KADİR HAS UNIVERSITY
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DIFFERENCES OF PLAYER EXPERIENCES BETWEEN PHYSICAL AND DIGITAL MEDIA

A CASE STUDY OF: “MAGIC: THE GATHERING”

DOĞA AYTUNA

ADVISOR: ASST. PROF. DR. AYHAN ENŞİCİ

GRADUATE THESIS

İSTANBUL, JULY, 2020

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GRADUATE THESIS

Submitted to the School of Graduate Studies of Kadir Has University in partial fulfilment of the requirements for the degree of Master of Arts in the Program of Design

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METHODS OF DISSEMINATION

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This work entitled **DIFFERENCES OF PLAYER EXPERIENCES BETWEEN DIGITAL AND PHYSICAL MEDIA / A CASE STUDY OF: MAGIC: THE GATHERING** prepared by **Doğa Aytuna** has been judged to be successful at the defense exam held on **28/07/2020** and accepted by our jury as a Master's Thesis.

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ABSTRACT

AYTUNA, DOĞA. *DIFFERENCES OF PLAYER EXPERIENCES BETWEEN PHYSICAL AND DIGITAL MEDIA / A CASE STUDY OF: "MAGIC: THE GATHERING"*, GRADUATE THESIS, İstanbul, 2020

Communication and entertainment continue to move towards digital media. Understanding the gains and losses of these transformations from physical to digital is essential for better digital experiences. Games are a big part of human life. Moreover, currently, the video game industry has the biggest share in the entertainment industry. Every statement that is supported with an academic research on such a subject would have an audience that can benefit from.

This thesis aims to reveal the differences between playing experiences of different platforms. In order to completely grasp player experience, concepts like game, play, player, play typology, user experience and player experience itself has been extensively studied. With the gathered information, in order to conduct a research an individual game has been selected. Magic: The Gathering originally being a tabletop card game recently launched a successfully received version for online play. The game is almost exactly the same in both platforms and has a lot of components for a multifaceted and deep experience. Since players can play with the same game pieces in a similar manner in both platforms against equivalently competent opponents, the difference that the two platforms would generate is expected to be revealed clearly. For the collection of the data, after an exploratory research a handful of online face-to-face interviews are conducted, and the qualitative data gathered from these interviews used to construct a theoretical model for an online questionnaire. 697 Magic: The Gathering players' views are collected, analyzed and discussed through this method.

Detailed analysis of the results concluded that the tabletop experience is superior overall for the case of this study. Especially social interaction and the idea of fun scored much higher than the online experience of the same game. Contrarily, the online version had better numbers in the areas of competitive play and convenience of gameplay.

Keywords: Player experience, PX, game, game studies, play, player, player typology, Magic: The Gathering, card games, digitalization.

ÖZET

AYTUNA, DOĞA. *FİZİKSEL VE DİJİTAL MEDYA ARASINDAKİ OYUNCU DENEYİMİ FARKLARI / "MAGIC: THE GATHERING" ÖRNEK ÇALIŞMA*, YÜKSEK LİSANS TEZİ. İstanbul, 2020

İletişim ve eğlence gün geçtikçe daha fazla dijital medyanın bir parçası haline geliyor. Bu fiziksel mecralardan sayısal mecralara dönüşüm sırasındaki kazanç ve kayıpları anlamak daha iyi bir dijital deneyim için son derece önemli. Oyunlar insan hayatının büyük bir parçası. Hatta video oyunları sektörü de eğlence endüstrisinin en büyük payını alan sektör haline gelmiş durumda. Bu alanda yapılacak akademik araştırmaların sonucunda ortaya çıkacak veriler bu sektörlerin etkilediği herkesin yararlanabileceği değerler olacaktır.

Bu tez oyunların oynandıkları mecranın değişmesi ile oynama deneyiminde oluşan farkları ortaya çıkarmayı hedeflemektedir. Oyuncu deneyimini tam anlamıyla kavrayabilmek için oyun, oynamak, oyuncu, oyuncu tipolojisi, kullanıcı deneyimi ve bizzat oyuncu deneyimi kavramları derinlemesine araştırılmıştır. Elde edilen bilgi birikiminin yönlendirmesiyle bir araştırma geliştirebilmek için üzerinde çalışmak için bir oyun seçilmiştir. Magic: The Gathering oyunu bir masa üstü kart oyunu olarak başlamış olmasına rağmen yakın zamanda çevrimiçi oynanabilecek başarılı bir dijital sürüm piyasaya sürdü. Bu oyun masaüstü ve dijital versiyonlarında neredeyse tamamen aynıdır ve çok bileşenli olduğu için çok yönlü ve derin bir deneyimdir. Oyuncular oyunu farklı platformlarda aynı oyun öğeleriyle, benzer şekilde, eşdeğer yetkinlikte rakiplerle oynayabildikleri için, iki platformun yaratacağı farkların net bir şekilde ortaya çıkması beklenmiştir. Veri toplamak için bir keşif araştırmasının sonrasında çevrimiçi yüz yüze görüşmeler yapıldı ve bunların sonucunda elde edilen niteliksel veriler doğrultusunda da çevrimiçi bir anket tasarlamak için bir teorik model oluşturuldu. Bu yöntemle 697 adet Magic: The Gathering oyuncusunun görüşleri toplandı, analiz edildi ve tartışıldı.

Sonuçların detaylı analizleri bu çalışmanın odaklandığı örnek için masaüstü deneyiminin üstünlüğüne işaret etmiştir. Özellikle sosyal etkileşim ve eğlence kavramında çevrimiçi versiyona göre çok daha yüksek rakamlar elde edilmiştir. Öte yandan, çevrimiçi versiyon ise rekabetçi oynama ve oynama kolaylığı açısından daha üstün sonuçlar çıkarmıştır.

Anahtar Sözcükler: Oyuncu deneyimi, PX, oyun, oyun çalışmaları, oynamak, oyuncu, oyuncu tipolojisi, Magic: The Gathering, kart oyunları, sayısallaştırma.

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1 INTRODUCTION

1.1 GAMES AND IMPORTANCE OF GAMES

The concept of game has been an interest to various academic fields and studies. The definition of "game" can be elusive. It is not only an opposite to work, it may not be enough to say it is constructed play, it is not always definitely fun. Think about it; how is it different from a challenge or a competition? Does whatever we play with should be considered as a game? Whether one or the other, everyone plays and knows about games. As mostly accepted, mainly children love playing, however, playing is not only restricted to that age group, adults also frequently resort to some form of playing in their lives. A psychological stalemate might be overcome approaching through a game perspective, or a creativity issue might be able to be solved via well-constructed gameplay about the subject at hand. It is understood that there are many examples of how people, throughout time, turn to games and play to overcome various obstacles. Even though, in classical sense, games are considered as a hobby activity to pass leisure time, there are professional occupations that revolve around games too. "Sports", for example, is often used synonymously with games. These examples indicate that games are undeniably an important part of anthropology. Even as babies we play games, and it is a crucial part of the learning process (Piaget, 1999). Playing is one of the most important tools for newborn humans to start adapting to the world. Games and learning are very closely related even in later years. Since playing is a very effective way to learn, and is in many aspects of our lives, education systems implement games in countless ways into their processes. In kindergarten, preschool and mid school it is not uncommon for teachers to rely on some sort of a playing activity to educate younger people. Further in the education ladder it is quite possible to come across some examples that use game practices to improve learning. For example, university graduate level science and engineering students showed increased depth and complexity in their learnings through game design exercises (Mayo, 2007). Moreover, sometimes professions use games as teaching tools, from pilot training to military, simulations are a crucial part of pre-field experience.

1.1.1 Increase of Playing Games

Games have been played all through history, initially basic pieces were bones, bones turned into dice and other variety of game pieces. Eventually, games are certainly one of the oldest systems of human interaction. Interaction being a part of the communication process is an important piece of the evolution of human culture and development. The social interaction's form and ways changes greatly with technology and this progress is true for socialization through games too. Social interaction as a communication tool opens various paths for people to connect. People communicate using whatever the tools available to them in their era. Games have been such tools as long as they have existed. As computers became ubiquitous people have been able to play games against computers. Which made games more present, every day and frequent events. People didn't even need other people to practice their chess skills anymore, computers programmed to play various levels of strategy games. Games are fundamentally structured, which makes being played by computers possible. Today's modern era of communication and powerful computers that can fit into pockets in the form of mobile phones, made playing games much more accessible. The mobility of computers and internet access creates an unprecedented environment for games. Internet access and the ability to move games to an online environment freed games from the restrictions of playing against a computer. Players have been able to play games against other human players, through a computerised media, for a decent amount of time now. Hence, games are now everywhere. Advertisements have games in them, job interviews feature games, Netflix series have interactive games implemented in them (Roettgers, 2018). People usually are happy to interact with things through play and many sectors are aware of it (Nelson, 2002). Brands take advantage of this willingness of their audience in different platforms such as when collecting consumer data, creating advergames, and an outlet to create giveaway events.

Additionally, people do not only play games that are presented to them, people actively and enthusiastically seek games as well. A lot of people spend a lot of time playing games as a part of their lives. Even if only digital games are put into focus, according to Statista, 2.725 billion people are expected to be playing video games around the world in 2020 (Gough, 2019). People who call themselves gamers, from novice to aspiring professionals, play more than 7 hours of games a week on average (*The State Of Online Gaming*

2019, 2019). Identified as gamers or not, people spend a lot of time and money to reach games, especially trendy video games are in the lead in this area. Most popular ones break sales records one after another release. To create better games and have more players drawn into their games, game designers challenge technology to push further every aspect of games. These developments in mobile phone technologies and visual communication technologies both make games highly obtainable and render them more desirable which creates a wider audience for games. Finally, it is important to notice that games are not only for children or teenagers anymore; adults are playing games pretty heavily. Actually, the average age of gamers is 33, and the female to male ratio is pretty close too, at 46% to 54% ("2019 Essential Facts About the Computer and Video Game Industry," 2019).

1.1.2 The Video Game Industry and Esports

The above-mentioned popularity of games among humans makes the video game industry one of the biggest industries by revenue and the largest entertainment industry (Stewart, 2019). Global games market revenue has risen 9.6% from the previous year and was 152.1 billion dollars in 2019, and expected to continue an upwards trend (*Newzoo 2019 Annual Report*, 2019) (Figure 1.1).

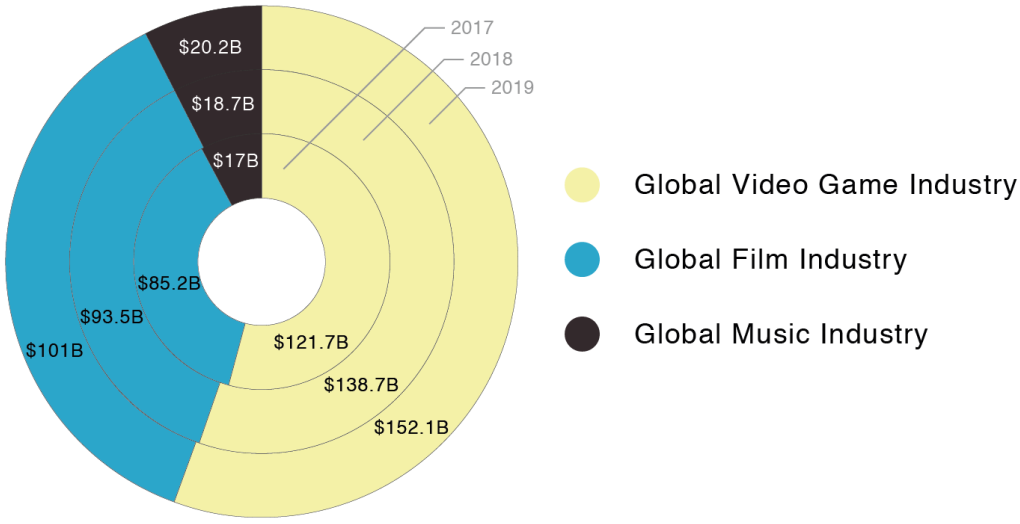

Figure 1.1: Entertainment industry revenue shares. (*IFPI Global Music Report 2019*, 2020; *2019 THEME Report*, 2020; Wijman, 2019)

The biggest player among regions is Asia-Pacific, and it has been even drawing away from other regions in the last years. 5 out of the top 10 companies by game revenues are and the top two are from this region ("Top Public Video Game Companies | By Revenue," 2019).

One of the primary reasons for gaming being so big nowadays is the rise of the esports phenomenon (Solomon, 2017). Recent and most popular video games are frequently played simultaneously by the contenders as multiplayer games, and real players are competing against each other, and not against the computer. This creates kind a of a sports environment, with the teams, supporters, fans, sometimes referees or judges, and tournaments are held with prize pools reaching up to tens of millions of dollars. These elements are important for sports, hence esports shows a lot of parallelism with conventional sports. People gather from all around the world to participate, watch and/or support their teams and countries in these events. This big spectator base mostly consists of fans of the games.

These fans are worth mentioning because games often influence a wide fan culture. Some of the fans attend events in costumes, usually of characters from the games. These "cosplays" require strong dedication to be realized and cosplayers have their own culture in themselves. With or without cosplays, fans socialize tightly within various events connected to the games and professional players they follow. Fans, almost by definition, follow renowned players online. There is a dedicated platform to watch gamers while they are playing: Twitch. Twitch is the main platform for gamers to broadcast (stream) their gameplays and others to watch those streams. For professional gamers this platform is an essential part of constructing a fan base. Plentifully followed streamers can earn enough money to sustain their lives just through streaming gameplays, even without winning prizes in these previously mentioned events (Taylor, 2018). A big chunk of their earned money is usually donations from their fans. On the other hand, these esports events help fans to get in touch with their beloved streamers/professional players and other people such as game designers, artists, brands and friends. All these pieces of this online gaming and esports phenomenon creates a fertile ground for research. Numerous research has been conducted to compare elements of video games and deduct conclusions for further research in game studies.

Collectible card games (CCGs) do not fall behind on this esports and fan culture sensation. Even though they are not the biggest crowd, they certainly do not lack any aspect of the spectacle. CCGs have considerable prize pools, striking characters to dress up as, a wide variety of designers of different pieces of the games and content creators about any aspect of most of the popular games. In these conventions it is easy to come across a fan who dressed up as a character in the game waiting in line to get a card signed by an illustrator who drew an art on a card or by a content creator they relentlessly follow.

1.2 RESEARCH PURPOSES

The game studies have many different aspects to it that are favourable subjects to research. There are social aspects of games such as, the way that people behave when they are playing or not, the capabilities of games that can help people to socialize, the feeling of belonging to a social group that is created by games are all worth studying. There are economic aspects, simply selling games, and understanding what aspect of games sell more successfully, or earning a living playing games, by streaming and or winning prizes in competitions. Learning through games is also studied immensely, since it is closely related to academia. Children's learning processes or serious games such as simulations being able to make these games' players more adept on an established subject cultivated a lot of articles, dissertations, and books.

Playing a game is usually considered as a relieving experience. It is important to feel comfortable about your interaction with the game and other players. Being fluent in the rules of a game and dialogues with players are important parts of a gameplay. Having a grasp of what is possible, what moves a player can do and what might foster out of them is crucial for an intuitive gameplay. In addition, when a player plays intuitively their personality and its parts that might not come out frequently, unfolds. One might discover new qualities about a close friend when playing games with them. Players can even find out new abilities or hidden talents of themselves. Considering this need for intuitive interaction in games, the platform that players play means a lot.

Tabletop games have an edge towards this intuitiveness, because there are little to no mediators from player to game. Holding the cards in hand positions players inside of the

game. Able to see your opponent, in person, provides a lot of information and chances to communicate. Digital games on the other hand, have to try and achieve a smooth transition from players thoughts into gameplay. There is another medium in the middle of the interaction from human to game (and if that is the case, back to the opponent again). The interface has to feel natural, straightforward and honest. However digital games have their advantages over tabletop games too. Some of the menial tasks that require "manual labour" have been diminished thanks to use of the computers. Which makes faster, easier and more comfortable playing experiences. Therefore, as the medium is different, the players' experience is expected to diversify significantly. The ability to observe the effect of medium on players' experience, devoid from other elements of gameplay, is an exciting endeavour. Moreover, tabletop and digital games serve a considerable number of players, research on the platforms would be significant in the gaming industry.

1.2.1 Medium's Impact

When there is a game being played, every factor of the game would alter the player's experience. For example, playing a boardgame at home or in a gaming café are fundamentally different experiences. The comfort and socialization variables are very different in these two environments. When playing a game, players' attitudes and behaviours might also differentiate according to their relationship and closeness of their opponents. Modern age of advanced personal computers creates the chance to replicate complex tabletop games in a computer environment. This study aspires to reveal if and how the player experience would change as the medium it is played on changes.

As this study examines a unique aspect of player experience and conversion of a game from a physical platform to a digital one, the findings of this study can shed light to digitalization of future games. Valuable insights are cultivated from actual players that operate in both platforms. The insight provided by the research and analysis can be taken into consideration when new concepts are needed to be adapted into digital or online media. On the other hand, even if there is a new application to be created only for digital platforms, the difference of player experience of the two platforms would be helpful as the research can be examined to reveal aspects of expectations of the audience for digital.

1.2.2 Research Questions

This thesis aims to explore and compare the effect of medium on playing experiences between tabletop playing and online playing. Understanding the playing experience of the same sophisticated game on different platforms is key for the study. The study tries to find out differences in playing experience by comparing both playing platforms and media.

It is discussed below that card games are efficient on both platforms and have similar gameplay. Yet two experiences are fundamentally different, being able to touch the cards and having the luxury of playing without social necessities can create diverse attitudes. In the light of this study, a future study might discuss precisely and in detail the ability to translate a tabletop game into a digital one. The necessity of such a transformation and effects of different platforms are important to understand. Today's conditions make companies and individuals more eager to use and to be in online platforms and tools of every kind. Which design choices might conclude in what kind of a player experience, and how it affects the final user's attitude is essential for gaming businesses? Specifying the differences of experience in digital and tabletop would reduce potential errors in game design. For example, if players have different expectations in a digital game, than a tabletop game, the digital counterpart of the game can be designed accordingly to meet the envisioned expectations. People who play a game with other people face-to-face may behave totally differently when they are sitting in front of a computer, even if there is an actual person on the other side. That gap in this behavioural change has to be understood thoroughly to create successful human computer (and back to human) interactions.

Since the same game, in the same format, with the same cards can be experienced in two different media, the medium's effect can be distilled from an appropriately designed research. In one sentence, this research aims to answer the following question: *How does the players' playing experience change when a complex tabletop game is digitised?* Or is it possible that the experience is the same? Has the experience been transported exactly? Another inquiry is, if there is a significant difference, does the digital version have any advantages over the tabletop one? In order to deduce such information, there is a specific target audience that is planned to be reached at. The assigned target player group consists

of people who are 18 years old or older and played Magic: The Gathering on tabletop and/or MTG Arena, for at least 2 months in the last year and more than 2 hours in a week.

1.2.3 Offerings of the Study

This study has various subsidiary expected outcomes that can be proven to be useful in game design and game research fields. It is expected that this study can be interpreted to help the digitization process of games. Moreover, results of this study might help new games for digital platforms. In the sense that, if players have alternate experiences and/or expectations for digital games, new games can be designed using the know-how this study would provide. This research may also reveal if and how the typology of the same player changes with the medium. Additionally, it is expected that findings of this study would reveal when players are looking to have fun or be a better competitive player if their choice of medium changes to achieve the initially expected goal. Moreover, in order to get such results this thesis will also question and explore how to compare player experiences in digital and tabletop environments.

1.3 DEFINITION OF TERMS

This thesis has a focus on a specific subject, such occasions create their own jargons. In order to make it easier to go through this paper some of the terms that are mentioned in this paper will be explained in this section.

The video game industry has many outlets in the form of social media channels for their community. Some of them are very large and commonly used by masses like Twitter, Facebook and Reddit, others are more niche and specific for gaming like Twitch and Discord. Reddit is used as a sharing and discussion platform that caters to a lot of unique interests, vocations and hobbies. There are subject specific subreddits, and through these channels people discuss and converse about that categorical subject. It is a very inclusive platform. Twitch is a game focused platform in which players or gamers publish themselves playing games. These gameplay videos are called streams and the act of publishing them is streaming. These streams are done live, and usually are available for watching afterwards, at this point they are called VOD's (Video on Demand). Even though it is

most well-known for games, nowadays the platform hosts many other types of video content. And then there is Discord, this is mainly an instant messaging and talking-over-the-internet application. People can form groups, invite each other into said groups, message, talk, share screens and files and so on. This platform is also dominated by gamers, but anyone can join and create a group to invite anyone they can contact and can communicate with them.

Moving over to the games' side, Card games have some terms that need mentioning. One of the important elements of card games is decks. When cards are neatly organised as a pile this is called a deck. By their nature card games need randomisation of these decks. This process is called shuffling. To shuffle is to rearrange cards in a deck to produce a random order. There are different ways to shuffle with their specific names.

These terms are used in branches of the card games too, one of which is CCGs. CCG is an abbreviation of Collectible Card Game. Collectible Card Games are, as the name suggests, card games, with their game pieces, meaning cards, have a value of their own. These cards are collectible and usually tradable. This genre of games normally makes use of randomly assorted packs of cards called booster packs. Through these booster packs players are able to acquire new cards. One the reasons for the cards to be considered as collectibles may be the "Art" on some of the cards. There is generally an illustration on cards which are usually a representation of card's properties. These illustrations are commonly called as Art of the card (Figure 2.2). With this visualisation and other side products such as books of certain games and/or sets, there is usually a story behind the gameplay. Some players are very much interested in these stories and other players not so much. Nevertheless, there is a definite sequence of events and it is generally referred as Lore. The lore has nothing to do with the gameplay, but characters and/or events from the lore are frequently referred to in game pieces. And, some players really enjoy integrating the lore into their games and telling stories or little anecdotes about certain events that happened in the lore through their game pieces.

Magic: The Gathering, this studies case, accommodates all these aspects and more. Expansions are a large part of the game. The game is regularly designing and printing (or reprinting) new cards in bulk and these sets of cards are frequently called expansions.

Expansions are important because they define some of the formats. Formats in Magic are ways to play the game. They usually define how to play by restricting the cards that are available to play for that format. Some of these formats use expansions and sets to define the format along with a ban list specific for that format. For example, one of the most popular formats, Standard Format, uses sets that are more or less printed in the last 21 months. Modern Format on the other hand allows almost all the cards from the set "Eighth Edition" forward. Another highly popular format is Commander or EDH (Elder Dragon Highlander). Commander is an Eternal Format which means every set and expansion is allowed, but it has its own ban list and different deck construction restrictions. Rules such as deck size and how many of one card players can have in their decks are determined by the format. These and along with others are Constructed Formats as players construct their deck beforehand with the cards they already own and then play with them. There is also Limited Formats, in these players are limited to the cards that they open from randomised packs, usually booster packs. In Sealed, players open 6 booster packs and from those fresh cards they need to construct a deck and play with it. In the popular Limited Format of Draft, 8 players gather around and every contender opens one booster pack and pick one card from it and pass the remaining cards to the player next to them, hence getting new cards from the other side, and pick again until all the cards are picked. They repeat this process for three times, and they construct a deck with the cards they picked. Limited Formats usually have smaller deck sizes and no ban lists or card count restrictions, since they are very restricted in terms of card pools.

There are of course more details for every aspect, but this amount of definition for terms and explanations of concepts is expected to be satisfactory in terms of not losing track when reading this paper. Some of the concepts are reexplained under their respective titles but some needed a little more elaboration.

1.4 THESIS OVERVIEW

There are five main parts to this document. Firstly, there is an introduction that has brief information about research's motivation, purposes and significance.

Continuing on this introduction part a literature review is presented. This second part elaborates what “Play” and “Game” is and continues to explain what “Player Typology” is and what “Player Experience” means. Explaining how the terms that are established in game studies came to be. Discusses about different views there are, and how and why the one used in the study are selected. Literature review closes with an analysis about this study's focus case. A collectible card game that operates very similarly both in tabletop and online platforms.

Thirdly the methodology of the research is presented. How the research model is constructed, why an online questionnaire is selected as a method to collect data and how that questionnaire is designed are explained in detail. Additionally, how the research process is followed through is clarified.

In the fourth section findings of the said research are presented. The quantitative results and significant points are indicated in three titles; Tabletop Magic: The Gathering Experience, Magic: The Gathering Arena Experience, Differences of Player Experiences.

Finally, in the fifth conclusion part, theoretical points comparing conventional card games and their transformations to the digital platforms is discussed, and limitations of this study is given along with possible future study ideas that seems plausible by the author of this thesis.

2 LITERATURE REVIEW

In order to go forward in an academic field studies need to be constructed on established knowledge. This study is investigating player experience; therefore, an understanding of the terms is essential. Being familiar with the concepts and working with the most constructive ones will help clearing the path that this paper will advance on. Following literature review is executed to achieve these goals.

2.1 PLAYED GAMES

Play, games and player are core concepts for this thesis and seemed to be well-known words. This can be misleading, frequently used terms' meanings are often vague in people's minds. It is important to understand different academic definitions for such simple terms and clarify in what contexts the terms are used in this paper.

2.1.1 Definition of Play, Game and Player

The English word "play" can mean a wide range of things. Acclaimed book Rules of Play: Game Design Fundamentals (Salen & Zimmerman, 2003) suggests a poetic sentence that can define a great variety of them: *"Play is free movement within a more rigid structure."* This definition also contains the relation between game and play. Play has to be free but also has to be confined. It simply cannot be without rules, yet there has to be some room for freedom for it can be registered as play. This definition does justice to the meaning of play, from "word play" to "play of a steering wheel" jiggling in its groove, from "playful shimmering lights" to "playing chess" (Salen & Zimmerman, 2003).

Still, defining "play" in terms of playing games is a challenging task. Although seems confident, people usually have vague definitions of play. Even academics do not have an agreed upon, absolute definition for play. The seminal book of Dutch historian Johan Huizinga's *Homo Ludens: A Study of the Play-Element in Culture* has been a great starting point for many researchers of play, including abovementioned Salen and Zimmerman. These academicians not always or completely agreed with Huizinga but his work's inspiration is evident (Bernhaupt, 2015; Caillois, 2001; Nacke, 2009; Salen & Zimmerman,

2003; Sutton-Smith, 2001). Originally published in Dutch in 1938, this book explains play as a distinctive model for behaviour and defines play by its five defining attributes. These characteristics are, play being a free or voluntary activity, play not having a material outcome, play having set of rules, space time concepts etc. different than the outside world, play enforcing rules but also incentivises bending the rules and finally, play promoting working together with the participants (Huizinga, 1980). In 1951, another famous academician, Jean Piaget categorizes play as a form of "assimilation", all the other characteristics of life that are related to intelligence, are constant modifications to the world's demands by the one who is living in that world, Piaget argues, but play is not (Piaget, 1999). Lastly appropriately titled 1997 book *The Ambiguity of Play* claims that an unquestionable definition to play cannot be scientifically provided (Sutton-Smith, 2001). It is and perhaps will always be a topic open for discussion whatever the future may bring.

Even though many languages do not even have separate words for play and game, the concepts unmistakably mean different things (Salen & Zimmerman, 2003). Surely the words are related and intertwined but, as their definitions, that relation is not a precise and clear-cut one. After looking up some definitions of play, games seem like a subset of play. This is a typological approach. Another approach can be conceptual, that is to say, play is a component of games. Playing experience is one of the ways to better evaluate what a game is (Salen & Zimmerman, 2003). Games have more essence in them than simply playing. Besides, the field of games consists of a greatly varied group of applications and a broadly spread range of players experiencing those games. This immense diversity does not let a universal approach for its conceptualization or measurement (IJsselsteijn, Van Den Hoogen, et al., 2008).

Chris Crawford being aware of the cacophony of uncertain definitions for play and game, suggests a definition "game", although adding that this too, still might not be definitive; "games are conflicts in which the players directly interact in such a way as to foil each other's goals" (Crawford, 2003). This blatant statement is an effort to summarize his reasoning scheme of understanding the concept of game (Figure 2.1).

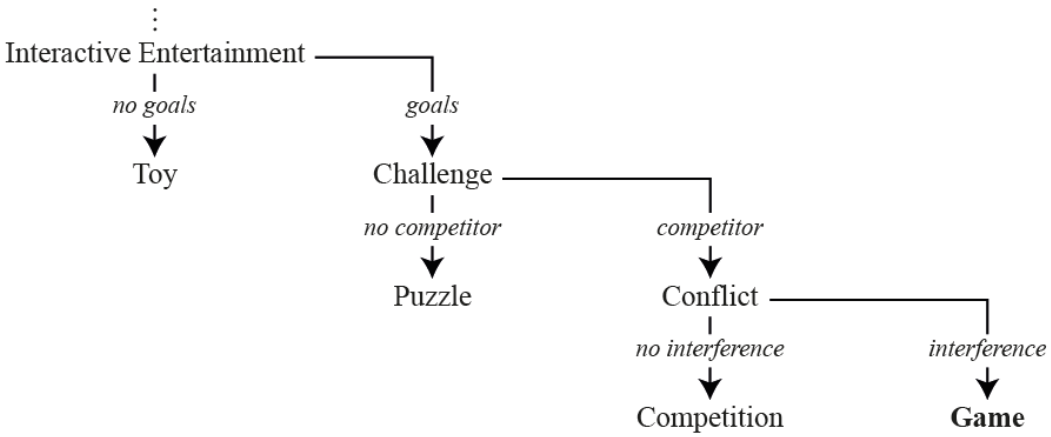

Figure 2.1: Chris Crawford's game definition (Crawford, 2003).

Philosopher Bernard Suits believes the easiest approach to validate a definition of game is to check if the definition is too focused or too loose. From his book *The Grasshopper: Games, Life and Utopia* (first published in 1978) he is popularly quoted saying "*Playing is a voluntary attempt to overcome unnecessary obstacles*" (Suits, 2005). He gave the following more academic and complete definition in pursuit of this quest of an appropriate definition that is not too loose or focused: *"… to play a game is to engage in activity directed towards bringing about a specific state of affairs, using only means permitted by rules, where the rules prohibit more efficient in favour of less efficient means, and where such rules are accepted just because they make possible such activity"* (Suits, 2005).

The seminal book of French anthropologist Roger Caillois *Man, Play and Games* composes a definition for game that had led the way for many researchers as early as 1958. "*… an activity which is essentially: Free (voluntary), separate [in time and space], uncertain, unproductive, regulated and fictive …*" (Caillois, 2001). These works had great impact on academia and will be further referred to in this paper. There are obvious differences between all these definitions, yet, it is still agreed that they are defining games and or play. Having cultural differences and choices of various approaches to the subjects creates a rather wide range of explanations for these concepts of play and game. Eventually even if there is no one absolute definition, it is possible to work over the shoulders of these definitions and conduct a viable research and create an academic paper. After all, making research is the only way to mine more resources for better understanding of any concept.

It is also worth mentioning the term ludology. Derived from the Latin word for game, *ludus,* ludology is the discipline that studies games. Argued that it is not particularly well adjusted to explain the narrower branch of video games, it is a wider term that includes all game concepts (Frasca, 2003). Searching for definitions of game and its elements is working under the academic discipline of ludology, also referred as game studies.

When the focus is diverted to the humans in the game concept, the noun is player. A person who uses a product in order to achieve a goal is called a user (Abras et al., 2004). Then, a player, to put it bluntly, is a user of a product that can be classified as a game. Although it seems easy-to-understand, giving a definition important as the term is frequently used in this paper. The idea of a player can also be branched out and categorized. Player types are regularly referred to when working on game studies.

2.1.2 Collectible Card Games

All games have common features. However, with a more detailed investigation they can also be categorized. An initial differentiation can be about skills required for the game. Athletic games (Olympic sports, team sports or tug of war) that require physical prowess, Children's games (Hide and Seek, Tag, Kick the Can) that require social skills and Intellectual games (Chess, Jigsaw Puzzles, Hangman) that require knowledge and strategy (Crawford, 1984). Or another separation can be about the media that which a game is played on. Games can be played on a tabletop, a field or on digital media (such as computers, mobile devices or game consoles). In order to search the meaning of the difference between mediums, the latter approach is beneficial for this thesis aims.

Electronic games that are played by means of digital media are generally called video games. An academic definition has been given in 2005, that explains: "A videogame is a game which we play thanks to an audiovisual apparatus and which can be based on a story" (Esposito, 2005). With this inclusive definition video games branch out into many genres. In a 2006 article T. H. Apperley suggests four main branches; Simulation, Strategy, Action and Role-playing games. To bring the focus into this thesis's subject, the article then continues to divide strategy games into two subgenres by the games' playing paces: turn-based strategy games and real time strategy games (Apperley, 2006). Since

players take turns when playing card games, it would fall under the category of turn-based strategy games. Finally, there are types of card games that players collect these game pieces called cards to play with them, or there are card games that have an already established set of cards to play with.

The card games are a peculiar specimen in the video games genre, they usually do not govern photorealistic visuals and the game is played turn by turn. Furthermore, the concept of "card" is so fundamentally physical, and it being a handy rectangular plane is wildly efficient for the real world, yet, it also has its own advantages in the digital world. Both media offer similar gameplays, basic elements and concepts are the same. Decks, shuffling, drawing cards from decks, one player seeing the faces of the cards and other(s) seeing the backs, and so on work the same way in both media. There are a lot of real-life card games that are adapted to the digital environment. Nevertheless, there are also many examples of card games that are endemic to the digital environment. Games that are played with regular playing cards are digitized as early as 1978 (Casino Poker) (Zircon, 1978). Card games with their own specifically designed cards are also digitized regularly; Uno, Magic: The Gathering, Concentration (Memory, Match-up, Pairs), Yu-Gi-Oh! are some examples. Furthermore, there are card games that are designed for and live only in the digital environment, such as; Hearthstone, Gwent: The Witcher Card Game, Kards, Legends of Runeterra, Eternal, Artifact. Note that Eternal has a tabletop version too called Eternal: Chronicles of the Throne, but it is not the same game, and the tabletop version came after the digital version. Both media, in multiple instances, take advantage of this traditional concept of cards for constructing and playing games.

A meaningful portion of all these branches of games are Collectible Card Games (CCGs). Also known as Trading Card Games, albeit this one is an outdated term now since usually there is not much of a trading going on in the digital card games world. But the collectability is still very much present. To elaborate, these games are played with cards with special abilities and usually have a lot of different cards, commonly well over thousands, with unique abilities that affects the game. Players compile a deck from the cards they own off of that universe of all cards and play with them via accessing the cards in a random order. This randomness also is in play when acquiring the cards, when players earn or buy new cards, they generally do not know about the exact cards that they would

receive. A “booster pack” of cards might include a card a player already owns, or a very powerful card that is very unlikely to appear. Because of all these powerful and rare cards, deck construction system, and randomness in gameplay, players try to “collect” cards in these games (Adinolf & Turkay, 2011). Hence the name, collectible card games. As players collect more cards they have more and better resources to construct decks that win more often or capable of doing other fun things individuals want to achieve.

These digital CCGs almost exclusively played against a human opponent. They are mostly strategy games that the actual competition is on the minds of the two opponents and the table, cards or the computer platform just provide the players an environment to compete at. In these digital card games players are not playing against the game, they are not trying to solve a readily created puzzle. There is no challenge other than the one that the opponent created, no artificial intelligence or programmed moves. It is not played multiplayer, it is one on one, there are no teams and nobody else on your side to help you. The “game” is being played by two human beings. However, in the case of online gameplay, all damage calculations, life counters, rules administrations, randomizations of the cards and so on are weighted on the shoulders of the computer platforms and people battle their strategies, wits, memories and minds. It is a peer to peer interaction in essence but both peers front end is a computer interface. Completely digital ones occasionally take advantage of computerized play and add abilities that would be impossible or too hard to track in real life. Within these digital CCGs, there are daily quests with prizes, longer period missions, and special events are being held. Which lets players earn in-game currencies that they can then spend on cards, packs, events or cosmetics, again within the game. In most cases, at least one of the game's specific currencies can be bought with real money of course. All are gears of the “collecting” concept of these games.

2.1.3 The First Sliver

Within these CCGs one has a special place, the one that started all in 1993: “Magic: The Gathering”. It is the pioneer of this category; it is the first Collectible Card Game. It has started as a tabletop product. The game released cards from the first year on without an interval. Sanctioned tournaments as early as the next year (Rosewater, 2017). Accumulated high numbers of registered players. Has more than double the number of unique

cards of its nearest competitor. There are a lot of formats of Magic, these are ways to play with various small rules or card restriction changes. Best known ones are official, but there are numerous ones that fans made that are known all over the world, some player groups have their own in-house rules, or even sometimes rules are created on the spot for a specific situation among friends. The possibility to play all these formats, with more than 20.000 unique cards and various ways to play, it is a very complex and fertile game.

A Magic card has a lot of information on it, from a commissioned art piece to rules text, a card type to a hologram of authenticity, illustrator's name to cards rarity, collector's numbers to a flavour text and more (Figure 2.2).

Figure 2.2: A Magic card named Angelic Captain

For the first years of the game there were no digital counterparts. Then, nine years after the initial release there was the game's online version with true gameplay for the first time, "Magic: The Gathering Online" (MTGO). Still active, this platform, at least when criticised now, is very clunky and deprived of modern interface design and accumulated user experience knowledge. A much newer digital online version of the game with a much user-friendly interface is released under the name of "Magic: The Gathering Arena"

(MTGA, MTG Arena or Arena for short). This platform takes advantage of the established know-how of other, competitor digital CCGs and is a well-designed and well received comprehensive online Magic computer game. Although it has much less cards (3.418 cards as of June 2020) and fewer formats available in it, both long term players of Magic (tabletop or MTGO) and newcomers to the game accepted the game as a worthy version to spend their time and money on. Being an online game, MTG Arena players can be matched from a large number of opponents. This abundance of players lets experienced players and novice players play with opponents of appropriate levels. This creates a suitable environment both for new players that want to learn and expert players that are looking for competition. The game's two of the most competed formats use the most recent cards, which are available in MTGA. Most importantly for this research paper, Magic: The Gathering has been played significantly even before this successful digital transformation, and it is played abundantly in the digital format whilst not losing blood on the tabletop side. Even though initially it was designed solely for paper and tabletop, it seems that the game now is competently translated into a digital format. This progression, is only available for observation in this transition period, is worth examining and could unveil useful insights about player experiences and how it is affected by the environment and the tools that are used to play a certain game. Table and physical factors versus computer and convenience.

To be able to examine one game's effect on its players' experience on different platforms is a valuable opportunity. That was not possible before and may not be possible in the future. Being able to examine the experience of the exact same game in two main play mediums could provide empirical results that can be benefitted from.

2.2 PLAYER

Being one of the key elements of game and play, player is a fundamental subject. However, that does not mean it is an easy one to define. To define it beforementioned concepts need to be understood comprehensively. The meaning of player will be dissolved and absorbed as the larger concepts set in. Being a player and ways to classify players will also be digested throughout this section.

2.2.1 Player Typology

Various people with ranging personalities and characteristics play games for a wide range of reasons. Play has a lot of applications in life, for instance, play is a crucial part of babies' and children's learning process (Ginsburg et al., 2007). But people from all age groups, socio-economic backgrounds, genders, cultures, nationalities, play games of diverse types. This diverse tapestry of people has different motivations to play games. Players of games also have alternating outcome expectations from the games they choose to play. A group of friends might be just looking to have some quality time with each other by socializing over a game. A professional player might be in pursuit of a prize. Infants might be simply trying to express themselves. A player of a "serious game" (i.e. a simulation application) might expect to learn or specialize in a certain skill (Michael & Chen, 2006).

Determining what type of a player a person is, since it is not always correlated with the personality, might be a challenging endeavour. There is no direct conversion from a quality of a person to a typology of that person as a player. Similar people in real life can be totally different types of players or even people may change types between games. Numerous qualitative, quantitative and psychometric research has been done on this very subject (Bartle, 1996; C. Bateman & Nacke, 2010; Busch et al., 2016; Nacke et al., 2014; Yee, 2006). Games today usually foster a wide range of play styles, frequently have a lot of levels to conquer. Hence, they are able to attract players of any preference. In life people direct their interests as they wish, and these interests are usually only explained as personal taste. In games this may not go that way, existing research reveal that people may not be choosing games according to their own aesthetic or other personal values (C. Bateman & Nacke, 2010; Nacke et al., 2014). Playing generally being more interactive than passive compared to most other life activities, games may reveal more about their audience's personalities. Previous research about emotions of play and player satisfaction modelling shows experiential differences linking to neurobiological systems (C. Bateman & Nacke, 2010).

Carl Gustav Jung reviewed psychological types and typologies throughout the history of literature. He developed his own formulations following his research. As a result, he initially made a fundamental distinction between introverted and extraverted attitudes of people (Jung, 2017). That separation represents an orientation to be objective or subjective. Continuing on, he theorized two opposing functioned sets; the rational (judging) functions which are represented by thinking and feeling, and the irrational (perceiving) functions which are represented by sensing and intuition. People can be classified as one of the four functions which is dominant, primarily, and with a second one as auxiliary (McCrae & Costa, 1989). These distinctions were made to explain all people's attitudes and typologies, not just players.

Following in his footsteps, the Myers-Briggs Type Indicator (MBTI) is a tool planned to make Jung's theory of psychological types easier to understand and make it so that it is applicable in everyday life. It is designed as a self-report study in the form of a questionnaire. This indicator's results can discriminate differences within normal, healthy people and these discrepancies can lead to a lot of misunderstandings if they are not addressed or understood comprehensively (Briggs Myers, 1998). It is one of most, if not the most, widely used tool for revealing normal personality differences today. Not restricted to game studies and player types, it has a lot of applications and is a frequently referred inter-disciplinary method.

In their article about evaluating typology psychometrically Lennart E. Nacke, Chris Bateman and Regan L. Mandryk, (2014) suggests ways to approach typology. The notion of typology initially thought it can be based around personality factors that relies on psychological types, for example MBTI. Nevertheless, these psychological types reflect as definite and solid categories of a person's qualities. A gamer or a player typology should have a more flexible way to categorize and measure players. They suggest psychological trait theory mentioning "*Trait theory is concerned with the study of personality as measured in behavior patterns, emotions, and cognitive preferences.*" Also commenting that approaches which focus on traits are usually bottom-up, but psychometric evaluations give a top-down view of player typology (Nacke et al., 2014). There are various research that focuses on how to measure typology.

Putting the games and player types in focus French sociologist Roger Caillois created a different scale in the book he wrote *Les jeux et les hommes*, 1958 (Man, Play and Games). In the search of defining play and games he created groups for players too. Dividing into four categories, Caillois defines games to be either; Agôn (competition and competitive struggle), Alea (submission to the fortunes of chance), Mimicry (simulation, role-playing, and make-believe play), or Ilinx (vertigo and physical sensations) centred (Caillois, 2001). Players are also drawn to one or some of these categories because they have an affiliation, in terms of their player types (Salen & Zimmerman, 2003).

A commonly used and referred player type model was introduced by Richard Bartle in 1996. This informal qualitative model suggests four types of players of multi-user virtual worlds (Busch et al., 2016). These four types are Achiever, Explorer, Socializer, and Killer (Bartle, 1996). His work was not completely comprehensive yet inspired many. One of the researchers who was inspired by Bartle's work is Nick Yee. A decade later, Yee, in his own research, suggested that at least three of Bartle's patterns, excluding explorer, resulted to be statistically valid. He also created his own motivations of play model for newer, more advanced games and recognized more varied patterns. Ultimately, the motivations he used in his research for his specific game genre were; Achievement, Relationship, Immersion, Escapism, and Manipulation (Yee, 2006).

For more than a decade Chris Bateman, Lennart E. Nacke together with others worked on creating a definite and universal scale for measuring player typology. DGD1 model, short for Demographic Game Design 1 model, was developed to be medium that helps structuring the design of game to be market-oriented (C. M. Bateman & Boon, 2006). This initial model was a modification of Myers-Briggs Type Indicator with some additions to make it applicable to draw information about playing games. This trial showed how MBTI inventory can work with games, playing and players. The key finding of this study was the terms "hardcore" (as in hardcore player) and "casual" were not indicate a play style, rather, players with these traits can be found in any other cluster of play style. Another interim survey was conducted to focus on this phenomenon to get more information on it named DGD1.5 (C. Bateman et al., 2011). Continuing over this accumulated knowledge a second demographic game design model has been designed and conducted; DGD2. This second attempt explored more on the hardcore-casual dimension as well as

players' preferences on single or multiplayer games along with various new skill sets (Busch et al., 2016).

Still working on the subject, in the pursuit of developing a more promising way of explaining the player typology, the same people that worked on DGDs made an out-of-their-backgrounds research on neurobiological behaviour. In this cross-disciplinary literature review some neurotransmitters and hormones that are related with the brain's reward system are examined and discussed. Brain's reactions and relations with play and games are studied. The main aim of this paper was to lay a groundwork for future studies towards gaming typology approach (C. Bateman & Nacke, 2010). After all these years of research, eventually, they were able to construct a method that they seem to be satisfied with, they named it BrainHex. BrainHex is a gamer typology survey that is based on previous, abovementioned, typology literature and with insights from neurobiological studies. Having 7 archetypes this survey is a comprehensive method for determining player typologies. The seven archetypes of players represented in the model are: Seeker, Survivor, Daredevil, Mastermind, Conqueror, Socialiser, and Achiever. To explain briefly; Seeker is a type of player who is motivated by the feeling of wonder, curiosity and interest. Survivor types like to think that they will find a way to get through alive and enjoy fear. Daredevils are there for the thrill, enjoy risk taking and rush. Masterminds wants to know what to do, enjoys problems that need strategy and efficiency. Conquerors are challenge oriented, focused on defeating, enjoys competing and struggling against impossibly difficult rivals. Socializers like to be with people they trust, communicate with them and possibly help them. Achievers enjoy believing in themselves that they can do it, they are motivated by long-term achievements (*BrainHex*, 2008; Busch et al., 2016). Yet, it is still considered as an interim model being hypothetical in nature, authors mention, a more potent future model can still be developed (Nacke et al., 2014). Nonetheless it is highly tested and the most advanced model to date for deducting a player's typology. This paper is using BrainHex archetypes in its survey to further classify its respondents. Typology needs of the research of this paper are explained more in detail in the methodology section. Even if there are many types of players, all are affected by the ability of the games presenting itself to them. An unusable game, providing a bad playing experience would be disliked by all types of players.

2.3 PLAYER EXPERIENCE

The concept of player experience has to be addressed, understood and agreed upon in order to follow through future sections. There is a vast literature around the subject and the literature is even disagreed about certain terms. The effort to understand different views would benefit when constructing a structure for a research.

2.3.1 User Experience (UX) vs Player Experience (PX)

Games are highly interrelated with emotions and they can even have the ability to affect the human psyche. Furthermore, their power to affect socialization and their ability to improve and develop character makes the player experience more comprehensive and extensive than user experience. User experience is, not always but frequently, about the interaction between a computer and a human. Player experience, especially in this day and age, has that too but also it is often about interaction with another human being, through a computer. This condition adds a lot to the equation. Moreover, it is not simply a task that is trying to be achieved through this computer interaction, there is a game being played, which is established that is a very sentimental, personal and character revealing experience. To say the least, it is easier to get carried away by a video game than a word processor interface.

In the literature, generally, a third factor's effect on player experience of games are tested within the same medium. This is a classic empirical approach of changing a single factor to extrapolate its effects on a certain equation. This research plans to implement a similar attitude with a minor but significant change. The game is exactly the same and other third-party stimuli are neglected. However, the medium that the game is played on changes. This is rendered possible by the recent developments of digitalization of physical card games. Regular players of these games play the games as a tabletop game with friends, family, acquaintances and/or in tournaments with other competitors as well as at their computers again with their friends, family or unknown competitors of various events. This is a unique petri dish to spy on.

The world is going through a digital transformation era, this provides an environment for a research study (Chapco-Wade, 2018). The difference of the player experience between two media can be obvious since there are no other factors affecting the player experience of the chosen card game. It was not possible before to make a research about the same game on different platforms, because it was not possible to transfer a complex card game exactly and completely to a digital and online environment and make it played with real people. Furthermore, this window of opportunity of making a research would be lost if newer generations of digital natives lose the meaning for tabletop games (Prensky, 2001).

A concept known as playability, which is derived from usability, is mentioned when measuring a game's design and performance. Usability is a measure of a tool's efficiency, effectiveness and satisfaction. It is a degree that is largely used by user interface and user experience researchers, scholars and designers. Sánchez et al. (2009) argues that usability is not enough to measure experience of the users of games and proposes playability as a correct way to base player experience research. In this context they define playability as: *"A set of properties that describe the Player Experience using a specific game system whose main objective is to provide enjoyment and entertainment, by being credible and satisfying, when the player plays alone or in company"* (Sánchez et al., 2009). On the other hand, playability is more currently considered as a value that measures the game rather than the player (Nacke et al., 2009). This paper draws a lot of experience from the previous playability research and its concepts yet does not use it as a dimension in the regular sense when measuring player experience.

2.3.2 Player Experience

The reason why loyal players of any game, like a certain game is not the packaging, the remarkable graphics, or simply the price of that game. Players like certain games because of the total experience the product provides to them (Lazzaro, 2008). Gaming industry knew they needed to understand player experience as well as they could, because it was evident that understanding would bring success and better sales. Gaming industry and research about the industry have had a parallel increase in recent years. User experience research frequently bled over in the area of gaming (Bernhaupt, 2010; Nacke et al., 2009; Takatalo et al., 2010). Many guidelines from user experience research are adapted to

analysis and evaluation of games as a new field of player experience (PX). Free interaction interviews, thinking aloud technique and standardized questionnaires are some of the more frequently adapted methods (Fierley & Engl, 2010; Poels, de Kort, et al., 2007). When video games are in discussion, playing a game is a way of interacting with a computer through a digital interface. This means that, whenever a researcher studies gaming experience they need to take into consideration both human-computer interaction and gameplay.

When video games are put in the focus they are separated from the other kinds of software, in terms of design considerations and usability issues. The definition of usability in ISO 9241-11 has three measures; effectiveness, efficiency and satisfaction. But in the instance of usability in video games satisfaction is the prime consideration, the other two are of secondary importance. Software other than video games are purchased to fulfil certain functions, so effectiveness and efficiency are highly valuable. A video game, on the other hand, is purchased willingly solely for its entertainment value. Since a game as a product needs to sell, it has to satisfy the need of entertainment, it has to be fun to play (Federoff, 2002). Understanding what creates satisfaction for the users of the game, namely players, is vital to create and design successful games that sell. The difference between games and other software is a key element in this lesson to be learned. Player experience research plays an important role right at these points.

A favourable way to obtain player experience data might be integration of gameplay measurements and classical attitudinal data. Gameplay metrics are useful in the way that they can be collected in large amounts and by doing so they can create objective results. Contrastingly, feedback from players is naturally subjective since it reflects personal preferences. Combining these two ways of data collection, it is possible to figure out the correlation between game design elements and the players experience (Nacke et al., 2009).

According to Lennart Erik Nacke's (2009) work, playability is a term that is directed towards games, yet, player experience is a concept that can be answered by directing the issue towards players. It is also argued that playability research focuses on evaluating games, whereas research on player experience intends to improve the gaming experience.

A well-adjusted playability is expected from a game in order to examine its player experience (Nacke et al., 2009).

2.3.3 Elements of Player Experience

A myriad of factors affect player's experience. The literature about game and play has studied a wide range of subjects (Salen & Zimmerman, 2003). Understanding the theoretical background of this academic field and specifying the terminology is essential. Eventually, it is also important to relate with this paper's purposes. Furthermore, establishing the appropriate literature and how to interpret those research to make use of them for this study is crucial.

The Space That the Game Happens: *The Magic Circle*

A game usually starts before playing starts, the rules are defined or known, opposing sides are ready, and the space where the game will take place is determined and prepared. The arrangement of the pieces of a backgammon board, given as an example in *Rules of Play*, when used as a decorative item on a coffee table, have no to little importance, but if a game is played on the board the exact spots where the pieces are put is exceedingly important. Preparing a backgammon board to play is not "playing" but in a sense the game has already started. The change that starts with the intention of play and converts some pieces of wood into a game is magical (Salen & Zimmerman, 2003). And appropriately the space that the game occurs is commonly known by ludology scholars as the magic circle. In this space people have the intent to play and rules of the world change, wood pieces are pawns, colourful papers are money, cardboards are spells, a drawn line on a pavement is a border not to be breached. In the physical face-to-face world, when a person plays a game, they are only linked to the world with the understanding that each party understands that there are some rules to be followed. In a computer game however, this notion of rules that must be followed is already present, predefined by codes and game engines, available moves and actions cannot be done even left unchecked (Linser et al., 2008). Being in the magic circle means both being in the designated space of the game and having a state of mind towards playing. Stepping into "the magic circle" communicates that real-world rules are abandoned and people that are in the circle are in a game.

Just being in that zone means that what is happening is play. The term in a game concept is coined by Johan H. Huizinga in his seminal book Homo Ludens (1980), he mentions the magic circle being a "*temporary world within the ordinary world, dedicated to the performance of an act apart*" (Huizinga, 1980). In the digital world the idea still works. The rules are not simply understood by people and acted upon but are enforced by the media. But as the circle is penetrated the game has started. Ultimately, the spatial requirement can magically act as a defining factor for people to understand that a game is being played. How the magic circle is created, and how people get into the game mindset can be an effect on players' playing experiences. Different spaces for a game may result in different attitudes towards a game.

Interactivity, Competition and Audience

After a comprehensive literature review on gratification, Sherry et al. (2006) uses Arousal, Challenge, Competition, Diversion, Fantasy, and Social Interaction as dominant dimensions as motivations for video game gameplay. Except for Competition and Social Interaction, the other four dimensions do not work greatly outside of action and scenery packed video games and do not translate well for this study's subject; card games. In the article by Sherry et al. the term 'Arousal' indicates the emotional stimulation with high-quality graphics, Challenge is about beating the puzzles of the game, Diversion is focused on action video games, and Fantasy is about simulating real life experiences in a video game platform (Sherry et al., 2006). The case study of this study, being a card game, does not house lifelike graphics, does not have pre-designed puzzles, is not an action game that requires physical dexterity, nor is a simulation of a kind. On the other hand, Competition and Social Interaction are applicable and useful dimensions for this study, because the game in the focus is played with other humans. Competition, the article mentions, is one of the most commonly referred motivations for playing video games. It is about other people who are in the same circumstances with you and players trying to surpass each other. Since the game this study investigates is exclusively played against a human opponent, and there are no other puzzles or side-quests against artificial intelligence included, Competition is one of the decided dimensions to adopt.

Many of Sherry et al. 's (2006) research's respondents revealed that Social Interaction is a major reason for them to start playing and keep playing video games. Social Interaction also used by other researchers as a dimension to measure player experience (Rogers, 2017) and as Social Presence by (IJsselsteijn, Poels, et al., 2008). This study's preliminary research shows sociality is an important part of people learning about the game, and for especially in the tabletop version keep playing the game. Magic: The Gathering's being always played with people and its openness for audiences empowers this dimension too. It is important not to disregard the online socialization; watching twitch streams, to be able to compete in online tournaments, sharing videos of your gameplays and commenting on all of this content is very real socialization done by especially but not exclusively the new wave of players.

Fun in Games

Fun is a basic element in games, the two terms are even used synonymously from time to time. Fun is a wide concept and can be found in many aspects of play and game. When dived into academia, fun is a frequently used component of games (Federoff, 2002; Lazzaro, 2004; Nacke, 2009; Poels, de Kort, et al., 2007). In her paper Why We Play Games, Nicole Lazzaro divides play motivation into four categories: easy fun (curiosity, wonder, enthusiasm), hard fun (also known as serious fun) (purposeful challenges and puzzles), altered states (emotions and perception) and the people factor (competing and cooperating with others and spectacle) (Lazzaro, 2004). Two of the four categories, she calls "Four Keys", are necessarily named fun, and Lazzaro claims best selling games fall into at least three of these four categories. Which means "fun" is inevitable. Easy fun is about the attention of the player. Players feel a sense of curiosity, awe and mystery, they want to explore new worlds, they wish to see what happens in the story. Highly related to this research, players even recorded to say "Liking the sound of cards shuffling" in Lazzaro's research. On the other hand, Hard fun, in the referred article, is about challenges and the enjoyment that comes from overcoming them. Players that experience hard fun are in pursuit of a predetermined goal, they enjoy testing their skills using the game as a medium, they are in search of challenges that require strategy rather than luck (Lazzaro, 2004). Enjoyment also appears in the literature, frequently hand in hand with fun, and usually a narrowed down version of fun. Since this thesis uses a very complex, deep in

flavour and structurally diverse game as its subject, keeping this dimension is sensible in order not to leave any possible aspect of fun outside. For instance, some Magic: The Gathering cards have "flavor text" on them, these texts have nothing to do with the operation of the game, they are there to provide flavour, jokes, depth and/or insights to a story. There are also cards officially printed to be funny and mocking, these parody cards have their own sets and card styles that are easily distinguishable and are not legal in tournament play. These are some examples of fun that can be distilled from the game but are not directly about gameplay.

Being There with the Flow

One of the most influential theories for the concepts of creative action and fun is by Hungarian-American psychologist Mihaly Csikszentmihalyi; the flow theory. First mentioned, flow was not entirely about games, it is a larger concept that is applicable for a wide range of human condition. *"During flow, attention is freely invested to achieve a person's goals because there is no disorder to strengthen out or no threat for the self to defend against. When a person can organize his or her consciousness so as to experience flow as often as possible, the quality of life starts to improve."* (Cziksentmihalyi, 1990). When adapted to games, flow is a state of a player playing a game. Flow state is a balanced state of going through the game, it is about the perceived level of challenge of the player (Ermi & Mäyrä, 2005). It is a state of being neither too excited, anxious or nervous nor getting bored with the game (Nacke & Lindley, 2010). During flow, players are focused to, invested and involved with the game. Not getting distracted out of the game is important. Cziksentmihalyi's specifications for flow includes loss of self-consciousness and control in self-sufficient activity among others. Other specifications are mostly about how the flow can be adapted by gameplay (Nacke & Lindley, 2010). Items like clear goals, feeling of enjoyment, explicit feedback, are genetic codes of any game.

To get back to the two that are used in this research, flow is defined by two sub-dimensions; loss of self-consciousness is adapted as immersion and control in self-sufficient activity is adapted as ease of use. Immersion as a dimension to define player experience is abundantly used in the literature (IJsselsteijn, Poels, et al., 2008; Jennett et al., 2008; Rigby & Ryan, 2007). As it is used widely there is no agreed upon, clear meaning for

immersion. As with “play” and “game” when “immersion” is uttered an idea comes to mind but claiming a sharp definition seems tricky. Cognitive psychology gives a wider definition of immersion suggesting that immersion is the failure of perception of the medium that is being used to communicate (Lombard et al., 2000). In ludology narrative however, sometimes referred to as “Presence”, “Immersion” means that players wholeheartedly feel that they are in the game. This immersed state is not just about they are not distracted, but also means the player is emotionally invested and the game world has a grasp of them (Rigby & Ryan, 2007). As for “Ease of Use”, it is all in line with both the wider idea of flow and immersion. Not having distractions is important for flow and immersion and ease of use provides that. Ease of Use, Pagulayan et al. (2002) describes, creates a smooth playing experience. If the player’s intentions are not translated smoothly to the game, frustration will start to show its ugly head (Pagulayan et al., 2002). To be free of distractions and have a gaming experience that pulls a person in and makes them stay there goes together with ease of use. Only if a player is comfortable with the game elements, be it on a tabletop or a computer, that player would be able to keep their focus on the game. Ease of use also refers to convenience, if it is easier to play the game at any moment players may be more likely to experience the game. If a navigation is not done without hesitation it is highly possible to get out of the world created by the game.

That Was Great, Let’s Do It Again.

As mentioned before Satisfaction is one of the three classic aspects of usability, and it is the best one that translates into playability. Being satisfied with an experience is one of the main reasons to revisit the satisfying activity (Webster & Sundaram, 2009). It is useful across diverse game types and an outcome of a psychological process. Satisfaction can be measured objectively, statistically significant when crossed with enjoyment and immersion. Furthermore, it’s relation with commercial outcomes such as perceived value, players given rating to the game and player’s intent to recommend the game (Rigby & Ryan, 2007). Since satisfaction is an outcome of a successful experience, what affects a game has on the players are defining measures for satisfaction. Positive and Negative Affects of games on playing experience are researched by (IJsselsteijn, Van Den Hoogen, et al., 2008). How the player is affected by the game is crucial, whether the effect is positive or negative the importance of it does not budge. One of the dimensions to assess

Satisfaction in this research is Affect. With what kind of an impact does the game leave on the player considered as a definitive variable.

2.4 SUBJECT OF THE STUDY

This study puts a specific game in its focus to investigate how player experience changes as the media it is played on changes. The game is selected because of its big and loyal player base, established place within its category, complex gameplay and experience and current prominent status in both platforms. Able to find an ideal specimen, it is expected that the results will be significant using this proper and valuable subject. This section elaborates on how and why the selected subject is appropriate for this study.

2.4.1 Development of Collectible Card Games

This study is focusing on the first and arguably the biggest collectible card game; "Magic: The Gathering". There have been many collectible card games. Following Magic (patented by Wizards of the Coast) other companies created similar, usually much simpler games. Pokémon is one of the most successful examples among them. World-famous and the highest-grossing media franchise of the world; Nintendo's Pokémon has a collectible card game too (Jones, 2019). First published in late 1996, and the USA publication was initially handled by Wizards of the Coast. In 2003 The Pokémon Company took over the publishing of the card game (Kaufeld & Smith, 2006). Another great contender is the Yu-Gi-Oh! franchise. Owned, designed and published by Konami, this game is largely fuelled by its Anime series that can be watched throughout the world. Both of these games have less than half the card variety of Magic: The Gathering. However, they have tripled the revenue of Magic by 2018, even though Magic is played more by the number of sanctioned games and players. But numbers show that Magic is gaining on the gap.

Hearthstone, often compared with Magic: The Gathering, is an exclusively digital, strategy collectible card game. It has a lot of connections to Magic, they both use "mana" as a resource (although differently), they feature similar characters and monsters, and their gameplay and deck building systems have similarities too. Released in 2014, five years earlier than MTG Arena, this free to play game became very successful (Minotti, 2017).

An already big and experienced company Blizzard Entertainment published the game, obviously they did a good job, and Hearthstone added a considerable income to the company. According to Blizzard, over 100 million players were playing Hearthstone by the end of 2018 (Hearthstone, 2018). This support from both the company and players' side rendered the game as an important contender in the esports scene and had many tournaments with big cash prizes by not only Blizzard but various companies. Being only on digital medium helped the game to create some in-game mechanics that would not be possible on a tabletop counterpart. They were able to fix the abilities of the specific cards as time proved them too powerful or too weak. There are cards that create certain types of cards and shuffle them into the deck, or there are cards that summons cards that players don't even own. Which all came with their own particular problems and choices.

2.4.2 Significance of Magic: The Gathering

Magic: The Gathering (MTG) was created in 1993 by Richard Garfield Ph.D. He was a doctoral student at that time and suspended his education to be able to complete the game (Kaufeld & Smith, 2006). He wanted to create a game that is bigger than the box. A strategy game, like chess, but each player would be able to bring their own pieces to the table and play the same game with the pieces they brought (Rosewater, 2018). Magic: The Gathering is exactly that. The first set was released on August 5, 1993 and very quickly ran out. The second set, a re-printing of the first edition (with a few changes), printed in much larger quantities to be able supply a longer time, but it too ran out much quicker than anticipated. This second set was available from mid-October until mid-December 1993 (D'Angelo, 1999). This success was enough for the game's creator to work on it for many years to come. The game had its ups and downs but continued to progress from the beginning without a break.

The game is categorised as a strategy based collectible card game. It initially played as a tabletop game. It is the first of its kind and the biggest one. It is played at least and most frequently with two players, along with multiplayer options. Game has a wide selection of cards (20.516 cards with different specifications by June 2020) which a player can compile their own deck of cards and play. A card has many characteristics and different cards have many different mechanisms and the game has its own way of progressing.

There are also various ways to play, for example there is one format called “Limited”. Draft and Sealed are examples of limited play. In limited play players get random cards from a small pile of possible cards (hence the name limited) that they need to read, understand and learn, then create a deck out of them and play with other players that have gone through the same process. Every other card has different capabilities, players need to strategize and create a deck of cards that can work together and play them wisely and correctly in order to achieve their goals. The game is extensively loved and there are 35 millions players and friend groups in 70 countries and it is printed in eleven languages (Steefel, 2017; Wizards of the Coast, 2018). With that there are also a lot of variations of how to play the game that are created by the fans and some of them even adopted by Wizards of the Coast (WotC) the company (owned by Hasbro since 1999) that produces and publishes Magic: The Gathering. Its nature is to be played with friends and can be considered as a social game. This used to mean face-to-face but, as the game itself, that is subject to change. Social does not mean exclusively face-to-face anymore, and cards do not have to be made of paper.

In 2019, a group of researchers proved that Magic: The Gathering is so complex, versatile and resourceful; the game and cards can be repurposed to create a computer (Churchill et al., 2019). This study implies, mathematically, Magic is as complex as a game can be. There cannot be any algorithm to calculate the winner. Defies one of the assumptions of game theory; any game must be computable (*“Magic: The Gathering” Is Officially the World’s Most Complex Game*, 2019). Something being Turing complete or computationally universal means it can act like a Turing machine, which is a machine that can solve mathematical functions and decide formal languages. A Turing complete thing is theoretically able to do whatever a computer can do, such as calculations and store data in memory. Most of the programming languages are Turing complete too. A constructed deck of Magic cards, when drawn a specific hand of 7 cards, can compute, within the rules of the game. A simple computer. To date, Magic is the only game proven to be a “Turing complete” offline game (Hill, 2019).

There has been an online version open to the public since 2002. Magic: The Gathering Online (MTGO) is a capable game that lets players play Magic in a digital environment. It has many popular formats (different ways to play) of the paper Magic has and has some

advantages to it. Rules are clearer sometimes; players cannot make plays the wrong way or at the wrong time and cheating is virtually eliminated. There is a basic chat option, and the game displays a log whatever happened throughout the match. But most importantly players can always find somebody to play with. In a 2007 interview, Wizards of the Coast Brand Manager Worth Wollpert said that (that time) MTGO has the %30 to %40 of the overall Magic business (Villoria, 2007). But this may have increased or decreased as time has gone by. MTGO has its own sanctioned tournaments and prizes and continues to be played.

Most of these are also true for the newest digital platform of Magic; Magic: The Gathering Arena (MTGA, MTG Arena or Arena for short). MTG Arena was officially released on 26 September 2019 after a year-long public Beta phase. It quickly became a fan favourite. MTGO has almost all the cards but is an old program and very clunky, the interface is old-fashioned and not very user-friendly. MTG Arena on the other hand has adopted a contemporary style of interface design and much more considerate of user experience. Even if the latter program does not have as many cards and formats as its predecessor, its numbers are quickly growing. It was a Windows only game at first and only recently has been able to be played in other operating systems and more are planned.

In MTG Arena there are nine languages available to play the game in, and Chinese is on the way. All the menu items and cards are in the preferred language, opponent's cards too, unlike tabletop, even if they use the game in another language. MTG Arena does not yet support chatting with any opponent. It only has a very basic way of communicating, besides moves of playing the game. This basic way is called "emotes". These are predetermined phrases that players can click, and the words will be displayed on the screen. These phrases are; "Hello!", "Nice!", "Your Go.", "Thinking…", "Oops." and "Good Game.". There is also "Sorry!" and "Thanks!", but they are only available for a short period of time as a response to "Oops!" and "Nice!" respectively. Players also have the option to "mute" their opponents to stop these words appearing on the opponent's side.

Players can add friends and play matches with them by sending challenges. It is also possible to chat with friends, but this feature is feasible before and after the matches but not during. It is technically possible to chat during a match, but the game has time limits

that prevent players from staying idle for a long time or they lose. Moreover, the chat area does not stay open for easy access, as players go back to interacting with the cards, chat disappears. Another interaction missing in MTG Arena, that the other two big versions have, is multiplayer games. It is not possible to play multiplayer games in MTG Arena, and it is always one player versus another one (1v1). Nonetheless, currently, for other ways to play MTG Arena is a frequently resorted platform to play Magic. The game is frequently updated with new features and it is unknown what the future updates might bring. This well-received version of the game also led the Magic into the esports environment which was lacking and needed. Because it is visually much more attractive than the previous digital version and much easier to broadcast than the tabletop version. The other multiplatform CCGs are not very prevalent in the esports arena. Which makes Magic: The Gathering Arena a worthy contender in the esports scene. In these esports events, the company gave prizes accumulating up to a million dollars on several tournaments in 2019.

3 METHODOLOGY

This section is about the methodology of the research for this thesis. Following questions are answered. How has the research initially designed? How a model for measuring player experience is constructed? How has the questionnaire been created and distributed? How all the data collected was analysed?

3.1 RESEARCH DESIGN

In order to get a collective data that is scientifically consistent, especially in this time of self-quarantine of COVID – 19 pandemic of 2020 spring, an online questionnaire shows great potential, because people have relatively more time to spend at home and are frequently online. An online questionnaire has better results than other tested techniques that are converted from user experience research to player experience (Fierley & Engl, 2010). Online questionnaire of this research reached 697 people total after elimination. 642 of them played Magic: The Gathering on the table top and 542 of them played Magic: The Gathering Arena which makes the results to project a 99% (confidence level) accuracy towards communal consciousness with around 5% margin of error (Malhotra, 2012).

Surveys have the flexibility of being exploratory and confirmatory. In its exploratory mode researcher patterns and relationships can be revealed. When they are confirmatory a model, basic relationship or a hypothesis can be tested. As is the case in this research, surveys are frequently used to measure predetermined characteristics that appear with a consistent rate, or to see if some of the factors have gathered together (Cohen et al., 2007). Questionnaires have the ability to supply answers to What, Where, When and How questions. Although, "Why" is not as easily answered by surveys (Bell, 2010). To be able to construct and design a survey that asks the right questions to get necessary answers, a sample audience of a few people is determined to conduct online face-to-face interviews. Taking advantage of the subjective nature of face-to-face interviews *why* players have certain opinions and values towards the game are collected and then analysed. Methods like Think Aloud or Free Interaction Interviews are dismissed because they proved to be distracting from the very playing experience that the interview tries to investigate (Fierley & Engl, 2010). In order to conduct successful interviews a field guide was designed by

the author of this study. The guide is constructed and refined considering the expected outcomes and research questions. After some back and forth and getting the views of some Magic playing individuals the field guide for the online interviews matured and became foolproof. Said face-to-face interviews are conducted right after players' playing experiences in order to get the freshest, most correct and in depth information (Fierley & Engl, 2010). Face-to-face interviews, being qualitative in nature, have helped gaining insights from subjects, and these insights have helped the designing process of the online survey questions and can direct the assumptions and hypotheses of this study. Accumulated knowledge that the interviews provided paved a way for a quantitative method that gathers information from a copious number of individuals which is expected to produce reliable and statistically significant results (Figure 3.1).

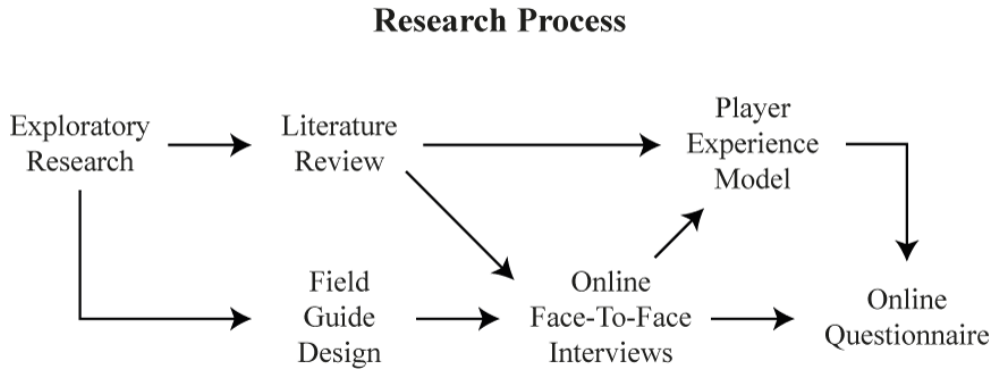

Figure 3.1: The feeding steps of research process

3.1.1 Pilot interviews

Face-to-face interviews with five people are conducted to test researched values and collect further insight about players of the game, from players of the game. Questions about the assumptions and hypothesis are directed to interviewees without interruptions, prejudice or guidance. Audios of the interviews have been recorded to be investigated in detail, with participants' permissions. Attitudes and behaviours of real people towards the game expected to be collected through these online face-to-face interviews.

These five people selected from various Magic playing habits. There are diverse social media groups that specialise on different aspects of Magic: The Gathering. Participants are reached through a range of these specialised communities. Social media tools such as Facebook groups, WhatsApp groups are used to reach candidates. The candidates are specifically told to play at least one game and then to attend the interview, and appointments have been made accordingly.

Questions about potential variables and possible outcomes are directed to the players in order to get insights about various Magic players' base demographics, behaviours and attitudes. Their age, experience with Magic and frequency of play are asked to get a better idea of "a regular Magic player" and main questionnaire elimination questions are developed accordingly.

During these interviews it became apparent that players of the game are very determined about their choice of platform. They also usually care strongly about the format they play. Additionally, it is seen that they identify themselves as casual, competitive and/or collector players and they frequently have a clear opinion about if they are casual, competitive and/or collector players. Results of these interviews revealed that players have various expectations from the game that were not initially foreseen. Interviewed people talked about seeing new art pieces when they were asked about expectations. One person described how they were excited to see new and breath-taking art on the cards. Another one talked about their expectations of learning, learning new words, learning new decks and synergies, learning to be a better player and so on. Some players stated that they were expecting to test if they are able to play without any mistakes, making the optimal plays with their position in the game. Handful of them talked about how they were looking for social interaction when they are playing Magic.

Interviewees also add to the discussion of the difference of playing experience between tabletop and online. Few people that are contacted mentioned how some of the physical undertakings are solved in the online platform, such as shuffling the deck and figuring out the randomizations such as coin flips, searching for certain cards, or who starts first. It is easier to go through the game in a computer environment. Further in the computer-

ized play, some of the game mechanic mistakes are averted. Frequently, there are mandatory moves that the game enforces people to make, but sometimes those moves might get neglected or forgotten on the physical play. Moreover, interviewees mentioned that it is easier to bluff while playing Magic in person. There are other psychological elements too they thought worth mentioning such as reading the mimics of the opponents and talking with them to distract them from the correct line of play. Most of the interviewees emphasized how having the cards in hand, the actual physical touch is important and satisfying for them when they play paper magic. They said it is lacking in computer play. Social interaction is another big point that is frequently mentioned in the scope of these conducted interviews.

3.1.2 MTG Player Experience Research Theoretical Model

Theoretical model consisting of three main dimensions and seven sub-dimensions is developed to compare game playing experiences between digital and physical media. This created a favourable environment for comparative analysis of the questionnaire data, because quantitative data for each sub-dimension is also accumulated for the main dimensions. Furthermore, using such dimensions make it possible to cross analyse the results. All dimensions found out to be working beautifully with the game Magic: The Gathering.

To integrate, arrange and analyse the experience aspects mentioned in the appropriate section above, following three classification dimensions are proposed: Motivation, Flow and Satisfaction (Figure 3.2)

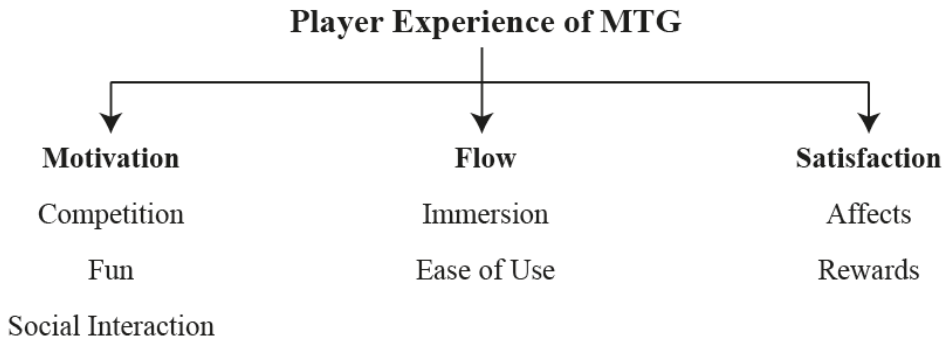

Figure 3.2: Visual model of the research.

Motivation

Why do people play the game, in one platform or in the other? The intention of a person to play a game can root from various incentives. What makes people choose a game or a platform to play a certain game is an important factor worth evaluation. The main branch about the orientation of MTG players towards a platform consists of three sub-dimensions. Pilot interviews showed that there are three main expectations from the game. To have competitive play, to have fun and to have social interaction. Being frequently referred and used in the literature, these dimensions are adapted and used in the research of this study. The social interaction is much harder – but not impossible – to achieve in the digital equivalent but very true for the tabletop. Learning about players motivations is expected to produce insights about their decisions towards a certain game or a platform to play a game in.

Flow

How do people play the game, in one platform or in the other? The state of playing a game has unique qualities that are ready to be studied. For this study, with the game at hand, the concept of flow is used and two sub-dimensions for it are constructed. Flow refers to being in a playing state of mind, immersion is used as a sub-dimension which is a more focused behaviour about getting lost within the magic circle of the game (Jennett et al., 2008). Secondly, in order to keep the flow state, ease of use is measured as a sub-dimension. As the game is easier and more intuitive to go through, it is more possible for players

to experience the game in a deeper state. The game being convenient to play makes it more likely to be played too. Distractions within and hardships towards a platform are effective of the experience of that platform. If the player struggles and cannot intuitively or fluently convert their intentions to game moves the player gets torn out of the game (Pagulayan et al., 2002). The way players go through a game is highly reflective of their experience about it.

Satisfaction

What do people get from the game, when they play the game in one platform or in the other? Literature review section of this thesis showed another explanation for people to prefer one platform or the other might be about the satisfaction they get (Webster & Sundaram, 2009). The satisfactions one might get from a game are multifaceted; getting a prize for being successful in a game, overcoming an obstacle, learning something, or even simply feeling good can be some of the affects that satisfies a player. Having a positive feeling towards a game can increase satisfaction.

Satisfaction in this thesis model has two components. The first sub-dimension is Affect (as in positive or negative affect), which also has its place in the literature (IJsselsteijn, Van Den Hoogen, et al., 2008). A game's affect to a player can be positive or negative. Affect of a game refers to the influence that game leaves on its player. This influence is recognized by the player and has an effect on player's behaviour towards the game (Poels, De Kort, et al., 2007).

Finally, a new dimension is constructed. Findings from the and with the accumulated data gathered through online face-to-face interviews with players of Magic: The Gathering showed that Reward is a complementary sub-dimension for satisfaction. Rewards out of a game of Magic can also be various. Interviews made before developing a theoretical model or a questionnaire showed that there are multiple benefits for players in playing Magic. Learning as a gain was mentioned by multiple people. Learning about the game, learning a new interaction between cards, learning about a potential deck, learning about competitive gameplays, new arts or even some new words is mentioned as what people enjoy in a Magic game. Feeling of being rewarded also comes from the idea of collection. In game prizes such as cards, dice, card styles and so on are also effective in that sense.

Since the game is a collectible card game, accumulating cards is a naturally occurring phenomenon as players play the game. Having new cards added to a player's virtual or physical collection is a reason to continue to play the game. These insights of learning and prizes being a factor of satisfaction are integrated as questions in the final questionnaire.

3.1.3 Method and the Design for Researching Playing Experience

Researching the player experience, this study aimed to initially get results for general demographic status and typologies of the players. Continuing on, mainly, aimed to collect information about players' tabletop experience and digital experience separately. Expecting to collect data from a large number of people that can represent the whole of Magic players, this study was well-positioned to use an online questionnaire.

Questionnaire method applied to gather information in four different contexts; the demographics of the players, typology of the players, playing experience of tabletop game platform for Magic: The Gathering and lastly, playing experience of digital platform; Magic: The Gathering Arena. Questionnaire designed in a way to investigate the two gaming platforms' effect on player experience separately.

As mentioned previously in this thesis we are focusing on the game Magic: The Gathering. In questions related to the tabletop version of the game "Paper Magic" term is used due to it being a more common term among players of the game, rather than the term "tabletop Magic" which is a more technical term and preferred in this paper.

Google Forms is used to collect data from the respondents, and the data collected was anonymous. The questionnaire starts with a basic explanation of its purposes and aims, how long does it take to complete and in what circumstances and the scope the data gathered will be used. Even if the link to the questionnaire is posted in relevant social media groups, the very first elimination question asked if the respondent play the game Magic: The Gathering. Oddly enough 12 people are eliminated indicating that they did not play the game. The entirety of the questionnaire can be found in the Appendix A.

In the demographics section mainly eliminating questions were asked for the elimination of the unsuitable respondents. Age, experience, play frequency were asked in this first part for elimination. Additionally, answers to gender, platform preference and experience are collected for insight.

As for the typology, respondents self-assigned and globally accepted Magic: The Gathering player types were asked before BrainHex class questions were presented (*BrainHex*, 2008). Respondents expected to indicate all of the collector, competitive and casual player types of Magic, that they consider themselves as. These three types are known and also tested in online face-to-face interviews to be common ways to refer to Magic players. Following that, a question with a statement for each of the BrainHex archetypes demanded to put those in order of representation of themselves. Every archetype's statement is constructed from the ground up to fit within the boundaries of Magic: The Gathering.

Before the experience part of the questionnaire respondents are asked if they played Magic: The Gathering specifically on the tabletop since a player of Magic might have been playing it on another platform that is not taken into consideration in this research. Continuing on in these experience sections initially a format preferences question was directed. Both for getting more insight and creating a smoother transaction from the previous section. After answering about format preferences, respondents have been asked about dimensions and sub-dimensions mentioned in the model of the study. One control question is asked for every main dimension which handles the subject in a more macro scale. Then three separate questions were asked for each sub-dimension. Except the first question all the other questions designed to be answered in a 5-point Likert scale, ranging from strongly disagree to strongly agree. As all the answers for the dimensions are collected for paper playing experience, respondents are prompted with a question that asks if they play MTG Arena specifically, for the previously stated reason. After that, as it was for the paper experience, the format preference is asked. That continued with equivalent questions about the constructed dimensions and sub-dimensions. As these were answered, the questionnaire is completed and a thank you message is prompted.

3.1.4 Respondent Recruitment Process

Niche subjects such as the game that is this thesis's subject are frequent themes for social media groups. People of specific hobbies and taste commonly get together in such groups and discuss and converse about their hobbies. It might not always be easy to find people with the same enthusiasm towards a game within a person's physical social circle. Social media fills exactly this gap. Consequently, Magic: The Gathering players of all kinds can be found in branching social media groups. Questionnaire has been distributed via various social media channels, including; Facebook, WhatsApp, Twitter, Twitch, Reddit and Discord. Additionally, from an exploratory research about Magic players, they were expected to be eager to talk and answer questions about Magic: The Gathering.

Initially two İstanbul based Magic WhatsApp groups are messaged with the link and an explanation of the research and kindly asking if they could fill the form (Appendix B). One of these groups is for the city's biggest local game store's communication and have 143 participants. The other WhatsApp group is initially created to follow a certain event of the game called Friday Night Magic. People ask if their friends are coming to the event, if they would be late, if anyone can lend or trade certain cards etcetera, this group has 33 participants. This initial local effort generated about 40 responses.

Subsequently, several Facebook groups about Magic: The Gathering have been targeted to collect respondents. Some of these groups are just about Magic and open to any subject of discussion, some are focused on a specific format of Magic, and some are specialized in a platform to play the game on. Most active and large communities with focuses on different aspects of the game are posted with a link to the questionnaire including an explanation about the research. Most interaction came from a group specific to the most played format of the game, called "MTG EDH COMMANDER". The group has 21.9 thousand members and produced 63 comments and 20 reactions. The second most interacted Facebook Group is called "Magic Arena MTG". This platform focused group has 34 thousand members and the original post and the resharing of the same post generated a total number of 30 comments and 11 reactions. Four other Facebook groups have been posted with the questionnaire. In total six Facebook groups the questionnaire attracted considerable attention. People commented on the post asking about the thesis, wanted

shareable links, said that they liked or disliked the questionnaire, wished good luck, made deductions about their own performances, tried to be helpful, considerate and thoughtful. These comments might mean Magic players are excited to see there are academic research about the game they enjoy. Likewise, perhaps Magic players are happy to give their own opinions about the game and feel that they are valuable individuals as players of the game.

Continuing the distribution process, a handful of MTG content creators were reached via, twitter, twitch, discord and direct e-mails. In twitch it is usually forbidden to post links to stream chat, when tried, one streamer (Twitch handle DEATHSIE) said to post it on discord then he would evaluate and post it on stream. The next time that streamer was online he has been asked if it was ok to share, then he gave permission to share and the link to the questionnaire has been shared on the chat and live audience from that streamer's followers have responded. None of the other content creators responded to the call except one. The sponsored, British, productive and versatile MTG content creator; Vincent Chandler, better known as PleasantKenobi. He is mostly known for his commenting and gameplay videos about MTG. He is interested in every aspect of MTG and plays in a very wide range of formats and platforms (Bermudez, 2019). He has 64.7 thousand subscribers on YouTube and 17.6 thousand followers on twitter. As he sent a tweet with the link of the questionnaire, the responses almost doubled in quantity in 12 hours. The tweet is retweeted by 20 people, got 85 likes and 18 replies all helps it to be seen by more people quickly.

The questionnaire was open to the public for responses between 18 May 2020 - 4 June 2020 and completed by 856 people, 697 of them were suitable for providing data about experience, meeting this research's criteria.

3.2 ANALYSIS

Results of the questionnaire are analysed in three parts. First part of the analysis is about the overall demographic characteristics of the players and the player typology. Second part of the data analysis is focusing on the playing experience of the *Magic: The Gathering* played on the tabletop. The last analysis focused on the playing experience of the digital version of the game *Magic: The Gathering Arena*.

In the introductory demographics section of the questionnaire information about respondents' age distribution, experience with the game, playing frequency, platform preferences are gathered. The results from the first section assumed to be reflecting a persona for Magic: The Gathering players, keeping in mind the data is restricted to the people who completed the questionnaire.

Two questions about player typology were directed to the respondents. First one was directly asking about their own observation about their typology using the game's terminology. Second question had an indirect technique, asking about players' attitudes towards the game. Multiple choice statements for this question are designed to reflect BrainHex archetypes with scenarios that are relatable to the game at hand. Answers are interpreted to create a profile for respondents BrainHex typologies (Nacke et al., 2014).

Within this initial cluster of demographics and typology some people are eliminated due to a screening process as it is mentioned in the research questions section. After the elimination some of the core set of people played Magic only on the tabletop, some played it only on the digital version MTG Arena and most of them played it on both platforms.

The player experience parts have been briefly investigated individually in order to paint a picture for each platform separately. For the player experience parts of the questionnaire similar questions were directed to respondents about their experience on these two platforms (see Appendix A). Answers to these equivalent questions are compared to discuss the differences between two playing experiences. Asking about very similar concepts these mirrored questions are expected to give genuine and significant results to be discussed.

Continuing on, some key elements like age, self-assigned Magic player typology and platform preferences have been cross referenced for a more detailed analysis. Taking advantage of the large data gathered by the quantitative method, very specific and detailed information are revealed through analysis.

4 FINDINGS

The questionnaire resulted in a total number of 856 respondents. 159 people are eliminated because of their age, lack of experience or playing frequency. All the data below are of the accepted 697 people. Largest percent of them were born between 1993-1997 with 27.4% following them 1988-1992 with 25.3% and 1998-2002 with 19.5% (Figure 4.1).

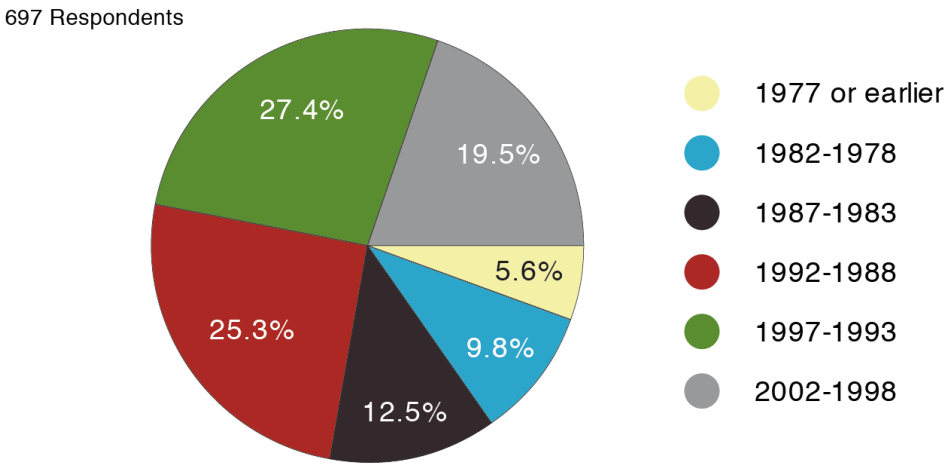

Figure 4.1: Age distribution of the respondents after elimination.

Almost all of the respondents have some experience with tabletop Magic (97.6%), many of them, at some point, played MTG Arena too (90.1%) (Figure 4.2).

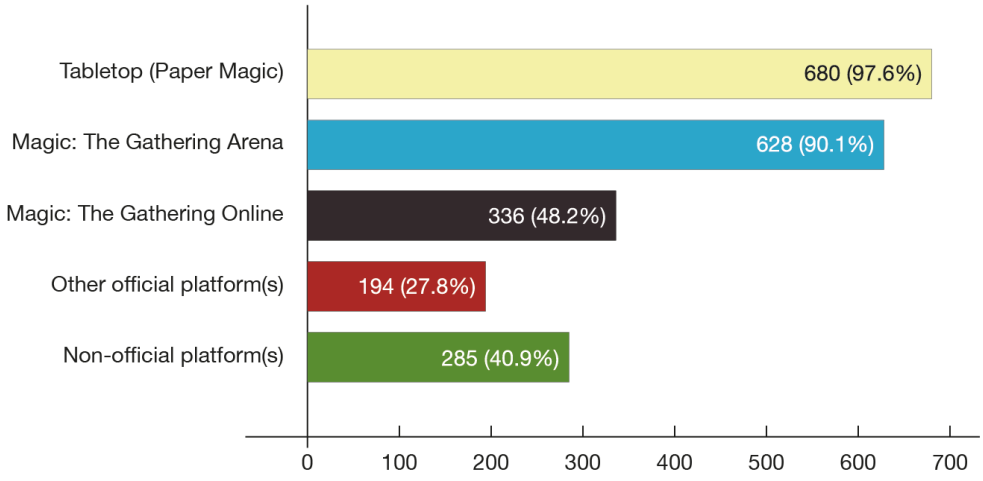

Figure 4.2: Responses to the question: *In which of the following platforms have you ever played Magic: The Gathering? (Select as many as apply)*

A vast majority of the players prefer tabletop as their go-to platform for playing magic with 84.9% and the second is MTG Arena with 14.1%.Keeping in mind that MTG Arena is around for about 3 years, a huge share of the players played Magic: The Gathering for more that 4 years at 79.6%. Respondents played Magic during most of the last 12 months; 70.2% played more than 9 months, and 11.5% played for 6, 7 or 8 months. More than half of the respondents indicated they normally played Magic 2 to 8 hours in a week with 56.8% and following that with 30.7% 8 to 15 hours was the second most indicated period. Players indicated what kind of Magic players they think of themselves; Casual, Competitive and/or Collector. These three non-contradicting typologies are common type adjectives that are used by Magic players. 81.3% of the respondents indicate themselves as Casual players, 36.4% Competitive and 26% Collector. Casual players are the largest type and among all the respondents, 47.2% of all the respondents identified themselves as only Casual and not Competitor or Collector. Last result of the first section of the findings measures the BrainHex typology classes (Seeker, Conqueror, Mastermind, Socialiser, Daredevil, Achiever, Survivor). Most rated as first with 183 people was the Socializer archetype. And the most rated as last with 392 people was the Achiever archetype (Figure 4.3). Interestingly, this is also the second most rated first statement with 145 people.

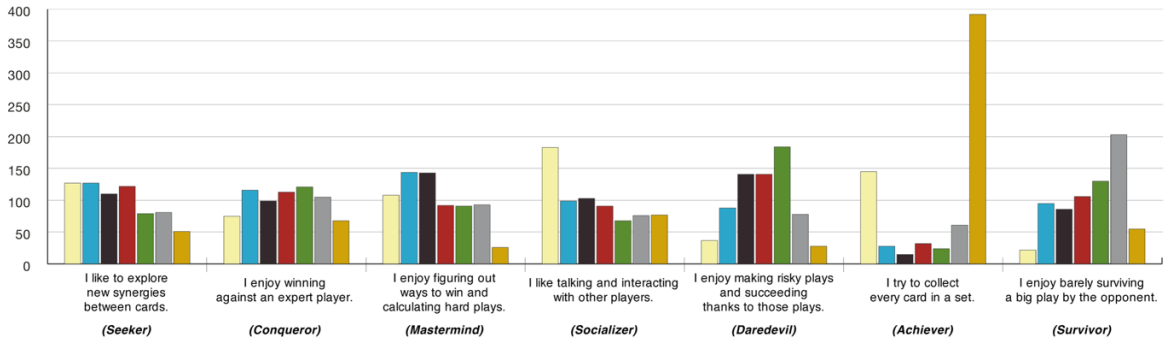

Figure 4.3: Responses to the statement: *Considering your Magic: The Gathering experience, put the following sentences in order from 1 to 7.*

When age groups are put into focus, the distribution of the time period option selected by the largest group of people (2-7 hours a week) is as follows. 59% of the players who were born in 1977 or earlier, 45.6% of the players who were born in 1978-1982, 47.1% of the

players who were born in 1983-1987, 58% of the players who were born in 1988-1992, 61.3% of the players who were born in 1993-1997, and 60.3% of the players who were born in 1998-2002 indicated that they played 2-7 hours a week (Figure 4.4).

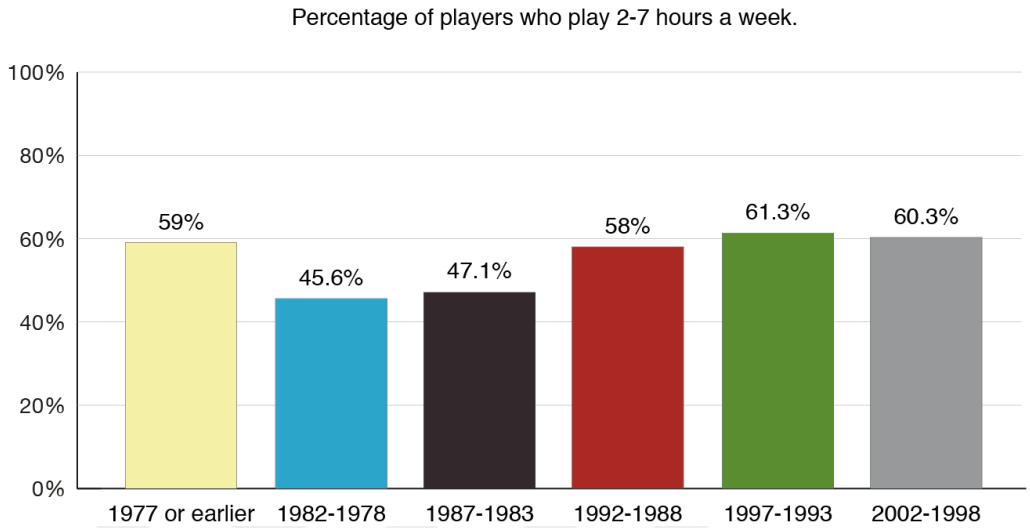

Figure 4.4: Cross-sectional data of date of birth over playing time. 2-7 hours.

Considering Magic player types, the highest preference towards MTG Arena is from players who identify themselves as Competitive players. 12.7% of the players who consider themselves as Casual, 13.4% of the players who consider themselves as Competitive and 9.9% of the players who consider themselves as Collector prefers MTG Arena as their preferred platform. The low score of Collectors' might mean that the acquiring of digital cards does not feel like collecting for the players of this game. On the other side, the highest preference towards tabletop Magic: The Gathering is from Collector types. 86.4% of the players who consider themselves as Casual, 85% of the players who consider themselves as Competitive and 89.5% of the players who consider themselves as Collector prefers tabletop Magic as they preferred platform.

4.1 TABLETOP MAGIC: THE GATHERING EXPERIENCE

Tabletop Magic players that filled out the questionnaire are primarily playing Commander format, which is a very popular format, it is customarily multiplayer and usually considered to be more casual, and it is not available in MTG Arena. Draft and Sealed are second and third most preferred formats, both are limited formats, requiring players to

buy new cards and play with them, both are available in MTG Arena. Number one reason players indicated to play tabletop Magic is “to have fun”, and the second most selected option is revealed to be “to have social interaction”.

Most prominent category tabletop Magic, proved to be agreed upon, is social interaction. Respondents united under the most powerful “Strongly Agree” option with an incredible 85.4% (Figure 4.5) when they are asked to respond if they liked playing with their friends when they play Magic on the tabletop (Paper Magic).

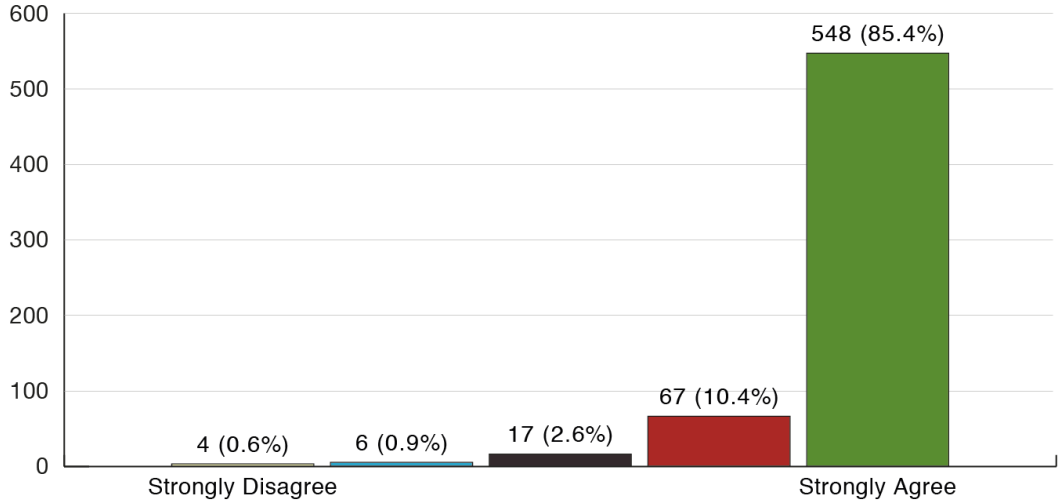

Figure 4.5: Responses to the statement: *I like playing with my friends when I play Paper Magic.* (Motivation dimension – Social Interaction sub-dimension Q:2)

The other two social interaction questions also had their most answers under Strongly Agree with big percentages (63.1% and 57.9%). The biggest perceivable difference that tabletop Magic has overpowered MTG Arena is under the dimension of fun. In all three of the “fun” questions, the most chosen choice was the strongest choice and all three questions with very big percentages; 79.3% (Figure 4.6), 55.5% and 51.7%.

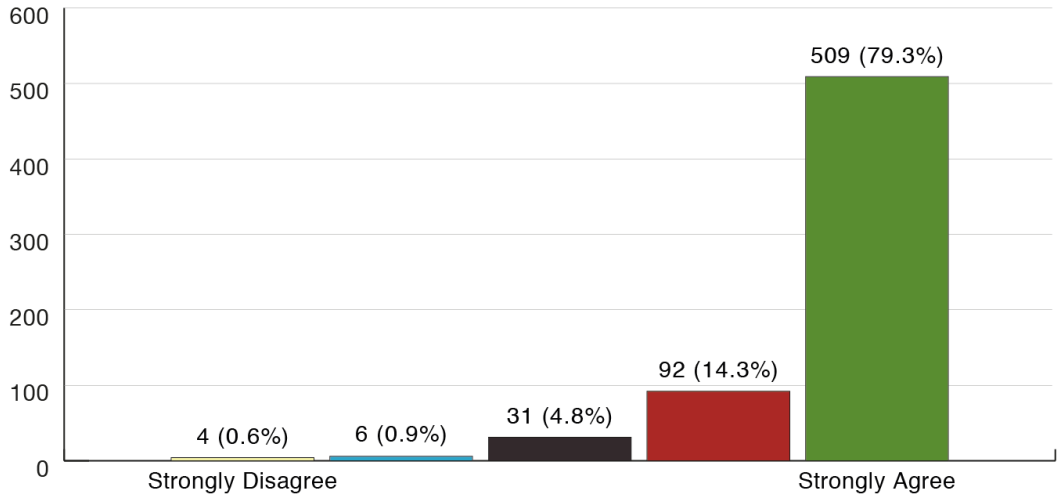

Figure 4.6: Responses to the statement: *I enjoy playing Paper Magic a lot.* (Motivation dimension – Fun sub-dimension Q:1)

On the other hand, MTG Arena had low scores with more distributed percentages. Another area tabletop Magic showed great significance was the satisfaction dimension's positive affect sub-dimension. The platform showed high scores on all questions, including the control question and the reverse coded question. Strongest choices got 42.2% in the control question, 55.1% in the first question and 66.2% in the reversed coded question (Figure 4.7). The last question got 48% of the answers, it was the second strongest option, albeit still stronger than MTG Arena in the equivalent question.

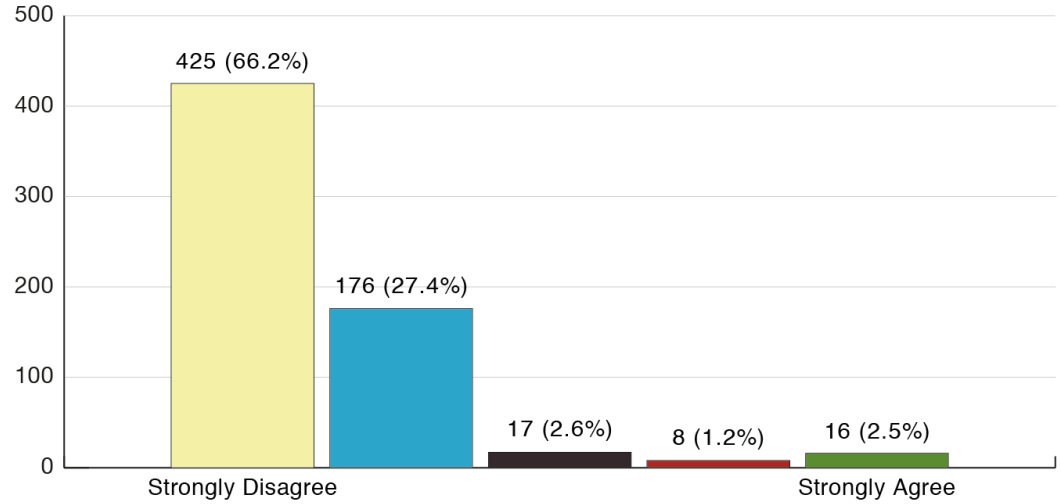

Figure 4.7: Responses to the statement: *I frequently feel I wasted my time playing Paper Magic.* (Satisfaction dimension – Affect sub-dimension Q:2)

4.2 MAGIC: THE GATHERING ARENA EXPERIENCE

Within all the respondents 22.2% of them declared that they do not play the digital version: “Magic: The Gathering Arena”, leaving 542 respondents to answer questions on MTG Arena experience. Although it is dynamic and a subject-to-change ground, MTG Arena players’ most preferred format was Standard for the time of the questionnaire. Coming in second is the overall beloved limited format of Draft. As it is the case with the tabletop, MTG Arena players enter the game primarily to have fun. Second reason turned out to be to have competitive play. Expectedly, having social interaction unanimously was the last reason for MTG Arena players to play the game since the platform lacks a great deal of tools for interaction.

In terms of experience, the competitive play in MTG Arena has got a better grade than tabletop Magic in one question. People believed that they would be playing with challenging opponents when they play MTG Arena. They responded with a stronger statement than tabletop Magic; Strongly Agree at 31.9% (Figure 4.8).

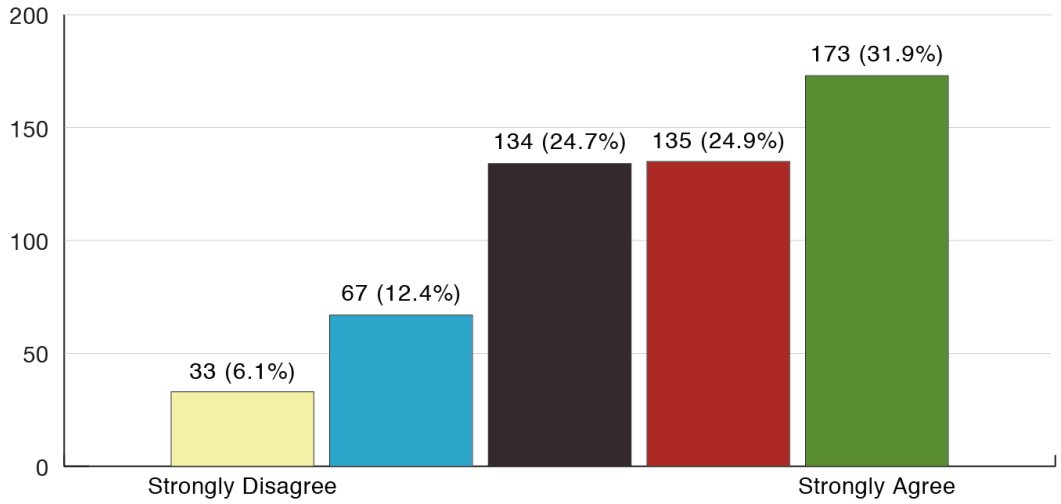

Figure 4.8: Responses to the statement: *I know I am going to be challenged by my opponents when I play MTG Arena.*

The second strong point MTG Arena show’s is in one of the questions of flow dimension’s sub-dimension ease of use. Players do not think they put as much effort into playing

MTG Arena as tabletop Magic. The answers showed an almost perfect linear increase and decrease on the two sides of the peak that is right in the middle of the Likert scale with the highest point chosen by 31.9% of the respondents (Figure 4.9). Contrarily, tabletop players majorly agreed that they put a lot of effort into playing Magic.

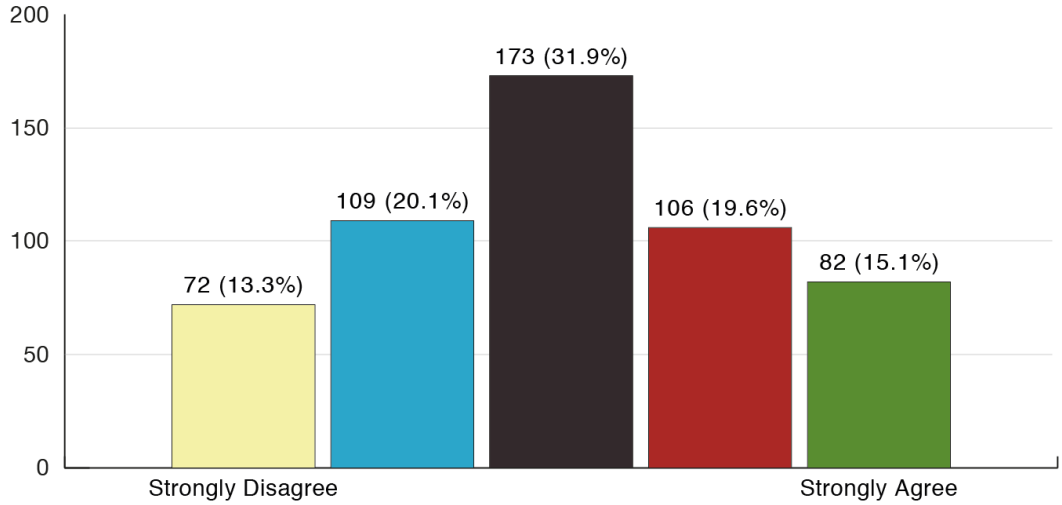

Figure 4.9: Responses to the statement: *I put a lot of effort into playing the game on the MTG Arena.*

The third and last variable MTG Arena did better than tabletop Magic is in a question of satisfaction dimension's reward sub-dimension. This particular reward was about adding new cards to players collections. MTG Arena players feel satisfied with the opportunity of adding new cards to their collections as they play the game. Strongly Agree is the most selected option with 24.7% but the next preferred option is the next positive option close second with 23.4% (Figure 4.10). This question, worth mentioning, has the most irregularly distributed answers among all the others for both platforms (Figure 4.10 and 4.11).

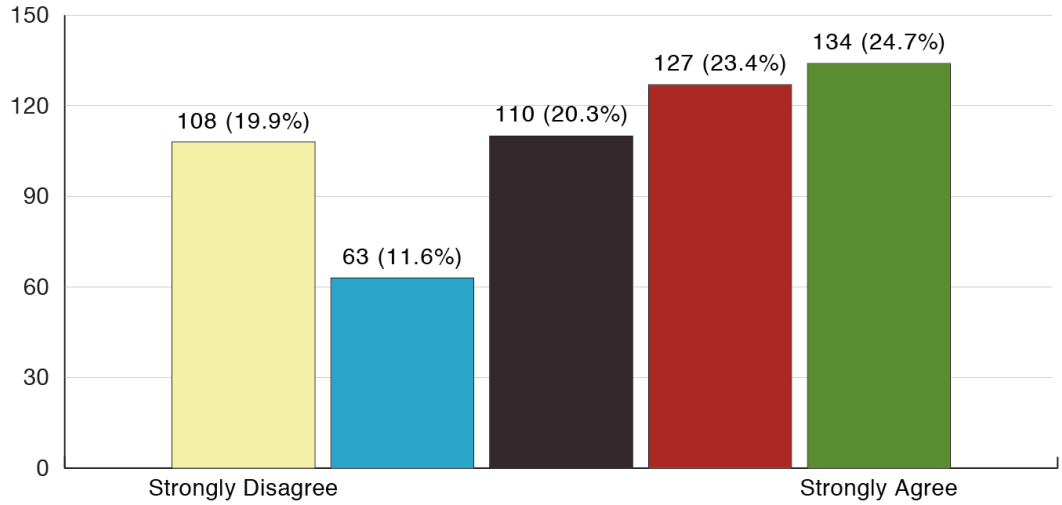

Figure 4.10: Responses to the statement: *The opportunity to add new cards to my collection is important to me when I play MTG Arena.*

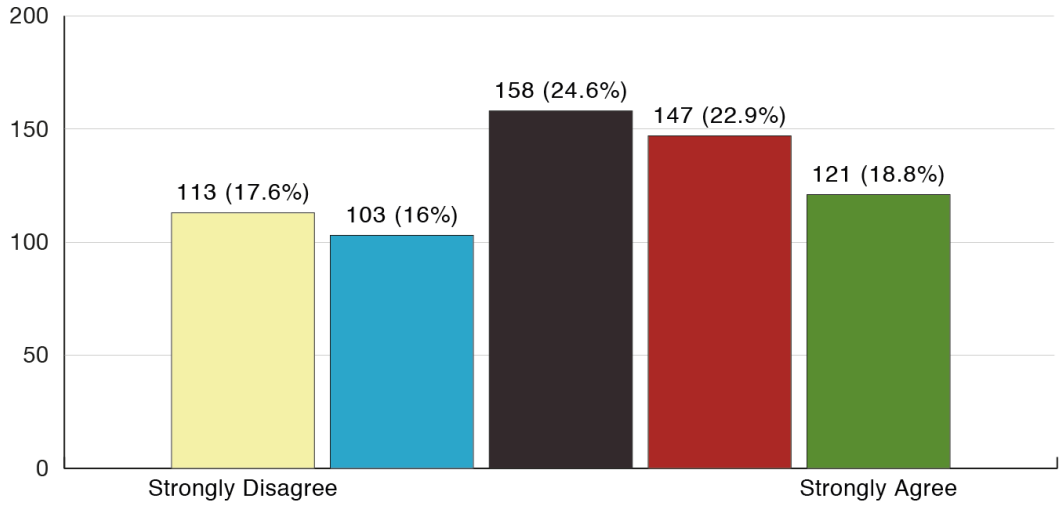

Figure 4.11: Responses to the statement: *The opportunity to add new cards to my collection is important to me when I play Paper Magic.*

4.3 DIFFERENCES OF PLAYER EXPERIENCES

The final results of the questionnaire show that, in the dimensions that were questioned, playing the game in its original form triumphs over newly born online counterpart. In almost all of the questions Magic: The Gathering played on tabletop got higher scores

than the recent digital version Magic: The Gathering Arena. This result was mostly expected, but MTG Arena believed to have its own strengths in some areas, such as ease of use and competitive play. Indeed, in the question about the effort that is spent to play the game on these two platforms, MTG Arena got a better score. Another question that MTG Arena bested tabletop Magic was surely about competition. MTG Arena players expect a greater challenge in the game from their opponents. The last point the digital game showed a greater ability to draw people in was about rewards from the game. People showed a considerable interest in acquiring new cards for their digital collections. Even though these are only three questions that MTG Arena scored higher, and in all the others tabletop Magic was ahead, a potential and a current state of digital versus physical can be deducted. Tabletop Magic is deemed to be more powerful in the social interaction dimension. Additionally, the most preferred format on the tabletop, by a big margin, has been revealed to be a multiplayer format with 44.3%; Commander (Figure 4.12). Commander format is also not available in the MTG Arena. Furthermore, MTG Arena lacks social interaction tools even for an online game.

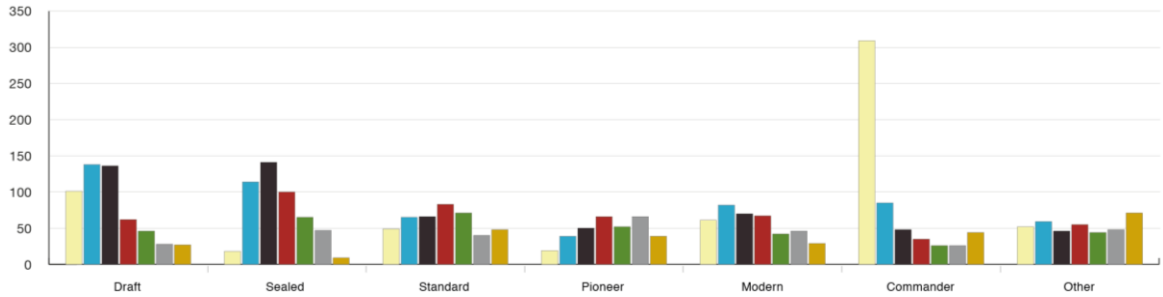

Figure 4.12: Responses to the statement: *Indicate the formats you play on the tabletop (Paper Magic) in order of preference.* Highest peak is 309 people.

Although, the research shows people are interested to have social interaction in the game if it was possible. Almost half of the respondents strongly agreed that they like the idea of playing with their friends (Figure 4.13). MTG Arena has some room to grow in the matter of social interaction, both in software development and players' needs.

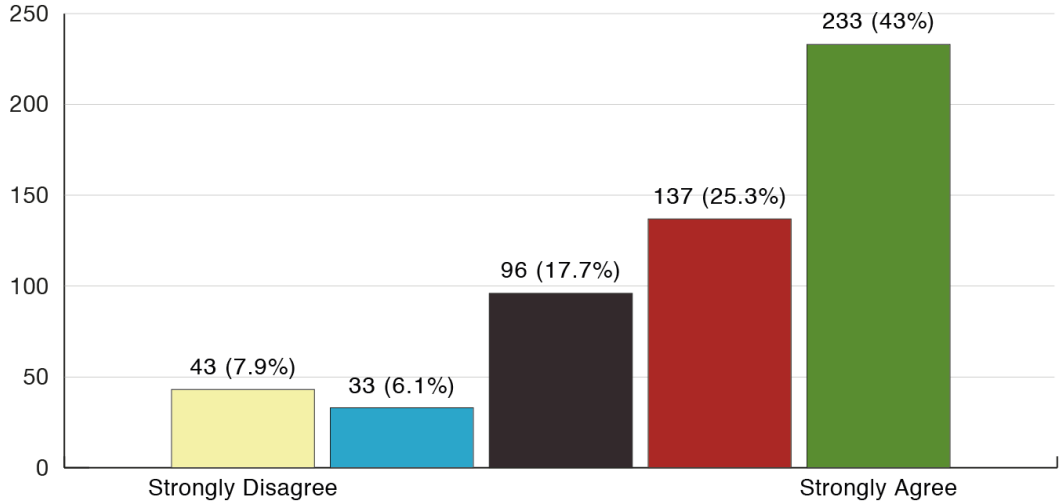

Figure 4.13: Responses to the statement: *I like the idea of playing with my friends when I play MTG Arena.*

Contrasting played formats of tabletop Magic with MTG Arena, the online digital version received higher scores in perceptively more competitive formats like Standard and Draft (Figure 4.14).

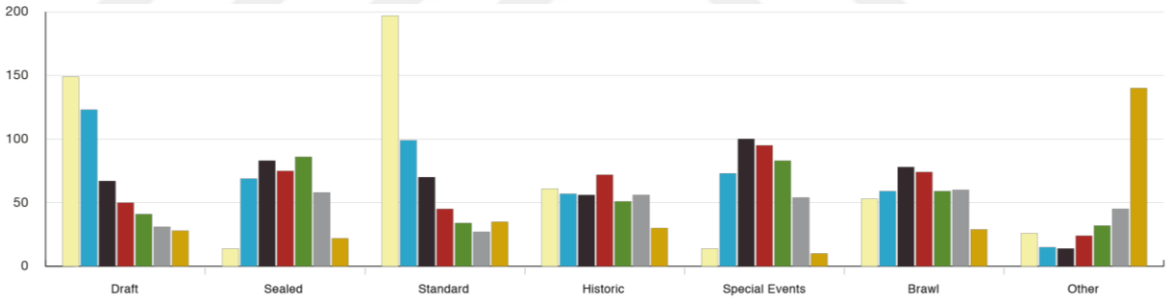

Figure 4.14: Responses to the statement: *Indicate the formats you play in MTG ARENA in order of preference.* Highest peak is 197 people.

Platform preference over self-assigned Magic player typology shows that 82.8% of the players who prefer tabletop magic consider themselves as Casual players. For the players who prefer MTG Arena the ratio decreases to 73.5% (Figure 4.15).

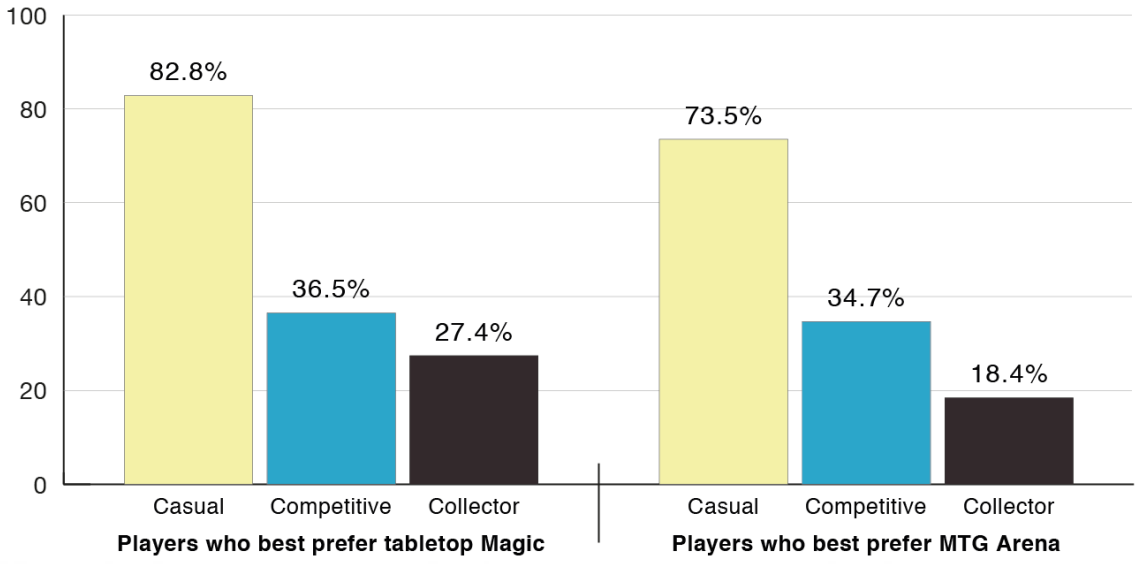

Figure 4.15: Cross-sectional data of platform preference and player typology variables

Tabletop Magic players' scores being higher for in categories could mean that the tabletop players are more likely to feel that they embody multiple types among these three player types than MTG Arena players. In other words, MTG Arena players feel they have more focused types than tabletop Magic players.

In-line with the grand total, the players who best prefer tabletop Magic, are mostly of the Socializer archetype among BrainHex archetypes with 28% (*BrainHex*, 2008). Contradictorily, the players who best prefer MTG Arena for their platform are mostly of the Mastermind archetypes with 24.5%. The Mastermind type is also represented by the players who prefer tabletop; this archetype's statement is the most ordered second statement by the players who prefer tabletop Magic with 21.5%. And, for the players who prefer MTG Arena, their most ordered second statement is of the Conqueror archetype.

5 CONCLUSION

With an analysis of the results of the research, this study shows, even though the online version of the game in question played plentifully the tabletop play is still the favourite for most of the Magic: The Gathering players. It can be assumed that the digital counterpart is not hated, and liked by many, but the original way to play the game is a more cherished way.

5.1 WAYS TO PLAY MAGIC

The sub-dimension measuring social interaction showed that the digital platform MTG Arena does poorly in this area. It is important to notice this outcome because social interaction is found out to be one of the most sought-after values for tabletop Magic players. Data of the questionnaire showed that the social format is played most frequently on the tabletop. Contrarily on the MTG Arena more competitive formats are played more frequently (Figure 5.1, 5.2). Standard and Draft formats are regulars of prized tournaments.

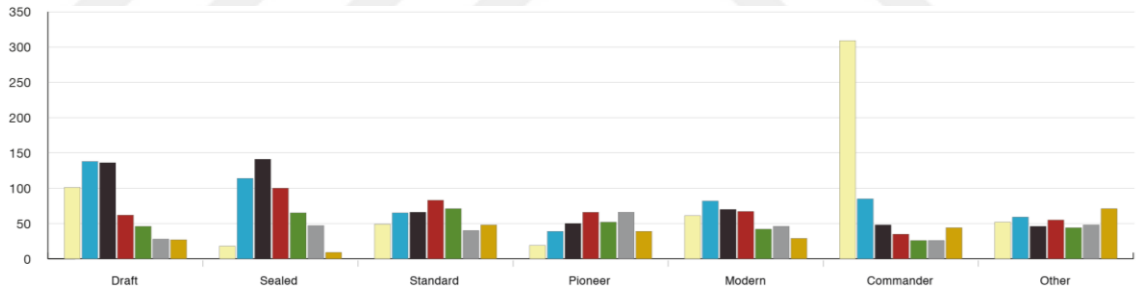

Figure 5.1: Responses to the statement: *Indicate the formats you play on the tabletop (Paper Magic) in order of preference.* Highest peak is 309 people.

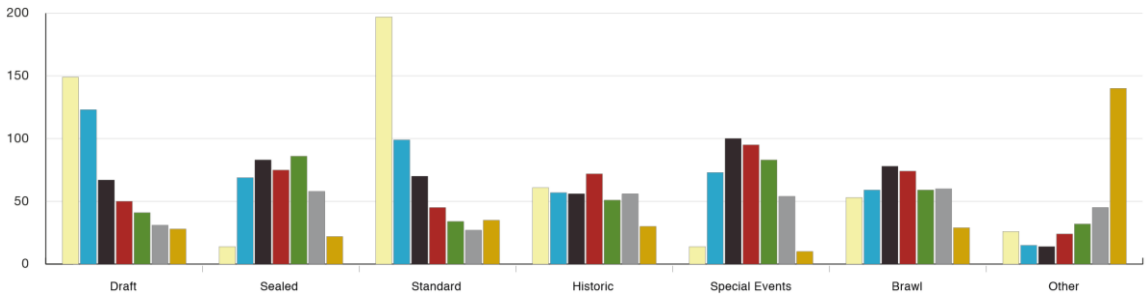

Figure 5.2: Responses to the statement: *Indicate the formats you play in MTG ARENA in order of preference.* Highest peak is 197 people.

However, Magic is not an entirely competitive game, there is a vast number of players who play it as a casual game. MTG Arena has not yet created a practical ground for these casual players. Added socialisation features can help casual players to enjoy the digital platform more sincerely. Additionally, players are motivated by the social and fun aspect of the physical game and motivated more by the other aspects of MTG Arena, especially aspects that are related to competition (Figure 5.3, 5.4).

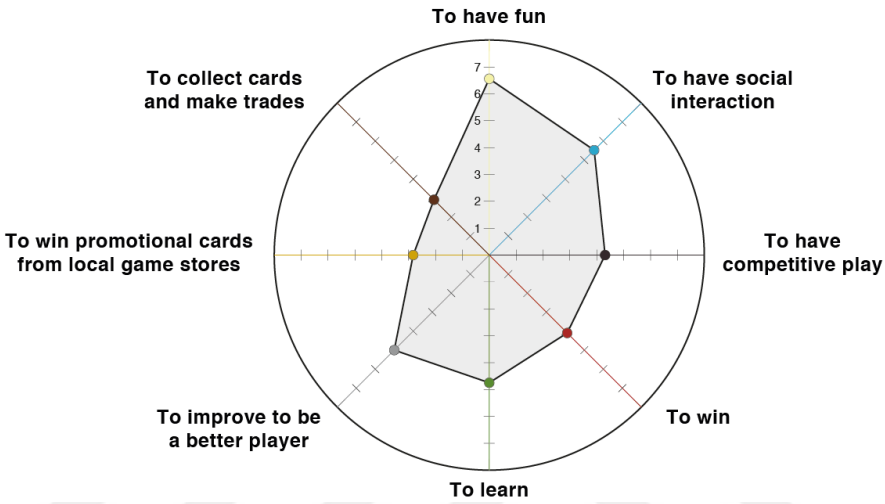

Figure 5.3: Weighted arithmetic means of the responses to the statement: *Put in order what you expect from the game when you play Paper Magic.*

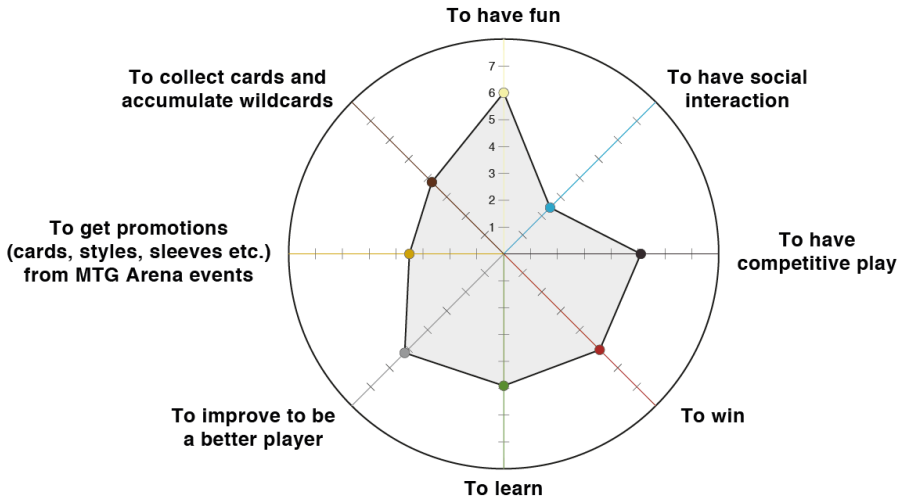

Figure 5.4: Weighted arithmetic means of the responses to the statement: *Put in order what you expect from the game when you play MTG Arena.*

Furthermore, self-assigned player typologies indicate that tabletop players are collectors and MTG Arena players are competitive. Within the players who identify themselves as collectors, 89.5% of them prefer to play the game on tabletop and for casual players the ratio is 86.4%. On the digital side, within the players who identify themselves as competitive, 13.4% of them prefer to play the game on MTG Arena and in the second place is again casual players with 12.7% (Figure 5.5). In short; the biggest typology group that prefers MTG Arena are competitive players, and the biggest typology group that prefers tabletop are collector players.

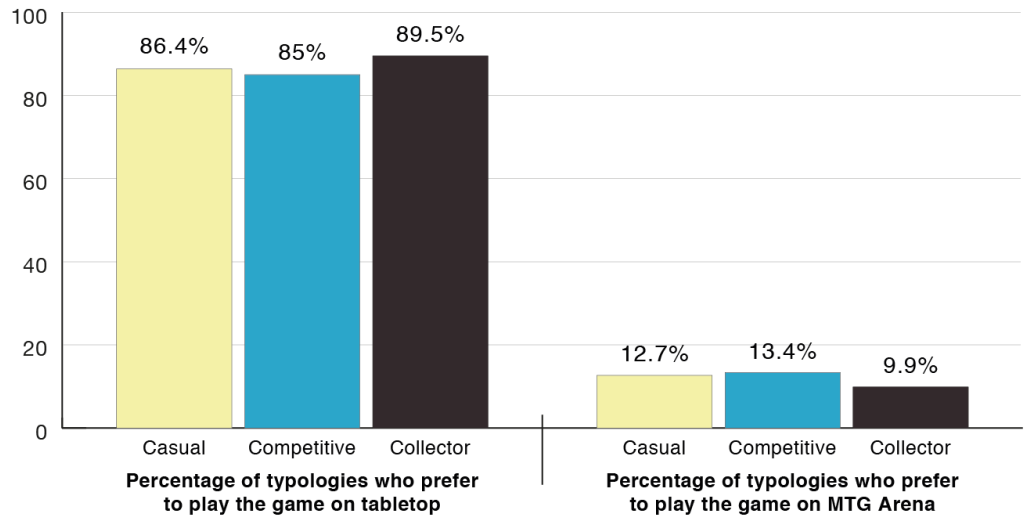

Figure 5.5: Cross-sectional data of player typology variable over platform preference variable.

Since MTG Arena greatly lacks communication tools with an opponent this result was expected. Still people frequently go great distances to make some things work. For example, it is not uncommon for people to create structures to play paper magic with their friends over online video conference tools especially in but not restricted to the COVID – 19 quarantine period. There are simple hacks, or intricate ways to construct structures that hold cameras or smart phones in a way that the table and cards are properly seen. Lighting tips and other suggestions are posted publicly in social media such as Reddit, Facebook, or Discord. There are dedicated channels just to be able to do this and find others to play over such a setup. One of the interviewees said they have just finished such a game and another one talked about how they are working to create a bigger community for this kind of play. For MTG Arena people use voice over IP systems or again online

video conference tools whilst playing the game on their computer. Discord is the frequently used tool for such communication for MTG Arena, and other games. It is possible that such features, at least to an extent, might come to the digital game sometime in the future. The game didn't have the options to add and chat with friends in its initial release, but today it is possible.

Although players cannot still chat during the gameplay with an unknown opponent, they can invite their friends to a challenge after they add them and chat with them to some extent. However, it is yet unknown if that is what people expect from the game. There are comments on both sides, people in social media openly express themselves saying MTG Arena feels like another way to play magic, it is quick, and can quit (concede) matches much more easily than tabletop. Others are really eager to chat, talk, or even see their opponents face on MTG Arena. Afterall, the other older but more comprehensive digital version; Magic: The Gathering Online has a basic chat and log system running through gameplay. In this research, all the social interaction questions demonstrate that people would like to communicate better with the players they are playing against (Figure 5.6). Even if the tabletop magic scored better in the social interaction questions, if the ways to communicate with other players are designed and integrated properly into the application it is possible that MTG Arena would get much higher scores. MTG Arena has had some promising steps towards being a more communicative and social game.

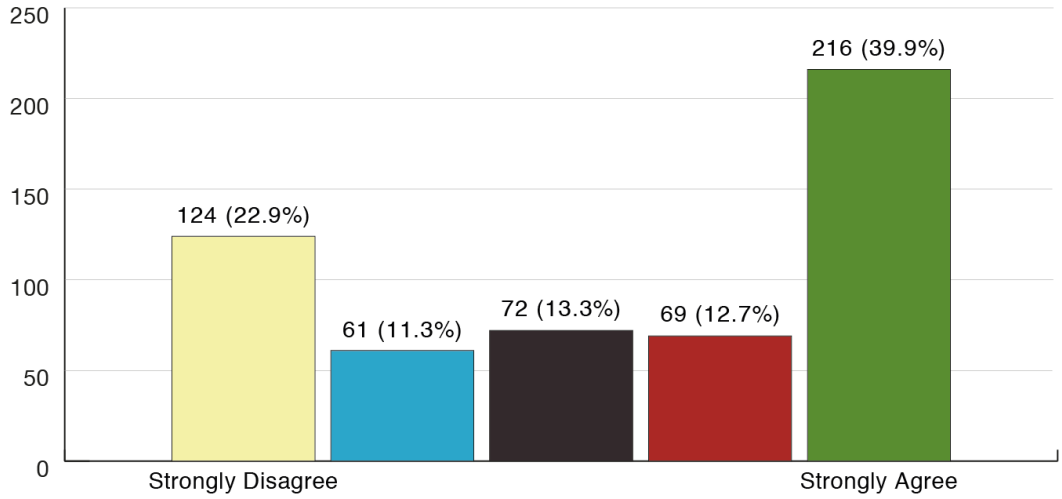

Figure 5.6: Responses to the statement: *I wish I was able to directly communicate with people when playing MTG Arena.*

Another interesting result that reflects a similar idea is about players' preferred platform by age. The results show that as the players get younger, they increasingly prefer the tabletop. 66.7% of the players who were born in 1977 or earlier indicated that they prefer to play the game on tabletop. The ratio increases; 77.9% for 1978-1982, 74.7% for 1983-1987, 88.1% for 1988-1992, 88.5% for 1993-1997 and 91.2% for players who were born in 1998-2002 (Figure 5.7).

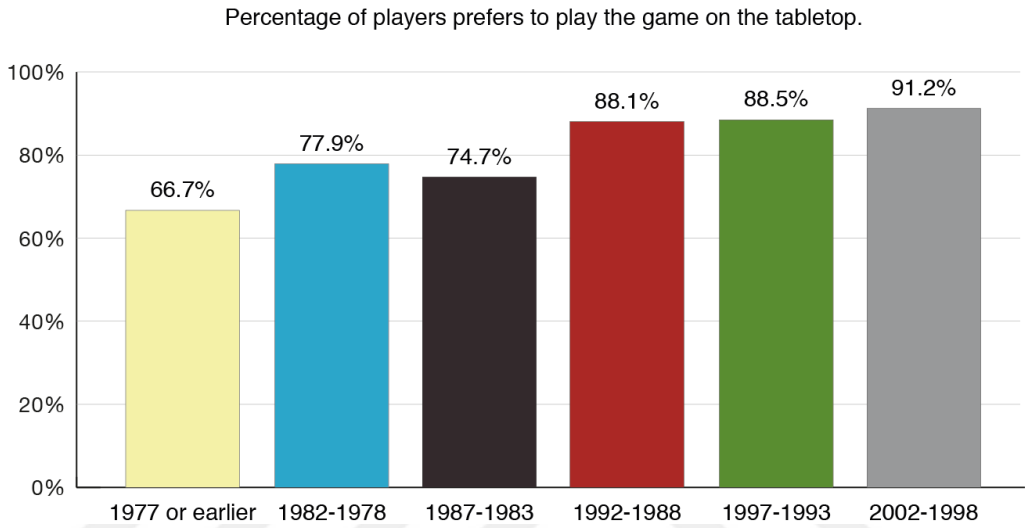

Figure 5.7: Cross-sectional data of date of birth over tabletop Magic preference.

This might mean younger audiences of the game are more attracted by the game's social value. Another possibility might be that younger people are not impressed by the digital version's build among the selection of digital games, but the physical game excites them.

All in all, the digital version that is investigated in this study: MTG Arena showed lacking results both in Social Interaction and Fun aspects. Analysis of the results shows that these two aspects go hand in hand, hence lacking in one might have been leading to being lacking in the other one. In the questionnaire when players ordered their expectations from the game; 95.6% of the people who ordered "to have social interaction" in the second place, ordered "to have fun" in the first place. This might mean if MTG Arena would be more socially interactive it might have been perceived as more fun. Another reason MTG Arena does not perceived as much fun as the tabletop version might be MTG Arena being perceived as more competitive. Fun and competition are sometimes considered as

contradicting values. These possible reasons for MTG Arena to score low on fun need to be further researched individually in order to ascertain their effects.

When putting the BrainHex typology archetypes in order, respondents majorly put the statement about the Achiever archetype to the last. Achiever archetype is all about completing every aspect of a game and collecting every possible thing, even still given statement might have been too harsh and that may be the reason for the far and away low score. Contrastingly, in theory a *collectible* card game like Magic: The Gathering, should interest an Achiever type gamer. Consistently with this second view, after all, 145 people did select it as a first option, and it was the second most ordered first statement. In short, it resulted with highly polarized answers in two ends, respondents basically either put it first or the last (Figure 5.8).

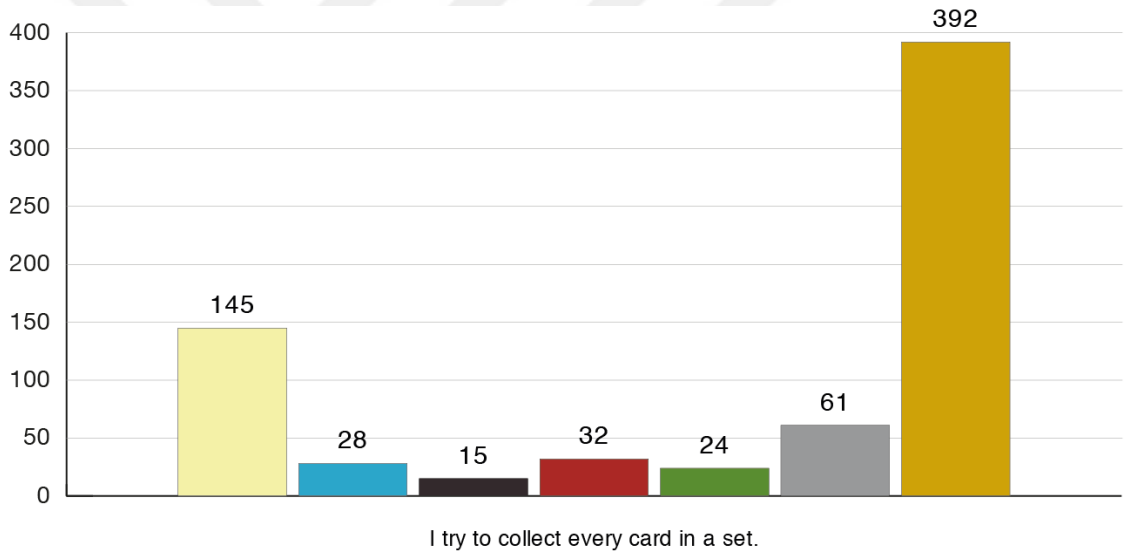

Figure 5.8: Distribution of Achiever archetype's ordering.

5.2 STATE OF COLLECTIBLE CARD GAMES

Overall, it can be stated that, being a new concept, the act of digitisation of the card games is relatively well-done. As the disruption of the internet and online media has been very fast on the world of communication, there is some room for advancement. The accumulated know-how usually is being used intelligently, but it is a known fact that the real-world experience can be different than the initially designed. In order to understand the

ramifications of the designed products, comprehensive research has to be done. Getting familiar with the qualitative and quantitative results of academic papers, designers theoretically are better equipped to produce better games.

Since the most missed part of the Magic game is the social interaction in the latest digitalised version, that may be an important issue to put under the scope. Collectible card games should perhaps need to be more communicative. Most shooter games seemed to have solved this. Shooter games are usually games that players form teams and play against other teams, conventionally killing other team members with weapons. They are very fast-paced and talking with your teammates can be highly advantageous. Hence, most of them integrated a way to talk to your team members within the game. Even still, sometimes players prefer third party applications such as Discord rather than the games' own voice systems. Even if collectible card games are not as fast-paced and adrenaline driven, they might benefit from interaction with other players. Seeing other people's faces, hands and movements may be more of an interest in card games. The gameplay is not as action packed, that an image of a face would distract players from the game, but the subtle movements and mimics can be important. MTG Arena has a gentle way for players to predict their opponents' thoughts; players can catch highlighted game pieces that their opponents have gone over with the cursor. That information can be interpreted as an insight about opponents' intentions. Card game players usually have the tendency to get information from nonobvious mimics and movements. The benefits that are generated by social interaction are not restricted to card games either; on an even bigger scale, all games that are played with and/or against other humans perhaps need more sincere communication methods. Perhaps that will be the direction for games to evolve.

When future trends for Magic are tried to be estimated, checking the results by age may be a viable starting point. Number of casual players can clearly be seen to be steadily on the rise (Figure 5.9). Collecting aspect of the game seems to be decreasing with the newer generations (Figure 5.10). Finally, competitiveness shows some fluctuation by the ages of the players, but overall it seems to be on the rise (Figure 5.11).

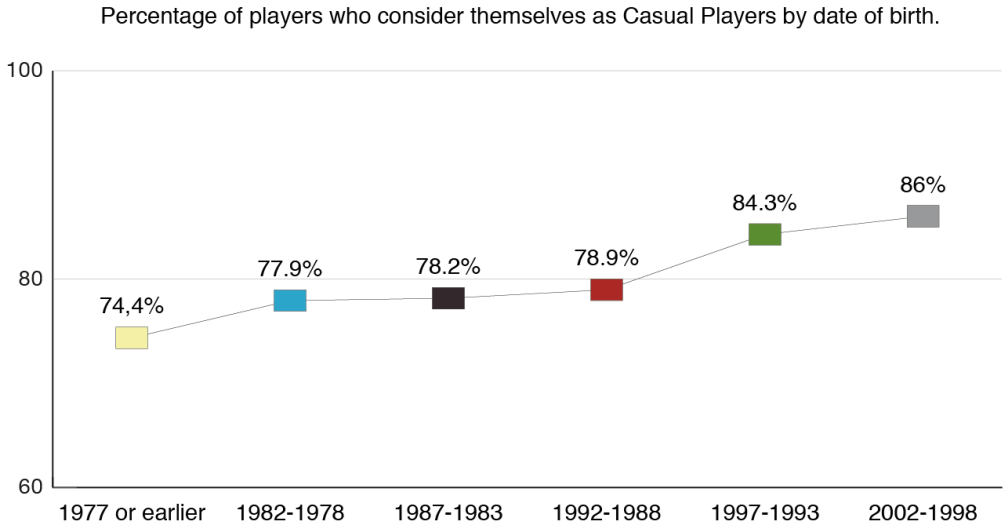

Figure 5.9: Cross-sectional data of date of birth over typology (Casual).

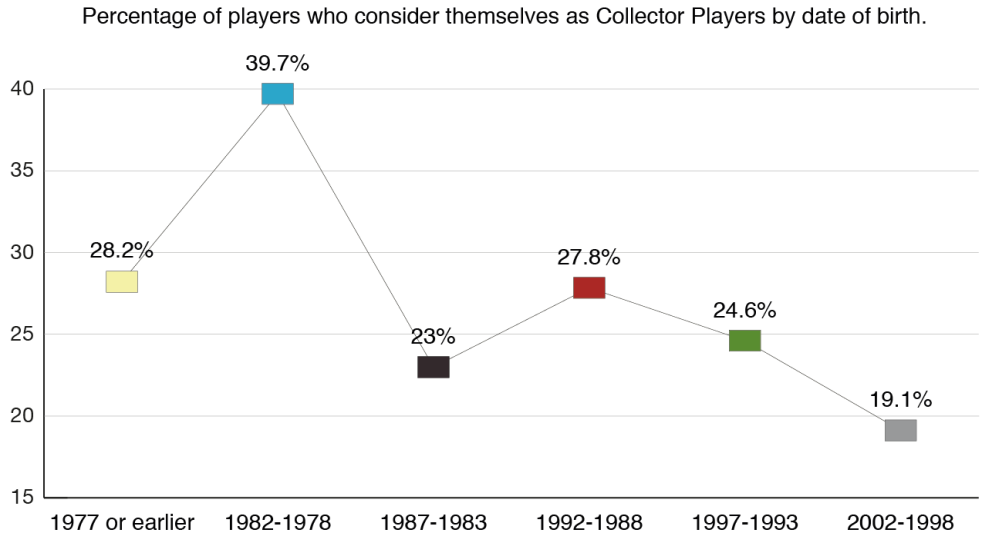

Figure 5.10: Cross-sectional data of date of birth over typology (Collector).

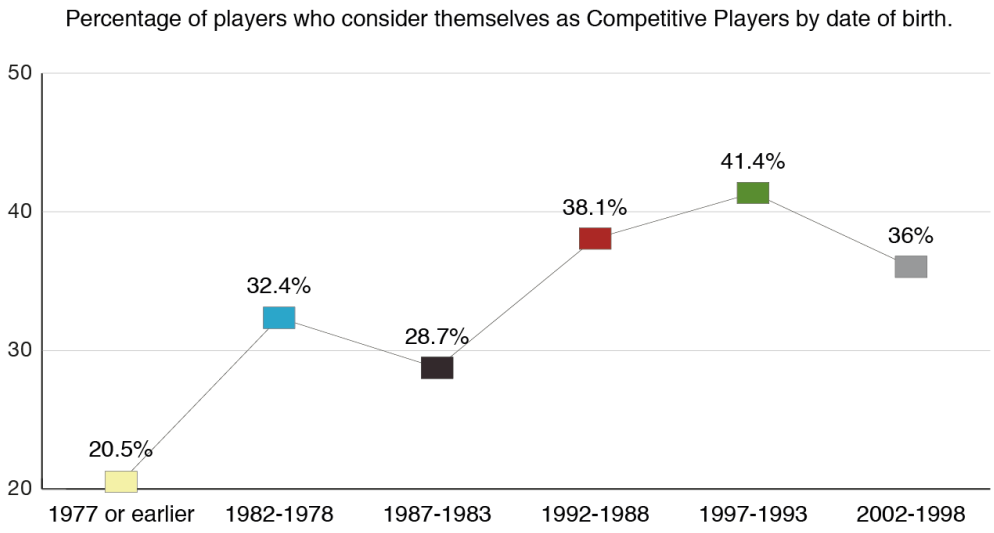

Figure 5.11: Cross-sectional data of date of birth over typology (Competitive).

This figure 5.11 can be interpreted as magic players need to be matured to become competitive players. Ultimately these three trends might mean that digital versions of CCGs need to cater to the needs of casual players in order to be more in demand. As mentioned before, the socialisation aspect can help in this path.

5.3 LIMITATIONS

When and how any research is done always matters. People themselves and trends are continuously changing. It is important to keep in mind that Magic itself is a dynamic game. The duration, period and the state of the game and what cards were legal in any format may play a role in the Magic players' experience. Additionally, players' preferences, or the actual people who are playing the game more at any given time may change. The majority's choice of format, preferred platform and play style would also be affected as new cards are introduced into the game. For example, by the end of this research a bundle of 27 cards pushed into the lesser played MTG Arena format called Historic under the name of Historic Anthology 3. This third group of cards really made an impact on the previously undesirable format, content creators started to make more videos of and about the format, which indicates players playing more of it too. Such a shift would have affected the results. Since Historic is an MTG Arena only format, it might have drawn some types of players into playing MTG Arena. It might have incentivised people to play more

frequently to be able to acquire said cards. It might have rendered people to have more fun from the digital platform and answer accordingly. This kind of format changes occur regularly in the game of Magic, it even paced up in recent years. There is even talk about if there are too many products (Chandler, 2020). When such a dynamic game is studied, that's habitat is swiftly remodelled, the results are always representing the era that the research has been done. Despite this research's subject stayed outside of the specific formats and cards, the players and their experiences are still affected by the present conditions.

This research was also affected by a force majeure factor. In the last five months of this research there has been a global virus outbreak. The coronavirus that caused COVID – 19's symptoms were seen only weeks after a person is infected, and that caused a global lockdown. In this worldwide quarantine reaching to resources like physical books or to advisors or university staff becomes harder. People have fairly quickly adapted to the situation, but still some compromises had to be made. For the research part of the study before designing the questionnaire a handful of interviews were needed to be done. Some of those interviews could have been in person, but all of them were made over the internet. Since getting information from a wide variety of people was important, making online face-to-face interviews were inevitable. Only that way it was possible to get opinions from people who live in different continents in a few days. The quarantine also affected how the game is played. Platform choice became an obligation rather than a preference. The game at hand requires some getting used to and has some habitual qualities for it. This may mean both people are easily able to recall their feelings and experiences about the game, and they were suffering and perhaps feel stressed that were not able to play on their favourite platform (if it is on the tabletop). Both sides can be true and both sides may have affected players' responses. In any event, the experience results from the questionnaire are from players that played the game three months and more, people who played less have been eliminated through eliminating questions. The analysis and deductions have been made keeping this effect in mind as well.

To the best of the author's knowledge this was the first research specifically measuring Magic: The Gathering players' experience. Keeping that in mind and planning to get the most out of the respondents, both tabletop Magic and MTG Arena questions are directed

to all the people that took the survey, if they play on mentioned platforms. Going chronologically, the questionnaire initially asked about tabletop player experience and then asked about MTG Arena experience of the respondents, if they played on that platform too. Using similar questions might have affected people as it created a sense of comparison in their mind. Likewise, it might have created a respondent fatigue for the people that play on both platforms (Bradley & Daly, 1994). The prioritisation and fatigue effect might have tipped the scales in favour of tabletop Magic. Another questionnaire exclusively for Magic: The Gathering Arena can be constructed to discard possible negative effects. Which might require a longer period of time and perhaps more resources.

5.4 FURTHER STUDIES

In order to distill and come up with a broader understanding of player experience differences in various media, a comparison of similar studies can be useful. To be able to compare results of this study, new studies can be conducted in a similar manner for different games that also have branches on both in digital and physical worlds. Doing so, not only two different clusters of audience would have been reached, but also the overall platform specific player experience knowledge would have been broadened.

Another way to increase the scope of the literature can be to conduct research about games that operate in a single platform. Researching player experience of a game in a platform-focused mindset still would provide valuable data to understand the effect of platforms, especially when used in conjunction with this study. Same platform's results can be compared and contrasted, or the lacking platform's results can be compared with the results from this study. Both can produce meaningful or interesting results. Focusing on a single game and contrasting it with another one has its own benefits. One of the biggest contenders in the CCG category is the digital only Hearthstone. Measuring how different MTG Arena's players' experience would produce meaningful results that would reveal information about two games' perception. Consequently, it would be revealed if the games have the image that they have positioned themselves in. Such a research would also reveal if the designed visuals and attributes of the game work as they were initially meant to work.

One of the biggest differences in the answers of the respondents is in the gender question. A study about the huge gap between the number of female and male players can be sociologically meaningful. In its surface Magic: The Gathering and Wizards of the Coast seems to be taking steps towards a more gender neutral and equal ground. But the numbers show a great inequality. Furthermore, the overall numbers of the gaming industry does not show such a disproportion in the number of female and male players ("2019 Essential Facts About the Computer and Video Game Industry," 2019). The reason behind this gap can be caused by various factors. Another method of recruiting, that is carefully adjusted to gender issues, may show a more balanced sample of respondents. As an alternative, perhaps the game has a faulty image in the eye of women. In any circumstance it can be a worthy subject to dig deeper and try to surface the reason behind this gap.

The number one component that this study shows insufficient in digital platforms is social interaction. With the help of a pre-research online games that players expect more social interaction can be determined. Eventually, selected games can be the focus of future studies. These studies could research if players really want more social interaction in those games, or do they like them the way they are; without social interaction. Perhaps that is a reason for them to choose to play that game, and they prefer a different game for social interaction. Possible scenarios can be written and simulated as if said games have more social interaction and various qualitative research can be organised through such simulations. The product of these research can tilt future game designs route.

A succeeding study might approach the socialisation in digital media issue in a game design point. Some games can be designed to research social interaction. Using different and various qualitative and generative methods can produce valuable data for future game designs. Following such a methodology, again and again a game design system might be able to be created. Putting the design of the game in focus seems to be needing an iterative method. Evaluating and re-evaluating can produce consistent results as new results and analyses are added. As the data accumulates, a new idea for designing games with social interaction in mind can flourish.

Further down the abovementioned road, a research can introduce a basic model of a digital game that uses the powerful tools of a digital game this research has outlined, additionally overcomes the disadvantages surfaced by this study. That model is to be presented to research participants and the effects can be measured to be tested how both similar results are. Through such research if results are meaningful and significant a heuristic may start to form for further analyses and designs.

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CURRICULUM VITAE

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Education Status

Undergraduate Degree : Bilkent University, Faculty of Art, Design, and Architecture, Department of Graphic Design (English), 2000 - 2005

Graduate Degree : Kadir Has University, School of Graduate Studies, Master in Design Program (English), 2018 – Expected 2020

Languages : Turkish (native), English (proficient)

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Istanbul Ayvansaray University, Plato Vocational School, Head of Visual Communications Programme, September 2015 - September 2019

I Mean It Creative, Senior Art Director, April 2012 - December 2014

F&C Marka İletişimi, Art Director, September 2011 - March 2012

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APPENDICES

APPENDIX A

Magic: The Gathering Playing Experience Questionnaire

This questionnaire is prepared for my master's thesis in Kadir Has University. The purpose of this academic questionnaire is to learn about Magic: The Gathering players' experience about the game. The questionnaire takes approximately 6 minutes to complete. The data to be obtained from the questionnaire will be kept confidential and will be evaluated only in the analyzes within the scope of this study.

Thank you for your invaluable contribution.

Doğa Aytuna

1. Do you play Magic: The Gathering?

☐ **Yes**

☐ **No**

*(ATTENTION: **Do not continue** to answer the survey, if you have selected "No".)*

2. Indicate the year you were born.

☐ **2003 or later**

☐ **2002 - 1998**

☐ **1997 - 1993**

☐ **1992 - 1988**

☐ **1987 - 1983**

☐ **1982 - 1978**

☐ **1977 or earlier**

*(ATTENTION: **Do not continue** to answer the survey, if you have selected the option of "2003 or later".)*

3. Indicate your gender.

☐ **Female**

☐ **Male**

☐ **Other**

☐ **Prefer not to answer**

4. In which of the following platforms have you ever played Magic: The Gathering? **(Select as many as apply)**

- ☐ **Tabletop (Paper Magic)**
- ☐ **Magic: The Gathering Arena**
- ☐ **Magic: The Gathering Online**
- ☐ **Other official platform(s)**
- ☐ **Non-official platform(s)**

5. What platform do you best prefer to play Magic: The Gathering?

- ☐ **Tabletop (on paper)**
- ☐ **Magic: The Gathering Online**
- ☐ **Magic: The Gathering Arena**
- ☐ **Other (Please specify) …….**

6. For how long do you play Magic: The Gathering? **(Any platform)**

- ☐ **Less than 1 year**
- ☐ **1-3 years**
- ☐ **4-10 years**
- ☐ **More than 10 years**

*(ATTENTION: **Do not continue** to answer the survey, if you have selected the option of "Less than 1 year".)*

7. For how many months have you actively played Magic in the last year?

- ☐ **Less than 2 months**
- ☐ **3-5 months**
- ☐ **6-8 months**
- ☐ **More than 9 months**

*(ATTENTION: **Do not continue** to answer the survey, if you have selected the option of "Less than 2 months".)*

8. Normally, on average for how many hours do you play Magic in a week?

- ☐ **Less than 2 hours**
- ☐ **2-7 hours**
- ☐ **8-15 hours**
- ☐ **16-35 hours**
- ☐ **More than 35 hours**

*(ATTENTION: **Do not continue** to answer the survey, if you have selected the option of "Less than 2 hours".)*

9. Complete the following sentence. (Select as many as apply)
I consider myself as a .....

☐ **Casual Magic player**

☐ **Competitive Magic player**

☐ **Collector Magic player**

10. Considering your Magic: The Gathering experience, put the following sentences in order from 1 to 7. **(1 most accurately represents you and 7 least accurately represents you.)**

	1	2	3	4	5	6	7
I like to explore new synergies between cards.							
I enjoy winning against an expert player.							
I enjoy figuring out ways to win and calculating hard plays.							
I like talking and interacting with other players.							
I enjoy making risky plays and succeeding thanks to those plays.							
I try to collect every card in a set.							
I enjoy barely surviving a big play by the opponent.							

11. Do you play Magic: The Gathering on tabletop (Paper Magic)?

☐ **Yes**

☐ **No**

*(ATTENTION: **Please <u>jump to</u> question 15, if you have selected "No".)***

TABLETOP MAGIC: THE GATHERING EXPERIENCE

Answer the following questions thinking about your Magic: The Gathering playing experience on the TABLETOP (PAPER MAGIC).

12. Indicate the formats you play on the tabletop (Paper Magic) in order of preference. **(1 is highest. Select only the ones you play.)**

	1	2	3	4	5	6	7
Draft							
Sealed							
Standard							
Pioneer							
Modern							
Commander							
Other							

13. Put in order what you expect from the game when you play Paper Magic. **(1 is highest, 8 is lowest.)**

	1	2	3	4	5	6	7	8
To have fun.								
To have social interaction.								
To have competitive play.								
To win.								
To learn.								
To improve to be a better player.								
To win promotional cards from local game stores.								
To collect cards and make trades.								

14. Please evaluate below sentences according to your Paper Magic experience.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I expect to be satisfied with the level of competition while playing Paper Magic.					
I know I am going to be challenged by my opponents when I play Paper Magic.					
I enjoy communicating with people when playing Paper Magic.					
I like playing with my friends when I play Paper Magic.					
I play Paper Magic to get together with people.					
I enjoy playing Paper Magic a lot.					
I am usually happy with the level of excitement Paper Magic provides.					
When I want to have some fun, Paper Magic is one of my first choices.					
I am fully focused to the game when I am playing Paper Magic.					
Outside distractions (such as phone alerts or other people talking) do not make me stop/pause playing when playing Paper Magic.					

I feel the game is something I am experiencing rather than something I am just doing when I play Paper Magic.					
When I am playing Paper Magic, I do not feel the urge to stop playing and see what is happening around me.					
I am at ease when I play Paper Magic.					
I put a lot of effort into playing the game on the tabletop.					
I feel comfortable with the game when I play Paper Magic.					
I usually feel content after I finish playing Paper Magic.					
I feel good with the time I spent when I finish a session of playing Paper Magic.					
I frequently feel I wasted my time playing Paper Magic.					
I am usually pleased after playing Paper Magic.					
I usually feel that I gain something from playing Paper Magic.					
I feel that I become a better Magic player as I play Paper Magic.					
The opportunity to add new cards to my collection is important to me when I play Paper Magic.					

15. Do you play Magic: The Gathering Arena?

□ **Yes**

□ **No**

(ATTENTION: ***The survey has been completed, if you have selected "No".)***

MAGIC: THE GATHERING ARENA EXPERIENCE

Answer the following questions thinking about your playing experience on Magic: The Gathering ARENA (MTG Arena).

16. Indicate the formats you play in MTG ARENA in order of preference. **(1 is highest. Select only the ones you play.)**

	1	2	3	4	5	6	7
Draft							
Sealed							
Standard							
Historic							
Special Events							
Brawl							
Other							

17. Put in order what you expect from the game when you play MTG Arena **(1 is highest, 8 is lowest.)**

	1	2	3	4	5	6	7	8
To have fun.								
To have social interaction.								
To have competitive play.								
To win.								
To learn.								
To improve to be a better player.								
To get promotions (cards, styles, sleeves etc.) from MTG Arena events.								
To collect cards and accumulate wildcards.								

18. Please evaluate below sentences according to your MTG ARENA experience.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I expect to be satisfied with the level of competition while playing MTG Arena.					
I know I am going to be challenged by my opponents when I play MTG Arena.					
I play MTG Arena to have hard games with good players.					
I wish I was able to directly communicate with people when playing MTG Arena.					
I like the idea of playing with my friends when I play MTG Arena.					
I would play MTG Arena more if I could interact better with my opponents.					
I enjoy playing MTG Arena a lot.					
I am usually happy with the level of excitement MTG Arena provides.					
When I want to have some fun, MTG Arena is one of my first choices.					
I feel fully focused to the game when I am playing MTG Arena.					

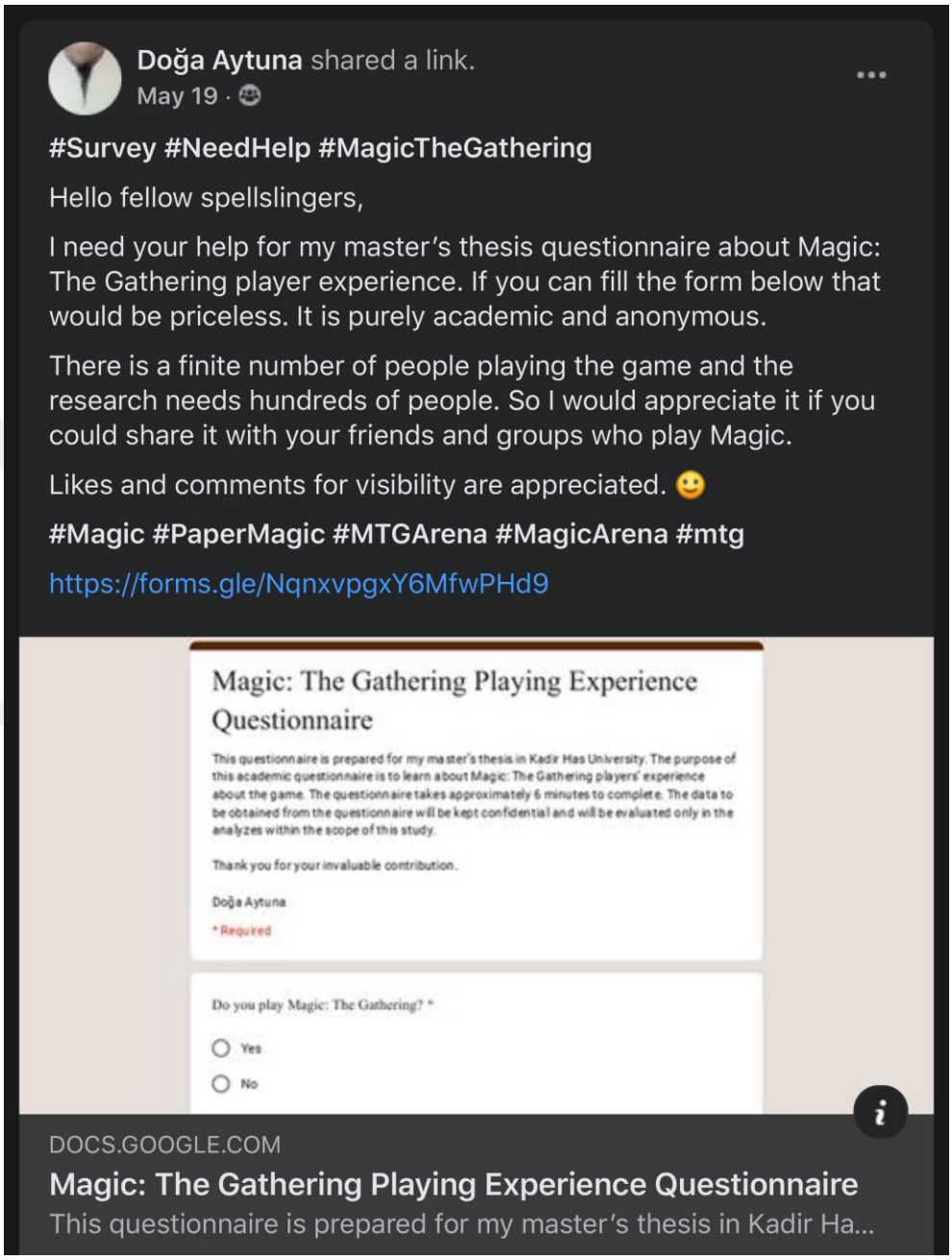
Outside distractions (such as phone alerts or other people talking) do not make me look away from the game when playing MTG Arena.					
I feel the game is something I am experiencing rather than something I am just doing when I play MTG Arena.					
When I am playing MTG Arena, I do not feel the urge to stop playing and see what is happening around me.					
I am at ease when I play MTG Arena.					
I put a lot of effort into playing the game on the MTG Arena.					
I feel comfortable with the game when I play MTG Arena.					
I usually feel content after I finish playing MTG Arena.					
I feel good with the time I spent when I finish a session of playing MTG Arena.					
I frequently feel I wasted my time playing MTG Arena.					
I am usually pleased after playing MTG Arena.					
I usually feel that I gain something from playing MTG Arena.					
I feel that I become a better Magic player as I play MTG Arena.					

The opportunity to add new cards to my collection satisfies me when I play MTG Arena.					

Thank you for your valuable contribution.

APPENDIX B

An image example of the shared post for recruiting respondents:



The post shared on Magic: The Gathering Facebook Group for recruiting respondents.