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Microtransaction Structures in Digital Card Games

Monetization, Microtransactions

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Thesis abstract

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Digital Collectible Card Games, or CCGs, are an extremely popular genre of video games, sporting a portion of the gaming industry. They are mostly backed by a monetization model focusing on a free to play experience backed by microtransactions, although a select few have an initial cost of entry.

The goal of the Thesis is to compare the microtransaction structures of at least two different digital CCGs based on the model, price, value, satisfaction, and relevance to gameplay of those games. The gameplay cannot be compared against one another in a satisfactory manner, due to the inherent complexity of video games. Although all are competing in the same market, they cannot be analysed against one another in those metrics; instead, they must be evaluated against themselves: Does the game achieve what it sets out to do?

In terms of the microtransactions, the offered goods, their price and value to the player are evaluated through first-hand experience and surveys, which provides insight to what players expect from the purchases they game make in-game, and how they affect the game itself, and whether the microtransactions give a distinct advantage while playing the games.

This Thesis primarily focuses on digital CCGs, but touches slightly on digital Trading Card Games, or TCGs, as well. Information was gathered through journals, online articles, and other written works, as well as online surveys directed at enjoyers of digital card games. Insight into the subject was also done through experiencing the gameplay firsthand.

The study found dissatisfaction with some pricing structures, albeit on the side of gameplay the players of digital CCGs were content with the complexity and content offered, albeit several bugs affecting the gameplay were also raised as a cause for concern.

¹ Keywords: Videogame, Card Game, Monetization, Microtransaction, Player-Satisfaction

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Digitaaliset keräilykorttipelit ovat erittäin suosittu videopeligenre, jolla on keskeinen rooli peliteollisuudessa. Niitä tukee enimmäkseen kaupallistamismalli, joka keskittyy mikrotransaktioiden tukemaan, ilmaiseksi pelattavaan kokemukseen. Jotkut pelit toimivat yhä normaalisti, mikä tarkoittaa, että niillä on yhä ostohinta, ennen kuin niitä voi pelata, vaikka niissä on mukana mikrotransaktioita.

Opinnäytetyön tavoitteena on vertailla vähintään kahden eri digitaalisen korttipelin mikrotransaktiorakenteita perustuen näiden digitaalisten keräilykorttipelien malliin, hintaan, arvoon, pelaajatytyväisyyteen ja merkitykseen pelattavuuden kannalta. Pelattavuutta ei voi tyydyttävästi vertailla videopelien luontaisen monimutkaisuuden vuoksi. Vaikka kaikki kilpailevat samoilla markkinoilla, pelejä ei voi vertailla keskenään näillä mittapuilla, vaan niitä on arvioitava suhteessa itseensä: saavutetaanko pelillä se, mitä sillä on tarkoitus saavuttaa?

Mikrotransaktioiden osalta arvioidaan tarjottuja tuotteita, niiden hintaa ja arvoa pelaajalle ensikäden kokemuksen ja kyselyiden avulla, mikä antaa käsityksen siitä, mitä pelaajat odottavat pelin sisäisiltä ostoksilta ja miten ne vaikuttavat itse peliin sekä tarjoavatko mikromaksut selkeän edun myös pelejä pelattaessa.

Tämä opinnäytetyö keskittyy digitaalisiin keräilykorttipeleihin, toki osa siitä koskettaa myös tavallisia keräilykorttipelejä. Suomen kielellä ei ole helppoa vastinetta, mutta Englannin kieliset lyhennykset näille ovat CCG ja TCG. Erona on, että CCG peleissä kortteja ei voi vaihtaa toisen pelaajien kanssa. Tietoja on kerätty lehtien, nettiartikkeleiden ja muiden kirjoitettujen töiden kautta, sekä netti kyselyistä, jotka oli suunnattu digitaalisten korttipelien pelaajille. Näkemys aiheeseen otettiin myös ensisijaisen pelikokemuksen mukaan.

Tuloksena kävi ilmi tyytymättömyyttä joitain hintoja kohtaan. Pelattavuuteen liittyen keräilykorttipelien pelaajat olivat tyytyväisiä pelien mutkikkuuteen ja sisältöön, vaikkakin peleissä oli joitain pelattavuuteen vaikuttavia vikoja.

¹ Asiasanat: Videopeli, Korttipeli, Kaupallistamismalli, Mikromaksu, Pelaajatytyväisyys

TABLE OF CONTENTS

Thesis abstract	2
Opinnäytetyön tiivistelmä	3
TABLE OF CONTENTS.....	4
Pictures, Figures and Tables	6
Terms and Abbreviations.....	7
1 Introduction	8
2 Research.....	9
3 Hearthstone.....	10
3.1 Hearthstone Impressions	10
3.1.1 Hearthstone Gameplay	11
3.1.2 Hearthstone Collection and Currency	11
3.1.3 Hearthstone E-Sports	12
4 Marvel Snap.....	14
4.1 Marvel Snap Impressions.....	14
4.1.1 Marvel Snap Gameplay	14
4.1.2 Marvel Snap Collection and Currency.....	15
5 Other Games.....	16
5.1 Gwent.....	16
5.2 Faeria.....	17
6 Microtransactions	18
6.1 Types of Microtransactions	18
6.1.1 Expansion Packs	18
6.1.2 Downloadable Content.....	19
6.1.3 Battle Passes	20
6.2 Controversies	20
6.3 Microtransactions in Hearthstone	21
6.4 Microtransactions in Marvel Snap	22
7 Methodology.....	24
8 Online Surveys.....	25

8.1	Hearthstone Survey Results.....	25
8.2	Marvel Snap Survey Results	26
9	Data Comparison	28
9.1	Appeal to Players	28
9.1.1	Player Profiles.....	28
9.1.2	Correspondence to Games.....	29
9.2	Microtransaction Appeal.....	31
10	Conclusion	33
10.1	Pitfalls of the Thesis	33
	BIBLIOGRAPHY	35
	APPENDICES	38

Pictures, Figures and Tables

Picture 1. Horse Armor	19
Picture 2. Yogg-Saron, Hope's End	Error! Bookmark not defined.
Figure 1. Hearthstone E-Sports	13
Figure 2. Gwent E-Sports	16
Table 1. Arcane Dust Expenditure	12
Table 2. Microtransaction Comparison	32

Terms and Abbreviations

TCG	Trading Card Game
CCG	Collectible Card Game
MMORPG	Massively Multiplayer Online Role Playing Game
E-Sports	Electronic Sports
Microtransaction	A business model where users can purchase virtual goods with micropayments within a game
Free-To-Play	A videogame with no cost-of-entry, the game can be downloaded and played freely
Arcane Dust	A currency in Hearthstone which is gained from duplicate cards and used to create new cards
Lootbox	A virtual purchase in the form of a box or a pack which contains a set amount of randomized goods
Skins	A term for a virtual item that changes how the game or characters look.
Blizzard	Known as Blizzard Entertainment, a company that develops games
CD Projekt Red	The game development side of CD Projekt S.A, a polish software company
Abrakam	A company that develops games
DLC	Downloadable Content
Pay-To-Win	Microtransactions or in-game purchases that lead to a distinct advantage over those who do not purchase them

1 Introduction

Customizable Card Games have steadily risen in popularity since the unexpected rise of a new genre on mobile in 2012 in the west (Nutt, 2013). In 2016, the estimated revenue for virtual Trading Card Games (TCGs) was \$1.4 billion, Hodge et al. (2019, p. 375) with the physical TCGs reaching an estimated revenue of \$4.3 billion.

It should be noted that the major key difference between TCGs and Collectible Card Games (CCGs) is that in the former the cards that a player can collect can be traded between different players of the game, while in the latter the cards that a player can collect cannot be traded between different players. While the distinction is important, ultimately the two different genres still compete in the same marketplace.

Digital TCGs often have a physical version that preceded the digital version, while digital CCGs often do not have a physical version but exist purely in a virtual form. The Thesis focuses on digital CCGs rather than TCGs, which limits the selection of games that are introduced. The specific focus is on two different digital CCGs, which are Hearthstone and Marvel Snap by two different developers, but with some shared background. Other similar games will be briefly mentioned.

The Thesis itself is split into several parts. The first part will delve into the research portion of the Thesis, while the following parts will explain the gameplay of the chosen games, as well as short examples of other digital Card Games. The part after that will dive into the background of microtransactions as well as the structures of the chosen games, and examples from other games as well. Following this is the methodology used for conducting the research and the results of surveys sent as a part of the Thesis. Afterward, there is an attempt to form an adequate data comparison based on collected data from previous parts. The Conclusion will touch on the results of the work, mainly what they show and what could be done better for future research.

2 Research

The research portion of the Thesis involves a combination of qualitative and quantitative research, which forms a mixed research method. To this end, quantitative research is done in the form of collecting empirical data on the cost of microtransactions, while the qualitative research will be focused on due to the survey portion of the thesis and gameplay analysis. As analysis of gameplay is subjective it is vital to gather as many responses as possible from a wide variety of players.

This Thesis does not aim to answer a specific highly research question, such as whether one method of using microtransactions is better than another, or if the gameplay of one game is superior to the other but aims to explore the relationship between gameplay and microtransactions, specifically with digital CCGs.

3 Hearthstone

Hearthstone was in development by Blizzard Entertainment as far back as 2008, although the game did not enter the public eye until June 2013 (Kollar, n.d.-a). It features characters and references to World of Warcraft, an MMORPG by the same developer. Hearthstone is a free to play digital CCG which is advertised as casual fun (Blizzard, n.d.-a), albeit the Game, when played in non-casual matches, keeps track of the player's monthly progression in terms of a rank which increases based on performance. Free rewards are given at the end of every month based on this performance.

3.1 Hearthstone Impressions

The Main Menu of Hearthstone displays several options for different modes of games. Specifically, as of 2023, Hearthstone can be played in the Standard, Wild or Twist formats, which place different restrictions on which cards from the player's collection can and cannot be used.

The Tavern Brawl game mode changes weekly with a new rule each time, albeit sometimes this is recycled, meaning it is the same as one previously. This either poses a deckbuilding restriction, or players must engage each other with predetermined cards. The Arena and Duels modes work differently still but are ultimately just Hearthstone with further restrictions or rules on choice of cards. Further still, the player can choose to forgo challenging a random online opponent, and they may battle against a computer-controlled opponent instead, typically as a form of introduction or test. There also exists the Solo Adventure mode, which contains challenging computer-controlled opponents. The Solo Adventure mode typically increases the challenge or adds strange twists which normally cannot be experienced against other players in normal play. Battlegrounds and Mercenaries, which are yet more additional game modes, play with massive differences compared to the norm and do not require the player to own any cards.

From the Main Menu the player can access the shop or their collection as well. The collection of the player displays the entire binder of cards that the player has unlocked, which can be filtered based on set, cost, rarity, or specific keywords. In addition to this, the player can utilize Arcane Dust, a type of in-game currency, to directly add cards into their collection without

needing to purchase additional card packs, albeit Arcane Dust can only be acquired through the acquisition of duplicate cards.

3.1.1 Hearthstone Gameplay

Typical gameplay in a Hearthstone match with no additional rules follows a simple convention. Each player gains increasingly more resources each round that passes to play cards from their hand, they also draw one card from their deck each round that passes. The goal of the game is to deplete the health of the opposing player to zero. More powerful cards usually have a higher resource cost. Typically, cards will have special effects, the outcome of which is determined by the player themselves, or they are random in nature. In this sense, to win a match in Hearthstone a player will need a combination of skill and luck if they are at an even ground with their opponent.

Depending on the nature of a player's card collection they may have objectively worse or better cards than their foe, meaning their odds of winning can either increase or decrease. Each hero, which represents the player, is slightly different with their own unique power as well, which can be activated with an expenditure of resources in lieu of, or in addition of, playing cards. Furthermore, the choice of a player's hero also dictates which cards they can ultimately put in their deck. During the game the only communication available from player to player is through the use of emotes.

3.1.2 Hearthstone Collection and Currency

Each Hearthstone player will receive the same basic cards when they first download the game. They can then supplement their collection with additional cards by simply playing the game, as the game provides free handouts to help fill the player's collection. To improve the players' collection, they can purchase more cards from the in-game store by using one of the in-game currencies, they can utilize Microtransactions, they can simply play the game for limited free rewards, or they can craft them with Arcane Dust. Cards in Hearthstone are separated into four different basic rarities, which are Common, Rare, Epic and Legendary cards. In addition to this, Cards can have a quality as well, three of which are unavailable to the player unless they purchase card packs. Qualities are purely aesthetic and have no impact on the gameplay.

The rarity of a card determines the amount of Arcane Dust the player must use to craft or create one of those cards. In a player's deck they may only have up to two of the same Common, Rare, or Epic rarity card, with Legendary cards being the exception, where a player can only have one of each in the deck. There is no limit to the number of cards that a player can hoard in their Collection, but they are incentivized to transform duplicate cards into Arcane Dust. Crafting a card to add to the player's collection uses Arcane Dust, while disenchanting, essentially removing a card from the collection, grants the player an amount of Arcane Dust.

According to Table 1., the values for Arcane Dust are skewed, where a player will end up spending a disproportionate amount of Arcane Dust to gain cards compared to removing them for Arcane Dust. Crafting a Golden Card refers to its quality, where it simply improves the aesthetic, and has no relevance to gameplay. Similarly, turning a golden card into Arcane Dust yields more Arcane Dust. It is typically more advantageous to spend other in-game currency to purchase card packs, or use Microtransactions, to gain more cards, rather than rely on the in-game mechanic of creating Cards.

Table 1. Arcane Dust Expenditure (2023).

Arcane Dust	Crafting		Disenchantment	
Quality	Regular	Golden	Regular	Golden
Common	40	400	5	50
Rare	100	800	20	100
Epic	400	1600	100	400
Legendary	1600	3200	400	1600

3.1.3 Hearthstone E-Sports

According to Figure 1, Hearthstone has had E-Sports tournaments since 2017 with a total combined prize pool of over 40 million dollars (Echarts, n.d.-a), albeit the popularity of the tournaments has gone down on average since 2017. There have been players from at least 10 different countries, making Hearthstone a very global E-Sport. In 2024 there will be three organized tournaments by Blizzard sports a prize pool of \$50,000 for the winner between 16 players for the first two, and a later tournament will be held between the best 8 players for a prize pool of \$350,000 (Blizzard, 2024).



Figure 1. Hearthstone E-Sports (Echarts, n.d.-a).

4 Marvel Snap

Marvel Snap, typically written in all caps, was developed by Second Dinner founded in 2018 (Apple, 2023) and is attributed to Ben Brode and Hamilton Chu, with Ben Brode being a former developer for Blizzard and a major contributor to Hearthstone. Marvel Snap was re-released in 2022 (Marvel, n.d.-a) and it features characters and references to the Marvel universe. Marvel Snap is a digital CCG that is free to play and features fast gameplay (Marvel Snap, n.d.-a). Due to the fast nature and gameplay, Marvel Snap has no official E-Sports support. Marvel Snap keeps track of the player's progression through their performance and wins, providing rewards every time they reach certain milestones.

4.1 Marvel Snap Impressions

The Main Menu for Marvel Snap is very involved, mainly displaying options for claiming free rewards by completing certain requirements as well as a central button which brings one straight to a match with another player. Specifically, as of 2024, Marvel Snap can be played in the Friendly Battle and Conquest modes, which work slightly differently from one another. From the Main Menu the player can access the shop or their collection as well. The collection of the player displays the entire binder of cards that the player has unlocked. During the game the only communication available from player to player is through the use of emotes.

4.1.1 Marvel Snap Gameplay

Typical gameplay in a Marvel Snap match with no additional rules is rather complex due to the inherent randomness involved. Each player gains increasingly more resources each round that passes to play cards from their hand, they also draw one card from their deck for each round that passes. The goal is to gather the largest amount of power in two of the three locations as compared to the opponent within 6 Rounds. Each card played has a power value, with more powerful cards usually having a higher resource cost. Typically, cards will have special effects, the outcome of which is determined by the player themselves, or they are random in nature. In Marvel Snap, cards tend to have less random effects as compared to the three locations, which are unpredictable, meaning the player must navigate the three locations with strategy and skill to defeat their opponent. Depending on the nature of a

player's card collection they may have objectively worse or better cards than their foe, meaning their odds of winning can either increase or decrease.

4.1.2 Marvel Snap Collection and Currency

Each Marvel Snap player must go through a training section when they first download the game. Through this training section provides them with the same basic cards and they can improve their collection by going through this training section. After completing the training section, the player can move onto the game proper, where they can unlock all remaining cards and play the Conquest mode. To improve the players' collection, they can purchase more cards from the in-game store by using one of the in-game currencies, they can utilize Microtransactions, or they can simply play the game for free rewards. Cards in Marvel Snap upgrade their rarity by spending another form of in-game currency exactly for that purpose. Improving rarity only aesthetically improves the card and has no impact on the gameplay. Within the player's collection they can only have one of each card with their deck being formed of those cards.

5 Other Games

Other games that were not focused on during this Thesis have briefly been addressed. These games are relevant due to their nature, but one aspect or another excluded them from the primary focus. Gwent, for example, would normally have been the second focus instead of Marvel Snap, but due to the circumstances of less support forced a switch to the new and still strongly supported Marvel Snap instead.

5.1 Gwent

Gwent was developed by CD Projekt Red, though it was not originally a digital CCG, but rather a small minigame in another game by the same developer, The Witcher 3: Wild Hunt, released in 2015. The game itself did not blossom to a full release digital CCG until 2017, (Dinsdale, 2022) also birthing an E-Sports scene with total awarded prize pool money of over \$1.5 million (Esports Earnings, n.d.-a). In 2024, the developers of Gwent decided to loosen support for the game and switched it into the hands of the players instead. In addition to this, CD Projekt Red will no longer plan events, and hopes that the players will continue to do so (Playgwent.com, n.d.-a).



Figure 2. Gwent E-Sports (Echarts, n.d.-a).

5.2 Faeria

Faeria was developed by Abrakam and was released in 2016. The game featured unique gameplay and a unique monetization model. The developers have moved to different projects, and with a low player-count, Faeria was unsuitable for the Thesis. The monetization model for Faeria was originally a single purchase, with no microtransactions required for extra card packs, much like a more traditional game. In 2017, however, Faeria moved to a free-to-play model (Abrakam, 2016) and later added Downloadable Content (DLC) in the form of expansion content which did need to be purchased.

6 Microtransactions

Microtransactions are the monetization model of many digital CCGs, including ones touched on this Thesis. With Microtransactions, players make small purchases within the game, and have become a vital part of the gaming industry (Touro University Worldwide, 2016). There are many ways on how to do microtransactions, but the primary one for CCGs is via the sale of cards & skins for the players. It is also possible to purchase expansions to the game, which unlock new modes of gameplay, or in-game currency, which is usually spent the same way on cards & skins.

Microtransactions and DLC are both known as a secondary market for games, but for most digital CCGs this has become their main way of revenue, especially if they are free to play (Colagrossi, 2023). The origins of microtransactions in modern fashion date back to the early 2000's and were pioneered by free to play games of the time. In 2003, MapleStory allowed the purchase of virtual items with in-game currency as well as real money (*CGMagazine*, 2023).

6.1 Types of Microtransactions

Microtransactions did not begin as minor purchases though, but date their history back to the early 1980's with the first foray into post-launch paid content in the form of an expansion called *Dunjonquest: Upper Reaches of Asphai* (Cook, 2016).

6.1.1 Expansion Packs

The sale of expansion packs can be seen as the first form of microtransactions. Expansion packs were post-launch content that was either given to the players for free, or it was sold at a price usually cheaper than the original sale price of the game. This, however, is not always the case. Notoriously, according to Agar (2020), the Sims series contains multiple expansion packs priced up to similarly as the base game, making purchase of all of them incredibly expensive for the consumer without resorting to discounts. The moniker of expansion packs has later rolled out to be similar with Downloadable Content (DLC), with an expansion pack being typically being referred to as a bundle of DLC (Bycer, 2014).

6.1.2 Downloadable Content

The sale of what could be called DLC was first experimented with in Japan (*Polygon*, 2022) Bethesda Games as a developer of video games is widely known for post-launch expansion packs to its games to such titles such as Elder Scrolls III: Morrowind, which came in 2002, with its expansion pack, Tribunal, released first in November of 2002 (*GameFAQs*, n.d.-a). In 2006, Bethesda Softworks launched its first true DLC for its game at the time, Elder Scrolls IV: Oblivion, only known as Horse Armor (*Polygon*, 2022). Priced at \$1.99, the only addition to the game it provided was cosmetic armor for the horse of the player character. Post 2006, microtransactions and DLC have appeared in multiple games with differing prices.



Picture 1. Horse Armor (*Polygon*, 2022).

According to Lu (2023), Grand Theft Auto V, launched in 2013, had an estimated production cost of \$265 million dollars and has created an estimated revenue of \$7.7 billion dollars since then, while only 185 million copies of the game were sold. The microtransactions one can utilize in GTA V include in-game currency, skins, weapons, and cars, albeit these directly

impact the gameplay. However, GTA V is not strictly player-vs-player competitively, unlike most digital CCGs, which means microtransactions can affect gameplay without harming the player experience. In CCGs, purchasing cards using Microtransactions can create a competitive advantage, thus leading to a pay to win scenario.

6.1.3 Battle Passes

A battle pass is another way for a developer to monetize their game, and ties into the concept of microtransactions neatly. A battle pass is designed to reward the player with additional in-game currency, resources or skins based on simply playing the game at a steady pace. The origins of a battle pass system can be traced to DotA 2 in 2013 (G2A, n.d.-a) and its introduction marks the beginning of a slew of different battle pass systems added to video games with post-launch monetization systems, which includes both Hearthstone and Marvel Snap.

A battle pass not only functions as a monetization system but also addresses player retention, to keep players in the game. A personal example of the function of this is with an online first-person shooter game Rainbow Six: Siege, where all free rewards of the battle pass system were designed to be unlocked only if the game was played several hours daily, unless a purchase was made to progress with the battle pass at a faster rate. Battle passes are often timed, which means players will lose out on potential rewards if the game is not played often. This, however, is not always the case, with some battle passes being replayable even when the timed period has ended. According to Barnes (n.d.) this creates some controversy but is also where monetization lies within. A battle pass will often contain a combination of free and premium rewards which are unlocked while playing the game or when completing certain achievements or milestones. Free rewards are available to everyone, while premium rewards are only available to those who purchase a “premium pass” or a similar item from the in-game store using either real money or in-game currencies, which are, of course, also bought with real money. A pass will also often speed up the progression of the battle pass, which leads to acquiring rewards earlier.

6.2 Controversies

It is hypothesized that microtransactions may affect individuals negatively. Unlike with actual gambling, where there is a monetary incentive, purchases with digital games directly

influence the player with a system of reward (Gibson et al. 2022). There is a chance for a reward that is thought to be more expensive than what the purchase is worth, motivating the player to spend in-game currency or money towards that goal.

In January 2023, the European Parliament adopted a report calling for harmonized EU rules to achieve better player protection in the online video game sector.

Consumer protection, policy visibility and study as to the effects of microtransactions, loot boxes and their likeness to gambling have been a hot topic (Dentons, 2023). This has led to some improvements, such as companies being forced to display the probability of obtaining certain rarities of items from any randomized loot boxes or packs (Sacco, 2019). Still, there are worries of players, especially those of the younger generation or those vulnerable, being exploited by the system. The urge to achieve or unlock everything at a quicker pace can result in unnecessary spending or addiction (The Enterprise World, 2023). Newly installed policies will hopefully protect those more vulnerable to the vices of gambling.

6.3 Microtransactions in Hearthstone

There are three types of in-game currency within Hearthstone. These are known as Gold, Runestones and Arcane Dust. The former two currencies can be used in the in-game store for various purchases. Most items have a cost in either Gold, Runestones or real-life money, but there are certain purchases that can only be made with one or the other, or some combination of. Gold can be gained simply from playing the game, but Runestones can only be acquired by purchasing them with real-life money. Some game modes also have an entry fee in the form of Gold or real-life money, but they reward the player based on their performance with gold, cards, card packs or Arcane Dust.

Arcane Dust can only be acquired by eliminating duplicate cards from one's collection, or as a limited reward, and can only be used to make new cards. A Card Pack typically contains five random cards each, although one of these cards is guaranteed to be of at least Rare in Rarity. The packs of Hearthstone include a pity mechanic, which prevents the player from receiving too many duplicates, and they receive cards of a guaranteed rarity every few packs (Battle.net, n.d.-a).

Prices from the in-game store for typical purchases, in the year 2024:

- 1 Pack, 100 Gold
- 1 Golden Pack, 400 Gold / €19.99
- Catch-Up Bundle, €14.99 / 1500 Runestones
- 2 Card Packs, €2.99
- 5 Card Pack Bundle, €49.99 / 5000 Runestones
- 500 Runestones, €4.99
- Tavern Pass, €19.99 / 2000 Runestones
- Mini-Set, €14.99 / 2000 Gold
- Golden Mini-Set, €69.99 / 10000 Gold
- Hero Skin, €6.99 / 1000 Gold
- Hero Skin & Card Back Skin, €9.99 / 1500 Gold
- Hero Skin & 5 Card Pack Bundle, €9.99 / 1000 Runestones

Hearthstone also contains a battle pass system which rewards the player through continuous gameplay. By purchasing the Tavern Pass the player is awarded premium rewards from the existing battle pass. Battle passes in Hearthstone are seasonal, with no opportunity to replay previous battle passes.

6.4 Microtransactions in Marvel Snap

There are three types of in-game currency within Marvel Snap. These are known as Credits, Gold, and Boosters. The former two currencies can be used in the in-game store for various purchases. Credits can be used to gain Boosters, and Boosters are used to improve the rarity or quality of the cards, while Gold can be used to purchase more cards. Cards can also be purchased with real-life money. Credits, Gold, and Boosters can all be acquired by playing the game, but it is generally faster to acquire them by simply paying for it. Unlike Hearthstone, there is no system to recycle cards for extra Boosters. Marvel Snap does not contain randomized packs with multiple rewards, albeit one can purchase mystery cards which are a singular card that is essentially randomized.

Prices from the in-game store for typical purchases, in the year 2024:

- Welcome Bundle, €2.99
- Premium Mystery Card, 800 Gold
- Select Card, 700 Gold

- Avatar / Skin, 400 Gold
- Boosters, 25 Credits
- 500 Credits, 400 Gold
- 300 Gold, €5.99
- Premium Pass, €11.99

Marvel Snap also contains a battle pass system, which rewards the player through continuous gameplay. By purchasing a premium pass, the player can receive premium rewards from the battle pass. Battle passes in Marvel Snap are seasonal, with no opportunity to replay previous battle passes.

7 Methodology

The gameplay review for CCGs as a part of this Thesis was easy to acquire through personal experience as anyone can download and try the games operating on a free to play model. Reaching the players of the games to acquire data from their experience, and their thoughts, was another matter entirely, as neither game provides an opportunity to chat with the opposing player easily. It is possible to send a friend request, but an easier methodology was through an online survey. Both Hearthstone and Marvel Snap are digital CCGs, which means the only way to play them is to use a computer or a mobile device, there are no physical versions of the games.

In addition to this, both games are online-only, which means an internet connection is required to play both games. According to Nayak and Narayan (2019, p. 33) the Online Survey technique is usable for a study that fits the characteristics of this Thesis. A wide range of people with different backgrounds must be reached. The purpose of the Thesis was for a general overview of microtransactions in CCGs globally, rather than in a country such as Finland, so there was no regard for limiting the sample size for the Thesis. For future research more personal surveys could be sent for players of CCGs in a smaller region.

8 Online Surveys

An online survey was sent as a part of the Thesis during December 2023 through spring of 2024, concluding in April 2024. The online survey featured questions for Hearthstone and Marvel Snap regarding the gameplay aspects and pricing of the game. The surveys used for the Thesis both contained 11 similar questions, with slight changes depending on which players of which game were targeted. Both games part of the Thesis, Hearthstone and Marvel Snap, have different game modes as well as in-game purchases.

The player population was reached through contacting friends who play the games, or similar games, as well as visiting online hubs for players of these games. The survey was performed using Google Forms and all respondents were anonymous. An attempt was made to address the disadvantages of the method, such as abandonment of the survey (Sue V. & Ritter A., 2012, pp. 18–19) by keeping it short and concise with only relevant information to the Thesis. Limited population was not seen as an issue due to the requirement of the internet to play digital CCGs in the first place.

8.1 Hearthstone Survey Results

The Hearthstone Survey was sent out as a first batch in late 2023, and later as a second batch in 2024. In November of 2023, Hearthstone received its third expansion for the year, Showdown in the Badlands, which proved an excellent opportunity to receive survey results. (Blizzard, n.d.-a). 61 people answered the survey consisting of 11 questions. The results displayed here are what is considered relevant for the purposes of the Thesis, rather than a complete breakdown of all individual numbers.

The survey results corresponded to most of the players, around 70%, ranging between the ages of 25 to 29. Regarding how often they played Hearthstone around 40% responded that they played only very rarely or not at all, with the rest playing at least once a month if not more. Around 70% were introduced to Hearthstone originally through a friend or family member or a content creator. 100% of respondents commented that they played the Standard game mode, with the second most popular being Tavern Brawl at around 60%. The least popular game mode was Mercenaries at around 10%.

A variety of other card games were represented as being played as well, with the most popular answer being Yu-Gi-Oh! and the second most popular being Magic the Gathering. At least half of the respondents commented on having spent no money at all on Hearthstone, but if they did, they spent more than \$20 to an upwards of \$90. The Card Packs were most represented in interest of in-game purchases at 25%, with the rest receiving sporadic answers ranging at 10% interest.

Nearly all the respondents answered that the in-game purchases were not priced fairly, with one third of the respondents commenting that the in-game purchases are simply too expensive, while the others lamented that they simply were not priced fairly with no other comment.

The problems that players faced ranged from bots, a form of automated player that exists to farm wins or in-game currency, unbalanced design, and a buggy client. When asked what made Hearthstone great there were a multitude of answers with no clear majority. Some preferred to play a specific hero, while others preferred the multiple game modes. Overall, it seemed as though nearly all aspects of Hearthstone appeal to someone, with no clear winner. The respondents rated Hearthstone with an overall score of 3/5.

8.2 Marvel Snap Survey Results

The Marvel Snap survey was sent out as a single batch in spring of 2024. 44 people answered the survey consisting of 11 questions. The results displayed here are what is considered relevant for the Thesis, rather than a complete breakdown of all numbers.

The age of the players according to the survey as about 60% around the ages of 18 to 24 and about 20% around the ages of 25 to 29. Around half of all respondents, or 50%, play Marvel Snap weekly. Around 60% were introduced to Marvel Snap through online advertisement and nearly all the respondents play the standard game mode, Friendly Battle, with around 50% preferring to also play the other game mode, Conquest.

A variety of other card games were presented as being played as well, with the most popular answer being Hearthstone. At least 60% of the respondents commented that they had spent money on Marvel Snap with around \$20 to \$40 being the most usual amount. The in-game purchases that people were most interested in were Credits / Gold at 50% and around 30% for the Premium Pass.

More than half of the respondents at around 60% answered that the prices were fair, with the rest commenting that they were not, with no outliers to extreme dissatisfaction with the prices of the game.

Most of the critique towards Marvel Snap was attributed to lag or crashes, specifically on mobile devices, due to intense graphics. The respondents praised the game for its fast pace and balancing. The respondents rated Marvel Snap with an overall score of 4/5.

9 Data Comparison

Compiling the general gameplay experience, design for the games with the survey results provides a point for the comparison of data. Initially, the gameplay can be used to briefly extrapolate the appeal to the players for both games, using established player profiles as a baseline. Next, the survey results will be considered in comparison with the microtransaction structures to see what the appeal is to the players, and if it balances out with the gameplay.

9.1 Appeal to Players

Comparing the gameplay and the survey results can be used to determine what is the appeal to the players for each of the games. According to Schell (2008), there are four player types, which are Achievers, Explorers, Socializers and Killers. Rosewater (2013) eliminates, or rather, combines one of these player types when talking about their own model for player profiles in Magic: The Gathering, which is a physical TCG that has also evolved into a digital version. While this is a different game, the similarity of the genre leads to credence to cross-connection.

The player profiles are named Timmy, Johnny, and Spike. The cards available to be used in Hearthstone correspond to these player types and player profiles loosely. According to the survey results, Hearthstone has mass appeal, which allows them to interact with all different player profiles, not only with the card variety, but with the multitude of different game modes. Marvel Snap, in comparison, is a lot simpler and lacks a true competitive scene, which makes the game less appealing to competitive players, except in terms of simply increasing their in-game rank.

9.1.1 Player Profiles

Timmy prefers to win with quality, rather than quantity, which means the cards they use have subjective worth in terms of their aesthetics and strength, in short, they prefer big or valuable cards. Johnny is a creative player, preferring to win on their own merits, assembling unique a combo of different effects to eventually single out a victory. Spike is the competitive player, aiming to win with whatever means necessary, short out outright cheating. They disregard quality and aesthetics purely to win more. Hearthstone has different cards that appeal to all these player profiles.

When backported to Bartle's Taxonomy of Player Types (Rosewater, 2013), Timmy fits into the category of Achiever, Johnny fits into the category of Explorer and Spike fits into the category of Killer. The model of Rosewater (2013) does not touch on the social aspect of games much.

9.1.2 Correspondence to Games

Hearthstone has five distinct varieties of cards based on their effects alone, albeit the game of Hearthstone does not list these as official classifications, they are merely observations made through playing the game extensively.

These card varieties are:

- Completely Random
- Semi Random
- Controlled Random
- Situational
- Basic

Hearthstone possesses an incredible number of cards that rely on randomized effects to produce a result, as such 3/5 of the varieties are reserved for different types of randomness. "Completely Random", "Semi Random" and "Controlled Random" cards influence the state of the game in a random fashion in a way that is unpredictable, with more predictability added as randomness goes down.

Cards like this are hard to use, and dangerous at a competitive level, but are occasionally defining on a competitive level, as was the case with a card called "Yogg-Saron, Hope's End" (Bindloss, 2016). The competitive viability of the specific card was a hot issue, and it could be seen as one of the most impactful cards in Hearthstone since its release (Van Hoose, 2016). In terms of gameplay, the battle statistics of the card in relation to its resource cost are abysmal, and the effect is wildly unpredictable, yet the card found use in competitive play because of the random, often-detrimental effect, was effective from positions where the player was already at a disadvantage. It effectively neutralized the board state to allow for a comeback. The effect itself could also grow the longer the game went on for, which gave a higher chance for a result that would effectively neutralize the board.

In Marvel Snap, randomness is less pronounced on the cards themselves, but rather on the locations that the game revolves around. As Marvel Snap has no E-Sports support, playing on a competitive level does not rely on that randomness.



Picture 2. Yogg-Saron, Hope's End (*Hearthpwn*, n.d.-a).

“Situational” cards usually have a unique effect that only applies in specific gameplay scenarios, as such it mostly appeals to Johnny. However, if a certain scenario applies with a higher rate of occurrence, players may also pick up “Situational” cards to improve their advantage in some situations. In terms of Marvel Snap, some cards could be considered situational, albeit that situation is more common than not.

“Basic” cards do not have any sort of randomization applied to them and have a clear and understandable effect on them. Before the card is even played, the player can calculate the exact situation that the game will be in after playing the card, barring exceptional circumstances. “Basic” cards, due to being clear and understandable, usually appeal to players who play casually, and strong “Basic” cards are preferred by competitive players. For a simple player, “Basic” cards can be a safer bet than randomization, albeit cards with randomization tend to have stronger effects.

In Marvel Snap, most cards could be “Basic” cards with a clear and understandable effect. But like with Hearthstone, cards that are more situational or random tend to be stronger.

9.2 Microtransaction Appeal

According to McAloon (2016), 77% of the Americans answering a survey on microtransactions believes that they can be a good thing for the longevity of games working on a free to play model. However, around 70% are not a fan of pay to win mechanics. It can be inferred that most players do not mind the model, but they can be against predatory prices on these games as compared to what the game offers instead.

It should also be noted that microtransactions can be seen in a heavily negative light if a game or game series that previously did not include a monetization model based on frequent in-game purchases is suddenly transformed to include one. An example of this is the Diablo game series by Activision Blizzard. According to Yin-Poole (2018) Blizzard faced incredible backlash from the reveal of their new mobile game, Diablo Immortal, to the point where they not only received booing from the audience, but during a Q&A session after the reveal a disgruntled audience member asked the following:

Is this an out-of-season April Fool’s joke? (BlizzCon, 2018).

The response was a roaring applause, both events suggesting that the audience members and potential players were not only displeased by the reveal of the game, but actively supporting harsh critique towards it. Previously, all Diablo games were not on mobile devices and have been fully-fledged releases on PC and consoles (*IGBD*, n.d.-a). While the games have featured DLC in the form of expansion packs, they did not contain microtransactions, albeit there was an attempt to add microtransactions Diablo 3 post-launch, but the system was never fully implemented (Wawro, 2015).

The survey results for Hearthstone Players and Marvel Snap players sent as a part of the Thesis showed that most Hearthstone respondents were distraught over the microtransaction prices of the games, where-as Marvel Snap respondents were less distraught over the prices of their game. Due to the difference in gameplay mechanics and deck-construction, the collectible aspect of the CCG, a direct comparison between card prices is not possible, but what is possible is the comparison of prices between the purchase of different in-game currencies,

cosmetics, bundles or passes that each game offers. A comparison tells us that while general purchases are more expensive on Marvel Snap, the bundles and passes are much more expensive on Hearthstone. In addition to this, the in-game shop of Hearthstone has many more purchases as compared to Marvel Snap, although this is due to the multiple game modes that Hearthstone offers, each with their own unique purchases, as well as the age difference between the games.

Hearthstone was published multiple years before Marvel Snap, allowing them to accumulate legacy content which is still on sale and being catered for. The expensive bundles and passes of Hearthstone seem to correlate with the survey results, with players being upset over high prices. The card packs of Hearthstone were also the most popular option of purchase, which are also cheaper in comparison to Marvel Snap. Likely due to the greater prices, as seen in Table 2, Hearthstone players reported a higher amount of money being spent on the higher end of the results.

Comparatively, players of Marvel Snap reported a greater interest in in the in-game currency purchases as well as passes. While in-game currency seems to be more expensive in Marvel Snap, the passes are cheaper. In addition to this, Marvel Snap players showed less dissatisfaction with the prices. While players were spending less money on Marvel Snap, the results were more consistent showing a more average spread on money spent as well as a higher interest on engaging with the microtransactions in general.

Table 2. Microtransaction Comparison.

Microtransaction	Hearthstone	Marvel Snap
Runestones / Gold	500 Runestones / €4.99	300 Gold / €5.99
Hero Skin / Cosmetic	€6.99	400 Gold
Catch-Up / Welcome Bundle	1500 Runestones / €14.99	€2.99
Tavern / Premium Pass	2000 Runestones / €19.99	€10.99

According to Balbo (2024) Hearthstone has 190,000 daily players on average with a high of 250,000 while according to Swan (2023) Marvel Snap boasts 70,000 concurrent players and has maintained this amount since its release. Hearthstone likely has more players due to the breadth of its content, established popularity, and competitive scene, which may also affect the pricing of its Microtransactions.

10 Conclusion

Conclusions drawn from analysis of gameplay and survey results correlate with one another, especially in terms of the microtransaction structures with only a slight anomaly in terms of purchase of in-game currency as compared to the pricing model. Both games pull a massive amount of attention on the CCG scene, with Hearthstone still showing E-sports relevancy in the year 2024. Still, as the survey results show, neither game is without faults.

On average, it seems as though players of Hearthstone adore the content of their game, with each game mode the game offers pulling attention from Players, with an emphasis on the established game modes as compared to the special ones but are dissatisfied with the high prices of microtransactions and the number of different bugs and bots in the game.

Players of Marvel Snap are more content with the pricing of their microtransactions and play the game for its established purpose, to be a fast-paced casual CCG, albeit the intense graphics of the game are too much for mobile devices of an older generation. Due to the relatively young nature of the game, there is not much expansion content to review, but due to its popularity it's likely that it will receive continuous support and expansion.

10.1 Pitfalls of the Thesis

The many obstacles encountered during the making of this Thesis can be rectified for future projects. Initially, the scope of the Thesis was either too wide or too narrow, with an eventual focus found on gameplay aspects, microtransactions and surveys and the data comparison within. However, due to the narrower scope, relevant research material was difficult to find, with a later attempt requiring a slightly wider focus to allow the inclusion of more relevant research material.

Problems were also found with the content of the survey and the number of respondents reached. With daily players reaching the hundreds of thousands for both games, and millions of accounts made, any future surveys should be sent through multiple different channels to reach the maximum number of players, such as with the help of the developers of the game or relevant content creators.

In addition, the survey questions, designed to take as little time as possible with the maximum amount of information acquired, were left with questions that garnered vague answers to important questions, especially regarding the pricing of microtransactions and what could be considered too expensive, worth it, or even too cheap. In future surveys, the questions must be planned carefully, with the help of a test focus group, to maximize the amount of information that can be gathered.

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APPENDICES

Appendix 1. Hearthstone Menu

Appendix 2. Hearthstone Battle

Appendix 3. Hearthstone Card Example

Appendix 4. Marvel Snap Menu

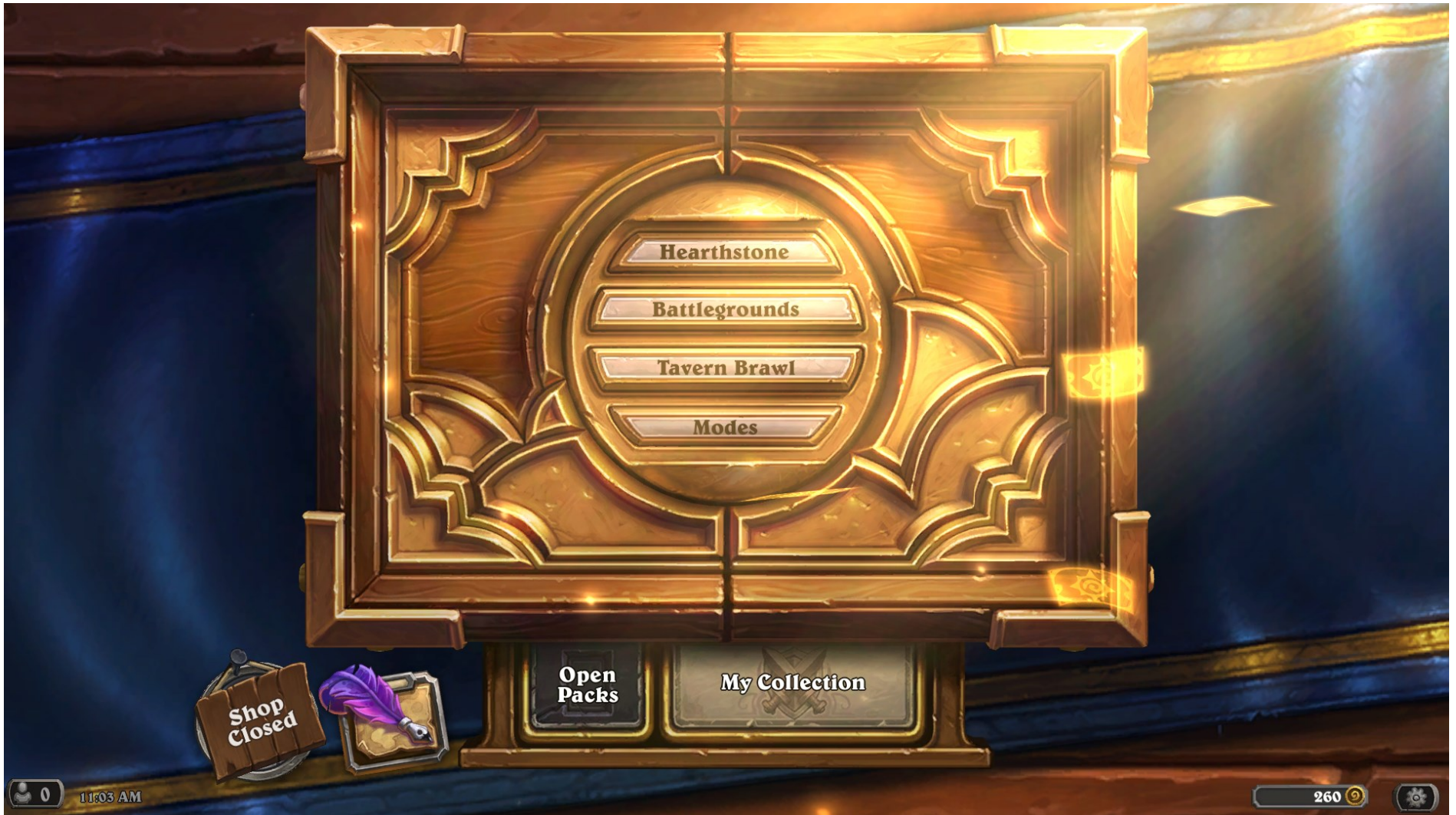
Appendix 5. Marvel Snap Battle

Appendix 6. Marvel Snap Card Example

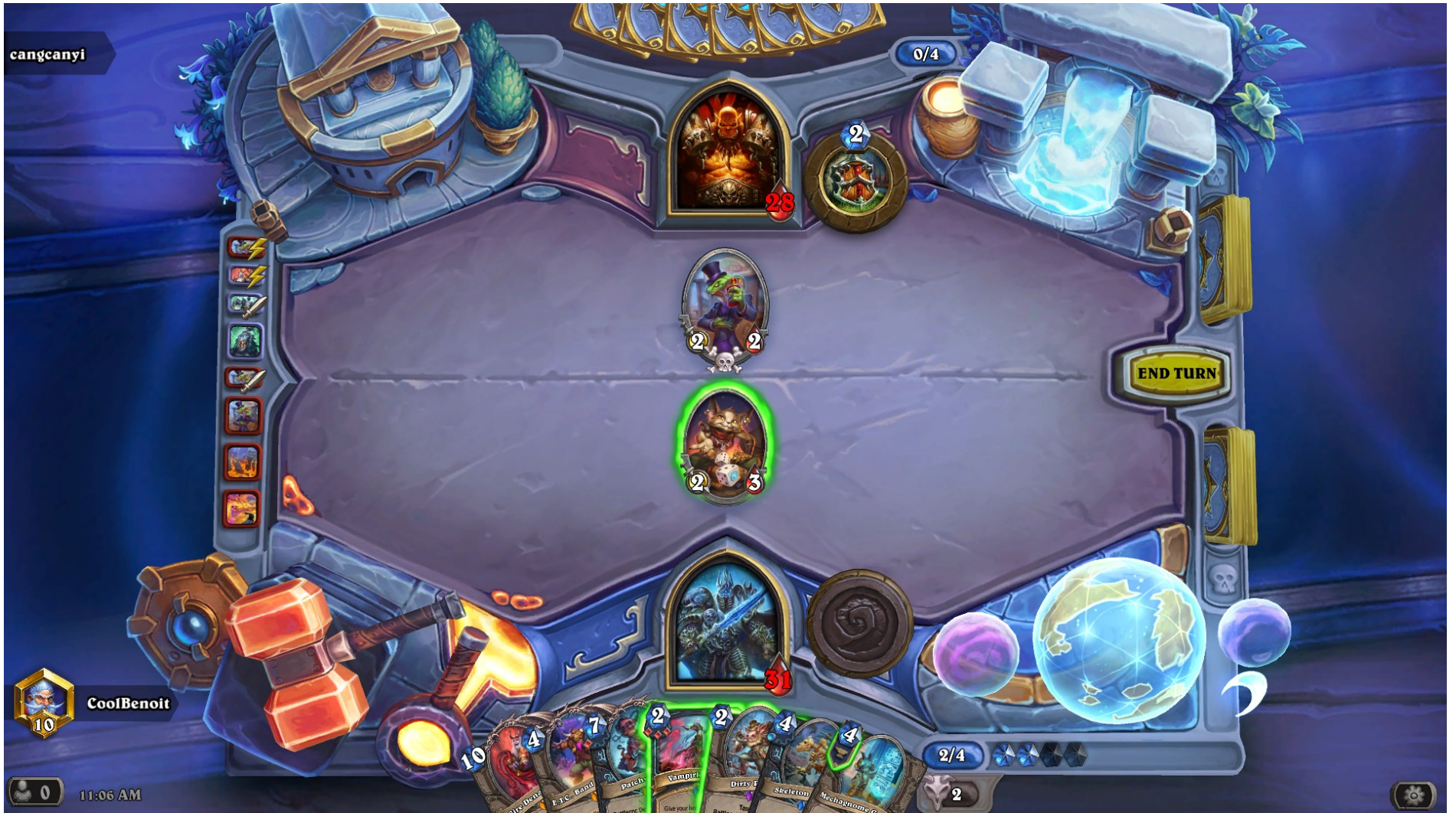
Appendix 7. Hearthstone Survey Questions

Appendix 8. Marvel Snap Survey Questions

Appendix 1. Hearthstone Menu



Appendix 2. Hearthstone Battle



Appendix 3. Hearthstone Card Example



Appendix 4. Marvel Snap Menu



Appendix 5. Marvel Snap Battle



Appendix 6. Marvel Snap Card Example

★ **BASE CARD**

0 1,375

Card Information

SERIES 1

Artists
/ JOMARO KINDRED
/ RYAN KINNAIRD



2 **2**

WOLVERINE

When this is discarded or destroyed, regenerate it with +2 Power at a random location.

 **MAKE ME A DECK** 

ESC Close

Appendix 7. Hearthstone Survey Questions

Question 1. What is your age range?

- 12 to 17
- 18 to 24
- 25 to 29
- 30 to 39
- 40+

Question 2. How often do you play Hearthstone?

- Daily
- A couple of times a week
- Weekly
- Once every few weeks
- Once a month
- Very rarely
- Not at all

Question 3. How did you get introduced to Hearthstone?

- Online Advertisement / Promotion
- Content Creator / Influencer
- Friend / Family Member
- Active Search
- Other

Question 4. Which game modes do you play?

- Standard
- Wild
- Twist
- Arena
- Tavern Brawl
- Battlegrounds

- Duels
- Solo Adventure
- Mercenaries

Question 5. Do you play any other Card Games? If so, please detail as best as you can. These can include digital and physical card games.

Question 6. How much money have you approximately spent on Hearthstone?

Question 7. What in-game purchases are you interested in?

- Card Packs
- Structure Decks
- Hero Cosmetics
- Tavern Pass
- Runestones
- Other
- None

Question 8. Do you think that in-game purchases are fairly priced? If so, please detail as best as you can.

Question 9. Do you think Hearthstone has any problems with the gameplay, client or otherwise? If so, please detail as best as you can.

Question 10. What is great about Hearthstone?

Question 11. How would you rate Hearthstone overall?

Appendix 8. Marvel Snap Survey Questions

Question 1. What is your age range?

- 12 to 17
- 18 to 24
- 25 to 29
- 30 to 39
- 40+

Question 2. How often do you play Marvel Snap?

- Daily
- A couple of times a week
- Weekly
- Once every few weeks
- Once a month
- Very rarely
- Not at all

Question 3. How did you get introduced to Marvel Snap?

- Online Advertisement / Promotion
- Content Creator / Influencer
- Friend / Family Member
- Active Search
- Other

Question 4. Which game modes do you play?

- Friendly Battle
- Conquest

Question 5. Do you play any other Card Games? If so, please detail as best as you can. These can include digital and physical card games.

Question 6. How much money have you approximately spent on Marvel Snap?

Question 7. What in-game purchases are you interested in?

- Cards
- Bundles
- Cosmetics
- Premium Pass
- Credits / Gold
- Other
- None

Question 8. Do you think that in-game purchases are fairly priced? If so, please detail as best as you can.

Question 9. Do you think Marvel Snap has any problems with the gameplay, client or otherwise? If so, please detail as best as you can.

Question 10. What is great about Marvel Snap?

Question 11. How would you rate Marvel Snap overall?