

GAME ADDICTION AND THE GAME MARKET

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INTRODUCTION

This article is not about electronic games (games) per se, but about the huge industry, or field, that has formed around them, since the first one appeared in the 1970s, therefore only 50 years ago! According to DFC intelligence, in 2020, the games industry had 3.1 billion consumers, which represents 40% of the world population (WILLIAMS, 2021). In this same period, Superdata estimates that the industry generated revenues of US\$ 139.9 billion, with a growth of 12% compared to the previous year (TAKAHASHI, 2021).

Nor will we enter into the discussion of “what” or “which” characteristics present in the activity socially called “game” or, in our case, “video game”. We will start from the somewhat simple and obvious perspective offered by Luchese & Ribeiro (2009) who, in light of Game Theory, differentiate digital games (games) from non-digital ones, initially from the obvious characteristic that games are related to computers (PCs, consoles, video games and cell phones). In addition, to the two distinctive elements of the universe of digital games presented by the authors: the rigidity of the rules (of games) and the existence of a fictitious world, we add one more: the presence of important controversies along the entire trajectory of the formation of this industry.

By treating the game industry from the field perspective as outlined by Fligstein and McAdam (2012), we treat the economic action of actors as socially referenced, we are aligning ourselves with those who perceive the market as a social construction. In the case of the games industry, this implies that its functioning and operation collide with moral and regulatory issues far from being consensual among the different social actors involved in the field.

The article highlights, among the monetization strategies of games, a particular type that has raised great controversy around the world, the loot boxes. The central issue involving this type of microtransaction is associated with whether or not it constitutes a characteristic element of gambling, which has very important

consequences in terms of legislation. To deal with this discussion, we turned to behavioral psychology for support.

A FIELD THEORY PERSPECTIVE

Seeking to understand the so-called “economic” action of actors in society is an exhausting journey. As pointed out by Granovetter (2007), the theoretical constructions that involve this theme tend to be positioned in a spectrum that ranges from under-socialized approaches, with a utilitarian matrix, to those over-socialized, with a structuralist nature. On the one hand, the prestigious approaches of mainstream economics, on the other, those dear to sociology, which is reflected in “.. witty statement by James Duesenberry that "oversocialized conception," is reflected in James Duesenberry's quip that "economics is all about how people make choices; sociology is all about how they don't have any choices to make" (1960, p. 233)” (1960, p.233 apud Granovetter 2007). However, as the author still points out, both approaches "both have in common a conception of action and decision carried out by atomized actors ...(isolated) from immediate social context" (GRANOVETTER, 1985, p. 485).

Granovetter (2007) develops the idea that individual action can only be properly understood when it is considered that it is "immersed" in a social context. We, in the article developed here, take a similar path, but not exactly the same. We will follow the path of The Theory of Fields, better said, of one of its approaches.

A field is a subspace of social space. For Fligstein and McAdam (2012), the field is the basic unit for understanding social action. In this sense, a field is always composed of two or more actors who take each other into account during decision-making processes, have shared understandings of where they are and what they are doing, are aware of the "rules of the field" and establish the functioning of the field. The authors also point out that the field is dynamic, where there is always a potential for conflict, so that it is subject to disorganization and reorganization over time. However, a field becomes stable as certain actors (the incumbents) become capable of reproducing themselves, and reproducing their advantages from one period of time to another.

Fligstein and McAdam (2012) also point out that to analyze a field it is necessary to focus on the following elements: the field itself; the incumbent actors, the challenging actors and the Internal Governance Units; the actors' social skills; the

environment where the field is located; exogenous shocks; the contention episodes and the settlement.

This article builds on some of these elements, with emphasis on the field itself; the environment where the field is located and the social skills involved.

Incumbent actors are in a position of advantage in the field and achieve that position insofar as they possess a greater quantity and variety of resources more suited to the disputes present in the field in question. However, this position of advantage, which can imply “dominance”, always encounters the resistance of challenging actors, who find themselves in less advantageous positions. The evolution of conflicts tends to involve the constitution of Internal Governance Units (UIG), in general non-governmental institutional structures, which fulfill the role of mediating and building the actors' cognitive references, in order to maintain stability within the field and achieve a state of settlement.

The authors point out that society as a whole is formed by fields that overlap and/or incorporate each other, such as Russian dolls, so that the analysis of the environment outside the field, the identification of which fields are close and which ones are relevant, as well as the relationships that are established between them.

Nearby fields can also be points of origin for new entrants or exogenous shocks that affect and destabilize the field under analysis. Exogenous shocks and internal disputes can lead to episodes of contention, which lead the field to reorganize itself, reestablishing shared understandings and rules between actors, leading either to the reestablishment of the status quo, or to new rules, new shared understandings and even new tasks .

GAMES INDUSTRY - VERY BRIEF HISTORY

The games market was established during the 1970s, through the consolidation of arcades and the launch of the first home console, made possible by innovations in nearby fields, such as semiconductors, switched circuits and cathode ray tubes (DONOVAN, 2010). Since the launch of the first home console, by Magnavox, other companies entered this new market in formation. Toyama, Ferratti and Côrtes (2020) point out that in this period the field is still in formation, which favored the 1983 video game crash, which resulted from several factors, such as: market saturation with low quality products, plagiarism and predatory competition as well as the ability to play games on personal computers.

In the following decades, the games market restructured and organized itself. During the 1980s and early 1990s, market leadership was disputed between Nintendo and Sega, however, in 1994 SONY broke this duality with the launch of the first Playstation. A process of field stabilization is evident as well as the construction of a certain "order", without which exchanges would not prosper, such as, for example, the consolidation of the understanding of "what is" a game, the treatment of intellectual property, the development of distribution channels, marketing and game development companies.

From the 2000s onwards, the entry of new actors, new technologies and a greater market segmentation can be observed. The business model is still based on the sale of consoles and physical copies of games (HARRIS, 2015; PALOLA, 2016; TOYAMA, FERRATTI and CÔRTEZ, 2020), but the companies started to develop a model based on the idea of games as a service, which is consolidated with the incorporation of several innovations and new business practices, which include online distribution of games, sale of DLCs, microtransactions and cloud gaming.

A MARKET USED TO CONTROVERSIES SINCE FOREVER

The games market has always had to deal with questions that involved doubts about the type of influence that the game exerts, if any, on the behavior of its players. Khaled (2018) points out that concerns about the relationship between video games and violence began in the 1970s, with the game Death Race, which "defined the guidelines around which the spread of moral panic by the mainstream media operates." (KHALED, 2018, p. 41).

Khaled (2018) classifies such questions as episodes of moral panic, which, in order to gain a social dimension, respectively, need to go through the following episodes: a) identification of a threat; b) media portrays a threat in an easily understandable way; c) rapid escalation of public concern; d) response from authorities and/or opinion makers and e) "panic loses strength or causes social changes" (KHALED, 2018, p. 46).

This situation shows the involvement of skilled, incumbent and challenging actors, consumers, critics, institutional actors and lay people, involved in what is called "market", from perspectives that both transcend and directly impact strictly economic action. Khaled (2018) points out figures such as Ronnie Lamm and Senators Joe Lieberman and Herb Kohl, as some of the actors leading the crusades

against electronic games. Joe Lieberman and Herb Kohl's onslaught against the Mortal Kombat game fostered cooperation between Nintendo and Sega to enable the self regulation of the sector and the establishment of the Entertainment Software Rating Board (HARRIS, 2014).

Khaled (2018) also points out that the attempts to ban games were not successful since, at least in principle, studies legitimated by the scientific field did not establish a causal link between violent behavior and games. The author, however, states that after the tragedy of Columbine (4/20/1999) the tone of some of these researches changed and turned to the “deliberate intention of attributing a truth condition to the media discourse and to the convictions of moral entrepreneurs about games” (KHALED, 2018, p. 338), which implies a possible reconsideration in favor of the concerns of the skilled actors more aligned with those who do not occupy a dominant position in the field.

The success of games, evidenced both by the spectacular increase in the number of people interested in playing them, and by the size of the amount of resources that this industry moves, is accompanied by new controversies, in particular the questioning about the possibility of games to generate some type of dependency on its users. Such questions were deepened with the approach of gaming companies to the field of gambling, with the launch and consolidation of loot boxes. (TOYAMA, FERRATTI and CÔRTEZ, 2020) Particularly in “free” games.

WHAT'S WRONG WITH LOOT BOXES?

Microtransactions are monetization strategies, defined by Ball and Fordham (2018) as in-game purchases of virtual goods, which include characters, maps, missions and quests, as well as loot boxes. Loot boxes are, therefore, a specific type of microtransaction present in games.

Loot boxes have attracted attention due to their perceived proximity to gambling. According to Koeder, Tanaka and Mitomo (2018) and Perks (2019), loot boxes are in-game transactions that have elements of gambling. This is because, as Latvala (2018) and King et al (2019) point out, this mechanism implies a specific type of uncertainty: the user does not know which item he will receive when he buys a loot box.

The introduction of loot boxes widened the fronts of mistrust and criticism of the games industry, and this situation was intensified with the recognition, in 2018, of

addiction to electronic games as a mental health disorder, by the World Health Organization (WHO). As a result of this situation, in recent years, there has been an effort by the different actors that make up or relate to this field (government bodies, companies, governance units, civil society associations, academia, among others) to try to understand how close the loot boxes are from gambling, which implies seeking some kind of consensus about what gambling.

Griffiths (2018) points out that several disciplines define gambling, but that most of these definitions have the following points in common: (a) a future event is decisive for the transaction, with the outcome of this event is still unknown; (b) there is an element of uncertainty; (c) there is a reallocation of wealth without productive work; (d) losses can be avoided by not participating in the activity; (e) there is a prize involved and the value of this prize is invariably greater than the value of the initial hand.

For Derevensky and Griffiths (2019), games of chance involve 3 elements: risk, consideration¹ and a prize, which makes them consider loot boxes as a form of gambling. Parker et. al (2012) propose a scheme to assess whether or not a game is "gambling": a) the use of real money or not, b) balance between possibility of advancement based on skill or uncertainty, c) the platform on which the game is found and d) what is the importance of the element of "bad luck" within this game.

Oliveira, Silveira and Silva (2008) consider gambling as those games that involve a bet on a game or event in which the outcome is uncertain and depends on chance. According to the authors this kind of game provokes a feeling of fear and pleasure, arising from risk. Koeder, Takana and Mitomo (2018), on the other hand, state that loot boxes require attention, as their elements are close to, but do not constitute, games of chance. According to the authors, loot boxes do not necessarily use real money, do not simulate casino activities, and are not necessarily central to games, and skill remains the most important element for the game itself.

Perhaps the main question about the loot boxes, and their proximity to gambling, is how much can they induce compulsive behavior, addiction and gambling addiction? Brooks and Clark (2019) understand that there is no consensus on the relationship between these microtransactions and disorders related to gambling addiction. King et al (2019) point out that this consensus is difficult due to the

¹ According to Deverensky and Griffiths (2019) this consideration refers to the act of betting money, or something with monetary value.

diversity of microtransaction mechanisms and loot boxes, some of which may represent a low impact on the player in terms of addiction, while others have a greater impact.

The idea that the discussion about loot boxes should be deepened is shared by several authors: PARKER, et. al. 2012; GRIFFTHS 2018; CASTILLO 2019; SCHWIDDESSEN and KARIUS 2019; DEVERENSKY and GRIFFTHS 2019; LATVALA 2019.

HOW HAS THE LOOT BOX THEME BEE DEALT WITH?

Loot boxes are a relatively recent monetization mechanism in the games market. The way to deal with this mechanism has been determined more or less independently by each country, with a wide variety of solutions. Among the countries that have already dealt with the subject and have some type of legislation on the subject, we have: Netherlands, Belgium, Japan, China, South Korea and, more recently, the United Kingdom has started debating about it .

Japan was the first country to address the issue of loot boxes and the first to legislate on the matter, and in 2012 the country started to consider illegal all loot box mechanisms considered “full gacha²”, but allowing other loot box models (KILLHAM, 2012). Straub (2020) clarifies that in the full gacha mechanism the player needs, to advance in the game, a set of items, which can only be obtained through the loot boxes, so he needs to keep buying the loot boxes until he gets the items.

Koeder, Takana and Mitomo (2018) point out that Japan deals with this monetization mechanism through consumer protection legislation, with the objective of increasing the transparency of these transactions. The authors also point to self-regulation in this market, through the action of CESA (Computer Entertainment Supplier's Association), which establishes limits related to prices and probabilities.

In 2016, China began to require companies to make public the names and probabilities of items that can be obtained through loot boxes, increasing transparency and allowing consumers to be able to calculate how many loot boxes they will have to purchase to obtain the items desired (STRAUB, 2020 and KOEDER,

² Gacha is a monetization device based on “gachapon”, machines that sell toy capsules (dating from the 1960s). In the gachapon, the consumer inserts the coin, turns a lever and receives a capsule with a random gift. Thus, in games with gacha, the player has access to a draw that will give him a random virtual item.

TAKANA and MITOMO 2018). The country also determines a maximum number of loot boxes that can be purchased per day.

South Korea, on the other hand, initially tried to address the loot box issue through self-regulation, but due to complaints from the general public, the country started to demand that the probabilities of obtaining each item be public information (HAFNER, 2018).

Some countries consider loot boxes to be gambling. Belgium banned the mechanism throughout its territory (KOEDER, TAKANA and MITOMO 2018). The Netherlands, in turn, classifies loot boxes that have market value as gambling, requiring a license to market this type of good and at the moment it is not possible for game companies to obtain this type of license (STRAUB, 2020).

Also according to the authors, New Zealand does not consider loot boxes to be games of chance, as their items cannot be exchanged for real money and are directly related to the game itself. The European Union also does not recognize loot boxes as games of chance. In the same direction goes the Entertainment Software Rating Board (ESRB), an important Internal Governance Unit (UIG), in the USA, as it considers that the consumer always earns something, which would bring loot boxes closer to collectible cards. However, the ESRB introduced, in 2018, a new labeling of games in physical media, so that games that have microtransactions must have this information on the packaging. Online stores, such as Steam, also showcase the information. The Entertainment Software Association, another UIG, also from the United States, considers that loot boxes cannot be classified as gambling, since the consumer can choose not to use this element (KOEDER, TAKANA and MITOMO 2018).

In Brazil, gambling is prohibited, which makes ranking loot boxes particularly important for the gaming industry. Fantini, Fantini and Garrocho (2019) point out that there are bills that aim to regulate games of chance, and only one of them, PL 186/14, superficially discusses the issue of digital games. However, the authors consider that the proposals are insufficient to deal with microtransactions and loot boxes.

Here, too, socially skilled actors act to interfere in the configuration of the field. On March 29, 2021, the Public Prosecutor's Office accepted to file a lawsuit aimed at banning the sale of loot boxes in the country. ANCED (National Association of Centers for the Defense of Children and Adolescents) filed a request for a public civil

action against several companies, including Activision Blizzard, Electronic Arts, Garena, Nintendo, Riot Games, Ubisoft, Konami, Valve, Tencent, Apple, Microsoft, Sony and Google, in order to prevent the sale of loot boxes in the country. According to Ferreira (2021) the request compares loot boxes to other gambling games, prohibited in Brazil.

GAME ADDICTION

In the field of Psychology, in general, the interest in games is given both by the possibility of its use as a resource for intervention in applied contexts, and by problems related to impulse control. In the latter case, gambling behavior becomes problematic and is classified as a condition that requires medical and psychological attention.

In 1980, the American Psychiatric Association (APA) recognized compulsive gambling behavior as a psychiatric disorder, including the diagnosis of “Pathological Gambling” in the 3rd. Edition of the Diagnostic and Statistical Manual of Mental Diseases (DSM-III). In the most recent published edition of the Manual, the 2013 DSM-V, there was a change regarding the Pathological Game classification. In the previous version (DSM-IVtr), from 1994, this diagnosis was presented as part of the “the impulse control disorders not elsewhere classified”. However, studies have pointed to evidence that gambling behavior, especially when involving so-called gambling, acts on the reward system, generating effects similar to those caused by drugs of abuse. These data motivated the inclusion of the Gambling Disorder among the Substance-Related Disorders and Addiction in the 5th. Edition of the DSM (2014).

For Ashley and Boehlke (2014), pathological gambling is commonly referred to as a hidden addiction, as it does not usually present the physical signs that usually accompany addictions. The authors also point out that a central feature of addictions is the failure to resist an impulse that is harmful to oneself or others. It is also important to note that this behavior has different levels or phases.

Depending on some characteristics of the games, they seem to create conditions that favor the emergence and maintenance of addictive behaviors. This is probably what happens with those classified as gambling that, as mentioned earlier, act on the reward system.

Studies in the area of Behavior Analysis define pathological gambling as those that present a configuration that favors the maintenance of recurrent gambling behavior, despite possible financial, social and psychological losses (LANDOUCEUR et al., 1994; RAYLU and OEI , 2002; OLIVEIRA, SILVEIRA and SILVA, 2008; SOUZA et al., 2009).

Raylu and Oei (2002) state that several factors were identified for the development and maintenance of pathological gambling: family, sociological and individual factors. However, the authors point out that there is a consensus that certain personality traits may indicate a greater risk of developing pathological gambling. Skinner (2005) points out that there is a possibility that the strength of compulsive behavior is due to variables not related to the individual's motivation.

In this sense, from the point of view of mental health, the issue is not limited to the act of gambling, but involves an attitude that is above the individual's will, characterizing what can be called pathological gambling behavior.

Bernik, Araújo and Wielenska (1995) presented some conditions responsible for the acquisition and maintenance of the pathological gambling behavior, namely: the pleasurable sensations that the gambling behavior evokes; the avoidance of feelings, thoughts or other aversive environmental conditions while the individual is engaged in gambling activity; intermittent reward schemes present in gambling (sometimes one wins, sometimes loses and these gains and losses, in the case of gambling, do not depend on the player's skills, but on a random scheme that releases the rewards in a uncertain way, so that it is not possible to identify when it will happen) and, finally, the use of money as a reward.

With regard to the pleasant sensations that the game provokes, physiological sensations of excitement and euphoria can be described, caused both by eventual gains and by the risky situation. Raylu and Oei (2002, p. 1020) define this as sensation-seeking: a dispositional characteristic that involves a desire for diverse, new, and complex feelings and experiences and taking risks in order to achieve this. High sensation-seekers are likely to participate in risky activities such as gambling

In addition, the game environment itself, including visual and auditory stimuli and the people with whom the game is played, become associated with the pleasure that the game itself causes, which increases the probability of engaging in the gaming behavior, since the simple contact with such stimuli or people can evoke the behavior.

In addition to the pleasure provoked, games can also function as a way to avoid aversive situations (RAYLU and OEI, 2002). Thus, emotionally vulnerable individuals who are experiencing financial, family or professional difficulties, for example, may find in the game a way to escape their problems, generating feelings of relief in the short term, although, in the medium and long term, such conduct often leads to aggravation of these problems.

Regarding the reward scheme characteristic of gambling, studies already consolidated in the area of experimental analysis of behavior, since Skinner (1953 and 2005), demonstrate that when the gains in a given activity are released intermittently and unpredictably, the engagement in activity tends to remain for a longer time in the individual's behavioral repertoire, even when such rewards are not provided for a long time. In activities where gains are continuous or predictable, the persistence of the behavior is less.

About the use of money as a reward in this scheme, a point that must be considered is the fact that the money can be “exchanged” for other items that are considered rewarding for the player. Money is said to function as a generalized reinforcer, as it provides access to other types of rewards. The player can even use the money earned in the game to continue playing. Thus, in a game, the more generalized the reinforcer, the greater the probability of maintaining the gambling behavior.

ELECTRONIC GAMES AND ADDICTION

In recent decades, healthcare professionals have begun to turn their attention to addictive behavior in relation to a specific category of games: electronic games. As mentioned before, the gaming field emerged in the 1970s, and this emerged as a niche market. However, Toyama, Ferratti and Côtés (2020) point out that over the decades this has become a multi-million dollar market.

Research in the field of Psychology, particularly in Behavioral Psychology, has mainly followed two lines: a) its impact on the player's health (for example, the study by Alves and Carvalho, 2011) and b) the use of games as a tool for the development of skills related to learning, such as teaching languages and mathematics (one example is the study by Cani, Pinheiro, Santiago and Soares, 2017).

The concern about the impact on players' health emerges when, in the last decades, the great amount of hours spent in this activity has been observed. To

investigate internet addiction and electronic games Abreu, Karam et al (2008), performed a systematic review of the literature in the MedLine, Lilacs, SciELO and Cochrane Library databases until December 2007, using the keywords: "videogame", "computer games" and "electronic games." At the time, the authors located 75 articles from different countries and the results pointed to very different prevalence, which was probably due to the lack of consensus and the use of different names, giving rise to the adoption of different diagnostic criteria.

The publication of other researches in the same direction and the identification of the reports of patients that the abuse and dependence on electronic games was leading to losses in the professional, social, academic and family areas boosted, years later, the World Health Organization (WHO) to direct efforts to identify, describe and systematize the behaviors and conditions involved in adding to games.

Thus, in 2018, the WHO started to recognize addiction to electronic games as a mental health disorder, a decision that was ratified in the 72nd. World Health Assembly in 2019. As a result of this decision, the 11th International Classification of Diseases (ICD 11), which takes effect from January 2022, includes the abuse of electronic games (gaming disorder) as a diagnostic condition in the section on disorders that can cause addiction. According to the international organization, three main behaviors are characteristic of addiction: 1) loss of control over the intensity, duration and frequency of the activity; 2) video games are given priority over other interests in daily life; 3) the dependency remains despite the negative consequences it brings.

Furthermore, more recently the gaming market has attracted even more attention due to the consolidation of loot boxes as a monetization mechanism within games. And as pointed out earlier, there is still no consensus on the classification of these mechanisms as gambling, mainly due to the wide variety of mechanisms classified as loot boxes.

FINAL CONSIDERATIONS

This article seeks to analyze the game industry and market from the perspective of the Theory of Fields, as considered by Fligstein and McAdam (2012). Although the game itself is an activity that accompanies human existence itself (and perhaps not just human existence), electronic games were created about 50 years

ago and already occupy a prominent place in terms of number of “customers” (players) and monetary volume handled.

Games are born from knowledge existing in domains specific to other fields (semiconductors, switched circuits and cathode ray tube), articulated by researchers and university students. In its trajectory as a business, this industry has gone through different models, from the rental and sale of consoles to the game as a service, and at various times in this journey, it had to deal with the very legitimacy of the game as an object of economic transactions, aimed at resistance and attacks by organized social actors, socially skilled actors, who feared, that the violence present in games could influence social behavior. Such situations, which reinforce the social dimension of this market, enhance the approximation of the incumbents of the field, in an attempt to stabilize it through the construction of consensus and Internal Governance Units.

In the quest to expand monetization alternatives, developer companies have started to introduce microtransactions in games, including loot boxes. This type of microtransaction is understood as a step by this industry in the direction of gambling, with especially serious consequences due to the possibility of developing addictive behavior on the part of the players. As we brought up in this article, although in a very preliminary way, there does not seem to be a consensus in the academic world about a causal relationship between the practice of playing video games and the addiction to gambling. The risk does exist, but the trigger for pathological behavior seems to go beyond gambling.

Given the panorama presented in relation to gambling addiction, in general, and the abusive use of electronic games, in particular, some relevant questions arise: any electronic game has the potential to trigger abusive behavior? Or are there specific characteristics in certain games that maybe resemble those described in gambling, thus making them more risky? If these characteristics exist, what are they and what are the possible consequences for regulating the marketing for these games? What impacts should this have on the game industry and how does this affect the balance of the field? What strategies will incumbents and challengers develop?

The debate about the regulation of the industry is established in a very consistent way. We carried out a review of the positions of several countries regarding this monetization mechanism. Countries like Belgium treat loot boxes as

gambling, banning their presence in games. Countries such as Japan, China and South Korea, on the other hand, seek to increase the transparency within these transactions available in games, without, therefore, prohibiting them. In several countries, such as Brazil, this discussion is still ongoing.

As you can see, many questions are still open and it is not possible to reach any conclusions at this moment. This signals the continuation and hardening of a dispute for the monopoly of truth, a dispute that can directly alter the distribution of probable events among possible events. The game industry, thought of as a field, moves quickly and it is also necessary to study how the initiatives taken within it can spill over into related fields, such as cinema and education, among others.

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