Universitatea-Babeș-Bolyai, Cluj-Napoca
Facultatea de Științe Politice, Administrative și ale Comunicării
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TEZĂ DE DOCTORAT - Abstract

The Role of Monetization Systems in Digital Game Consumption

Doctorand: Crețu Călin-Tudor
Coordonator: Prof. univ. dr. Abrudan Elena

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Digital games have evolved in the last 60 years from novel concepts on very expensive and large machines to common commodities on affordable, pocket-sized devices. Games, are no exception to the evolutionary steps all media followed, from sound (M. L. West 1971) (Brodsky 2008) (Simaan 1999) (Gamal 2012), to image (AlShehri and Gunter 2002) (Gomez 2008) (Manjila , et al. 2015), to video (Aumont 1996) (Flückiger 2018) (Bourdon 2000).

With the digital revolution affecting all types of media, we can see two general changes in all media types. The first change is that of storage: hard formats of either image (AlShehri and Gunter 2002), sound (Laing 1991) or video (Aharoni 2019), stored on physical, magnetic or optical drives could now be stored digitally, taking less space and making space for improvements in quality.

The second change that the digital revolution brought to media is linked with the transition to digital formats and online storage. Digital distribution offering the possibility of consuming one's media on-demand started changing how people consume all forms of media, from music, to movies to games (Dormehl 2020). However, most on-demand platforms evolved into not sell media to the consumer but sell access to the platform. Businesses like Netflix, Spotify, HBO GO became not a media selling business, but a service selling one, the service sold being access to an ever-increasing digital library (Hosch 2020).

However, the gaming industry did not follow the service-as-a-product path immediately, with games, even today, being sold as a product (throughout both digital and physical means). However, the ease of digital distribution allowed games to both cut costs and increase revenue sources by selling DLC (Downloadable Content) as enhancements to an already once sold game (Needleman 2017). With the gaming market reaching a maturing phase, free to play games start gaining larger audiences, monetizing by using a model of microtransactions, which has a portion of players chose to pay both small and larger amounts of money spread over a larger duration in exchange for in-game benefits exclusive to payers (Kowalkowski, Gebauer and Oliva 2017).

This new age of access allows media production companies to capitalize on every aspect of a product (Abrudan 2013) (Rifkin 2000), and in the case of games especially, creates new avenues of revenue which fundamentally change the way games are designed, produced and distributed. In this age of access, we could also see an increase in both television and digital content average consumption time per day in the United States and the United Kingdom, with television losing some ground to online media.

While digital play is a relatively new concept, play has been in humankind development for tens of thousands of years, and for even more in the animal world (Groos 1898). Huizinga's work and vision of the three facets of humans – the man of reason, the man that creates and the man that plays, shows how people have incorporated aspects of play in structuring day-to-day life (Mitchell, Webber and Seagull 2018) (Huizinga 1944). We can see games become pillars of communities and culture in the form of past times, education, competition and networking (Lastowka 2009).

The gaming industry grew from a $2 billion industry in 1972, with revenue exclusively made from arcade games, to $35 billion by 1980, with the majority of $25 billion being still gained by arcades while the console industry grew to become a $10 billion industry (Wallach 2020).

By 2018, the digital games market was worth 138.5 billion, distributed as following: $67 billion for the mobile games market, $35 billion for the personal computers, $27 billion in consoles, $4 billion in Virtual reality, $3.5 in arcades and $2 billion in handheld gaming devices (Wallach 2020) (Nakamura 2019). Estimations show that as an industry, mobile games will be worth $78 billion alone on *Apple's App Store* and $60 billion on *Google's Play Store* by 2025 (Sensor Tower 2021).

There are two candidates for the title of *first digital game*, chronologically, William Higinbotham's "*Tennis for two"* is the first digital game to ever be created, while Steve Russell's *Spacewar!* is considered to be the first real digital game (Kent 2001). *Tennis for two* was created in 1958 and it did not use a modern monitor to display the game but an oscilloscope while *Spacewar!* created 4 years later used a high-tech at that time (one of the three existing in the United States Universities) Cathode Ray Tube screen (CRT) (Kent 2001). *Spacewar!* Was initially created in 1961, but improvements to the game were added by Russell's colleagues reaching the final polished version in 1962.

Games such as *Space Invaders, Tetris, Pac-Man, Ultima or Phantasie* were launched in the early 1980's, period in which game studios such as *Capcom, Nintendo, Sega or Atari* started to grow at a quick rate (Barton and Loguidice 2008). By the late 1980's, focus would start switching from TV console games towards personal computers which would use both 8 and 16-bit computing, with companies like *Apple* marketing the idea that children can learn how to program a computer in order to help them in their future workplace, many of first PC games were sold as programing instructions.

Up until the launch of *Apple's iPhone* mobile phone games were seen as gimmicks that phones could possess. The first mobile phone that could run a game was the lesser known *Hagenuk MT-2000*, which was shipped with a preinstalled copy of *Tetris.* Other companies would start adding small, simple games to their devices. *Nokia's* introduction of the game *Snake* in 1997 became a popular culture icon for the brand, and even received a multiplayer mode. Trying to compete with *Nintendo's Game Boy Advance*, *Nokia* launched the *NGage*, a hybrid phone that could run games, however, *Nokia's* endeavors into the gaming market started and ended with the *NGage* (Prundaru 2013) (Willans 2013).

As phones started to evolve in a linear fashion, similar to personal computers, improvements were added on a year-by-year basis. Slimmer and lighter devices were a natural evolution, followed by evolutions of the screen, from low resolution TFT evolving to color LCD and OLED high-resolution, high-quality screens in the smartphone age. The launch of the *iPhone* in 2007 ended the emphasis on design for future phones, the focus now moving towards better-quality screens, improved touch screen capabilities and intuitive and application-centric devices. While before the launch of smartphones newer phones trended towards smaller, lighter devices, the touch screen-centered design reverted the trend, and new, larger phones with larger screens were launched to the mobile phone market (Prundaru 2013) (GSM History 2014).

Starting with the early 21th century and the popularization of online games, a novel monetization model starts gaining popularity in eastern Asian countries (China, South Korea and Japan) and starts spreading towards western countries. MMORPG games like *Silkroad Online*, *Maple Story* (Korean games) and even *RuneScape*, made by British company *Jagex* offer players the possibility of playing their games for free, choosing to monetize aspects of the game: faster experience gain, improved chances to gain items, queue priority if servers are full or even access to a larger world and skill set than. Some free-to play games chose to sell *loot boxes*, items which have the chance to reward certain items, free to play game, thus, monetize through multiple forms of microtransactions.

In September, 2018, after an investigation undertook by the Belgian Gaming Commission that analyzed four popular games at the time, the Belgian Gaming Commission concluded that the *loot boxes* existing in three of the four games were a form of unlicensed gambling (Yin-Poole 2018). Unlike previous similar legislation already existing in China, Belgian legislation did not require the loot box to be buyable with money, but obtainable with „*value"* – something that was money's worth (Close and Lloyd 2021).

Shortly after becoming subject of a criminal investigation, *EA* – the company developing *FIFA*, decided to remove the *loot boxes* for Belgian players (Yin-Poole 2019). A decision similar to the one taken by authorities in Belgium was taken Netherlands where the national Gaming Authority, classified certain *loot boxes* as illegal gambling, even fining *EA* with a 10 million euro fine. However, both in Belgium and Netherlands, it was the case of interpreting existing gambling laws that addressed the legal status of *loot boxes* and monetization mechanisms in specific games and not new blanket legislation (Lane 2020) (Tarason 2018).

Digital play features most aspects of Huizinga and other scholar's views of play, however its novel aspect is still riddled with mythic and presumptions outside academic fields, with news networks actively trying to link violent and criminal behavior as an effect of playing violent digital games, links that were mostly exaggerated (Nizza 2007) (Human 2007) (Block 2007). However, other negative effects of digital games can still be observed, from those related to addiction (Estévez, et al. 2017) to physical effects such as obesity and metabolic changes due to sedentary lifestyles (Wang and Perry 2006), enabling social self-exclusion as a coping mechanism for anxiety (M. D. Griffiths 2010)**,** or desensitization to violence (Greenfield 2013).

Non-digital play has been used in education in the forms of both free play, where children are allowed to play freely, and guided play, where adults set, supervise and impose rules (Kelly, et al. 2011). Pretend play can be used as a learning tool that promotes positive-peer relations by enabling discussions and encouraging participants to talk about mental states (Kelly, et al. 2011).

In digital play, due to the immersive and compelling experiences can be obtained in games thanks to the versatility of the medium, there is a present potential to enhance well-being, mental health, and developing a wide range of cognitive skills in players (Lobel, Engels and Granic 2014). Considering that by 2008 half of teens were playing digital games (Lenhart, et al. 2008), the potential for using games as an educational and training tool should not be overlooked. Another use digital games can be used for is the therapeutic one, aiding professionals in treating and helping patients cope with a large range of mental issues and disorders (James, et al. 2015) (Kuhn, et al. 2018) (Jiménez-Muñoz, et al. 2022).

Authors have tried classifying games into genres (Matthews 2018) (Pavlovic 2020) (Wirtz 2021), but due to the vast diversity of games and the versatility of the medium, no generally accepted consensus has been reached. Similarly, a design ontology accepted by both scholars and professionals has not been established, with multiple attempts failing to be adopted or outright stopping development (Rouse 2015) (Zagal, et al. 2005) (Hunicke, LeBlanc and Zubek 2004). Interactive narrative structures however, while still being limited in function (Szilas 2003) (Juul 1999) (Mateas and Stern 2000), have had generally accepted classifications and structures (Lindley 2005).

In order to improve and create more compelling narratives in games, and even to open new revenue streams, game studios and producers have appealed to the use of transmedia storytelling, expanding game narratives through the creation of additive texts on alternative media (Jenkins 2003) (Jenkins 2003).

The second part of this paper contains complex research, using an analysis grid that analyzes 89 unique game titles and a quantitative survey, questioning over 7000 respondents, the purpose of the research is establishing the relationship between monetization methods and narrative and how players perceive both narrative structures and monetization methods individually and as two interconnected parts.

Using the two research methods, this paper will try to answer its five hypotheses and the following research questions:

1. To what extent are cosmetic only microtransaction monetization systems used and how does it impact the player’s game and narrative experience?
2. How open are players towards season pass/battle pass type of monetization in free to play and premium games?
3. What are the main reasons for players choosing to pay for microtransactions and DLC content?
4. What are the main reasons for players choosing not to pay for microtransactions and DLC content?
5. How do players see monetization system affect narratives in games?
6. What are players main concerns with modern monetization practices?

The hypotheses state the following:

1. There is a difference in narrative complexity between premium and free-to-play games.

2. Cosmetic microtransactions are more prevalent in premium games than power-up and progress microtransactions.
3. Players of premium games are more accepting of DLC and season pass monetization forms than of microtransactions while players of free-to-play games will be more open towards microtransactions and season pass monetization forms.
4. Players of all cohorts perceive monetization of cosmetic items as having a small impact over the game's narrative experience.
5. Players do not perceive the consumption of transmedia content as being mandatory in order to experience the game's narrative.

After verifying the 6 research questions and 5 hypothesis we can notice some players preferences and trends in how games are consumed as a form of media. Using the survey data available we can observe clear trends in how each of the three cohorts perceive different aspects of monetization in their game type.

While we can see that free to play players are more open to newer methods of monetization, be them microtransactions or season pass/battle passes, we see a lesser acceptance of classic forms of extra monetization, such as DLCs.

In the opposite side, we can see the, overall older cohort of premium game without microtransactions players are less open to the idea of microtransactions but more open to season pass/battle passes than their counterpart cohort of premium games with microtransactions. And opposite to free-to-play players, we can see the highest acceptance rate of DLCs in the cohort of premium game players without microtransactions.

We can see players of free to play games are more open towards cosmetic items being sold in the form of microtransactions, and see them lest impactful in the narrative experience, with players from premium games without microtransactions being less open towards the concept and see a bigger impact than their free to play counterparts.

Overall, in most forms of microtransactions, except season pass/battle passes, but also in other perception metrics, players of premium games with microtransactions are representing an in-between opinion or metric in almost all aspects surveyed or measured.

A second major trend observed is that both from a design aspect and user perception, is the fact that premium games without microtransactions are more focused on offering a complex narrative experience, with free-to-play games more often opting for games with close to no narrative (usually battle-royale-type sandbox games).

The present thesis is adding a new dimension to the digital game industry, looking at the narrative aspect of 2021's top games of all important devices and platforms while also taking into account the monetization aspect of the game, be it a classic premium model or a newer free-to-play model.

From a development point of view. we can see how companies are reaching out to cover multiple devices and platforms, with more than half (54%) of the most popular games in 2021 being available on multiple platforms, including a small number of games (8%) being available on all major gaming platforms.

Overall, the data gathered shows two main trends forming in the gaming industry, in both game design and user expectation: **the first trend** is having premium games and DLCs being strongly focused on offering a complex narrative experience to an audience that, with the exception of DLCs, are at most willing to pay extra money for cosmetic items only, and that prefer the predictability of paid season passeses over time limited offers. This audience shows a stronger pushback towards most microtransaction-centered monetization methods, with any power-up or speed up type of microtransactions being rejected the most.

The second trend is having less narratively complex games being developed as free-to-play games towards an audience that is more open towards microtransactions, especially cosmetic only ones and season pass/battle pass, this audience is willing to pay more often than that of the premium trend. This audience still shows pushback to any power-up or speed up type of microtransactions.

The present thesis provides significant info in how monetization systems impact player narrative experience and player perceptions of digital games and info on what trends and strategies major games have had in 2021. The data gathered and analyzed in this paper is relevant and of use for both gaming and media and communication scholars, providing more insight into a domain that is in constant need of up-to-date research and data. The thesis is also relevant for decision makers, professionals and amateurs in the digital gaming industry, in domains such as game design, game economy design, game producing.

Understanding what the player base of multiple games expects from a game based on its monetization method can be essential in shaping how the narrative experience is created and used by developers in a digital game. Understanding that each cohort of monetization method has a certain threshold to which specific monetization methods can be pushed is important to game economy designers and decision makers, as they can tailor a game's narrative experience better for their specific audience.

To a smaller extent, the data obtained in this paper is also relevant to the process of creating transmedia products linked to game narratives. Decision makers and creatives can gain more insight on how transmedia products are perceived by audiences and can tailor the transmedia experience to be as pleasant as possible while also being monetizable.