Cartola FC is an initiative with purposes that go beyond the game itself. Its roles include expansion of consumption of news on websites affiliated to their managers and administrators. That is clear, for example, in articles written for the Cartola FC website. Although they are dedicated to that field, they are linked to news in other sports sections of Globo portal – SporTV and Globo Esporte. Since the game demands hiring players from several teams, users end up compelled to extrapolate their roles as fans and seek information about clubs that are not necessarily their “heart teams”.

4 Final remarks

A digital game is any playful and recreational activity that uses or is based on digital technologies. It is a concept that encompasses the ideas of “videogame” and “computer game” and which consists of several modalities and practices that are not always compatible with these categories. One is gamification – the process of using
and/or applying game mechanics in non-game situations. Its main goal is to create a playful atmosphere around a task or circumstance, urging the active participation of individuals involved in it.

Through Cartola FC, we presented the transformation of the Brazilian Football Championship into a game. Based on statistics collected from official match reports and scouts produced during broadcasts, the game puts its participants in the condition of coaches and managers of “fictitious” professional teams, requiring a clinical eye toward the “ball market” as well as strategic thinking with regard to the makeup of their teams. Therefore, one should not forget that Cartola FC is gamification of spectacle-sport, acting in integration with media sports, which suggests its link to the same problems inherent in the phenomenon.

As for the Nike+ product line, we observed that several game mechanics were employed in order to re-signify physical activity in order to merge it with motivational components present in videogames. For this, instead of using their regular infrastructure (consoles, joysticks and computers), the effort resorted to new technologies and mobile devices such as smartphones and online sociability platforms, among which we underscore social media networks on the Internet (Facebook and Nike+).

At the basis of dialectical relations between the digital and non-digital domains of games, we present new opportunities for playful experiences with human movement. In this regard, emerging recreational and digital practices show a nature that is relatively different from those who are currently more acclaimed and that are often associated with consoles such as Nintendo Wii and X-Box 360 – more precisely, its Kinect device. Gamification expresses the desire to systematically operationalize games’ essential mechanical, normative, aesthetic and motivational components, subordinating them to distinct purposes, for example, those relating to sports and “traditional” body practices – as we have seen in the cases described in this work. Rather than just emulating them through systems of representation and manipulation that are exclusive
to digital games and their game platforms, as conventional videogames do, gamification provides strategic means to reshape “real” physical experiences by merging them with multiple digital technologies, without changing the core of the activity itself – that is, its functions.

The body becomes an avatar and a joystick, human movement becomes skills, the world turns into display, while everyday life – and its endless tasks – take on the form of quests.

In general, gamification corresponds to the process that seeks to break the boundaries of the magic circle – a concept which, in turn, has long designated its own spatiotemporal domain in which the actions of games and playful activities are performed. Although the existing mutual permeability between recreational activities and the logics governing the rest of life, that is, “reality”, has already been recognized, gamification puts the same interchangeability at the service of varied interests, drawing on systematic concepts and practices that increase the degree of – digital – games’ instrumentality to the extreme. By having their products with highest appeal and visibility linked to predominantly marketing purposes, the phenomenon seems to require even greater attention from all spheres of society, particularly educational institutions. Those very institutions include Physical Education – a curriculum component whose role is precisely to debate the relationship between games and culture, giving rise to new perspectives about the limits and possibilities imposed by that relationship, especially with regard the full enjoyment and understanding of body practices.
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