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DOI: 10.1007/978-3-030-37643-7_11

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Abstract Modern gaming – especially in mobile platforms – has turned into a quagmire of questionable practices. This chapter takes a look into the ethical problems brought about by the increasing importance of monetization in game design. We recognize five factors that are threatening the player's game experience and argue how they constitute unethical behaviour on the part of game designers.

1 Introduction

Our motivation for this chapter is to consider the ethical aspects of the game experience. Usually articles on game experience approach the topic by building theoretical models or by addressing practical issues related to the game design and development. Our special focus is the mobile game experience and whether it is ethically sustainable, when the mobile game developers semi-openly admit that their purpose is to get the player addicted and to pay more than they realise in the first place (Kimppa et al., 2015).

Sometimes the methods catch the attention of lawmakers such as the case of lootboxes, which were deemed to be a form gambling and should, therefore, follow the relevant regulation. At the moment, the Battle Pass monetisation model, made famous by the game *Fortnite* (Epic Games, 2017), is the most popular one. Although it is likely not to be problematic in most jurisdictions from the legal perspective (like lootboxes clearly are), one could pose the question whether it and other methods of its kind are ethical and, in this chapter, we indeed do.

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Ethics refers to the philosophical study of right and wrong actions. Ethical issues of digital games have been considered for decades. The previous game ethics studies have ranged from considerations from cheating in an online game (Kimppa and Bissett, 2005) to discussions of how the well-being of digital chickens in games may affect the players, or misrepresent the importance of fowls in our development as a species (Fothergill and Flick, 2016) as well as the ethical dark side of gamification usage (Hyrynsalmi et al., 2017).

This chapter reviews the ethical considerations of the game experience design. The *ethics of game experience* is defined to include all ethical aspects of the game experience, including the game and its mechanisms as well as its interactions with the surrounding environment such as other games and communities. This view follows and extends Lynn's (2012) view on the game experience. Included concerns are, for example, questions regarding the placements of geographical points of interests in games such as *Pokémon Go* (Niantic, 2016), as they have been argued to favour wealthy areas at the cost of minorities (Colley et al., 2017) as well as endangering players (Laato et al., 2019).

The specific point at hand, in this chapter, is the impacts of the revenue and business model to the game design and, consequently, to the game experience. As the competition in the game markets has been growing and new innovative revenue and business models have been implemented into the games, the ethical consequences should also be acknowledged. This chapter will provide an overview of the state-of-the-art for the academics as well as practical considerations for the game designers.

This chapter is structured as follows: First, we will discuss on ethical issues in games as well as define our philosophical standpoint. This discussion is followed by a review of revenue and business models of modern mobile games. After that, we present our ethical concerns of the game experience design. Concluding remarks appear in the final section.

2 Background

The public ethical discussion on games and playing usually revolves around issues like games and violence (or other mature content), cheating in online games, cyber-bullying, game communities hostile attitude towards women and minorities (e.g., Gamergate controversy), and sexual predators utilizing gaming platforms. All of these are important issues in their own right but fall out of the scope of our present paper, which focuses on the decisions made in the game design. In this regard, Adams (2014, pp. 159–162) lines out the ethical dimension of designing a game world, where the designer defines "what right and wrong means within the context of that world". Sicart (2009, p. 41) shares this view and asserts that "[t]he game designer is responsible for most of the values that are embedded in the system and that play a significant role during the game experience".

The two most problematic features of current game desing – especially in mobile games – are psychological traps (Hamari, 2011; Søraker, 2016) and reduction of the game experience due to advertising (Palokankare, 2011; Kimppa et al., 2015). One can ask does this have consequences to the game designer's character – will they treat others unfairly in other parts of their life as well (Aristotle, 350 BCE/2004)? This situation constitutes cognitive dissonance, as at work they basically try to lure as much money out of their customers as possible. Heimo et al. (2018) specifically point out that these kinds of design methods are vices, not virtues. They make the game designer a worse person, rather than a better person. If their colleagues were true to them, they would stop this kind of development, as they, due to the fact that their work is drifting further away from what a good person ought to be. This, of course, sets a high bar for the colleagues at work, but professional pride ought to help towards this, as is pointed out, for example, in the ACM Code of Ethics (Gotterbarn et al., 2018).

What are the consequences of utilitarianism (Mill, 1863/2001) to the customers? The so-called 'whales' are players who use considerable amounts of their monthly income on these games. They need to also eat and pay their bills – and, possibly, they need to feed others such as minors they are responsible for. How can this kind of game design be considered right, when the whole idea is to sucker the weak (Kimppa et al., 2015)? Already the intent is clearly wrong, let alone the consequences (Kant, 1785/1997). On Kimppa's model (unpublished) of Intentional Consequentialist evaluation using a dutiful consequences model of ethical information systems (see Fig. 1), this is in the clearest corner of evil (bottom right in Fig 1.).

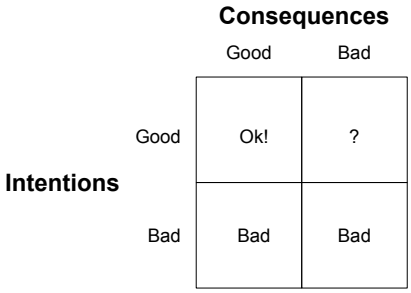

Fig. 1 Intentional Consequentialist evaluation of ethical information systems

Capitalism is based on two different possible approaches: (1) win–win where I have something you need and both win in the trade, and (2) sucker the weak and take their money. In this particular case, the latter thinking is clearly abundant. As John Maynard Keynes puts it: "Capitalism is the extraordinary belief that the nastiest of men, for the nastiest of reasons, will somehow work for the benefit of us all". Many mobile games and their functioning logic as well as their user interfaces are prime examples of this kind of thinking. Thus, it is clear that oversight on the practices used to make money are not just needed but mandatory, lest the weakest in the society (in this case those prone to addiction in games) are taken advantage of (Rawls, 1999)

Karhulahti and Kimppa (2018) state that introducing elements to the game, which the players pay for, are not problematic per se, but when those elements give the players an unfair advantage, it does pose a problem. A typical example, as pointed out before, are lootboxes. If it is possible to buy ones leading the way to the victory, those who have the wherewithal will take advantage of this, but, consequently, fall for the traps built into the system. This makes the game experience poorer for both those who can do it, but especially for those who cannot.

Although interesting and critical in their own right, in the remainder of this chapter we focus on the ethical problems brought on by monetisation. It is a growing concern that there is an increasing pressure to develop games – especially mobile games – as a tool for optimised monetising. Traditionally this kind of game design has focused on gambling and (on-line) casinos, which have specialised in creating an environment where the player (i.e., the customer) can be persuaded to spend more money that their might have initially intended.

The reason why this has become a norm in mobile gaming is two-fold: Digital distribution and digital payments have changed the monetisation method of games and changed them from products to service. At the same time, online metrics have evolved into a highly specific "science" allowing an ever-increasing and specific observation of the players and their habits, customs and weaknesses, which has boosted the monetisation methods.

Let us next look at these two facets – monetisation and online metrics.

3 Revenue and business models

In a common use, the term 'business model' refers to how a company operates, organises itself and how it makes money (Osterwalder et al., 2005; Luoma, 2013). To define the concept simply, it is a blueprint of how a business organisation is built and how it operates (Hyrynsalmi et al., 2019). In more formal terms, a business model describes how a company creates value, delivers it to the customers and captures value to itself (Zott et al., 2011).

A revenue model, or revenue logic, is a part of a business model; it reveals how a firm makes money (Popp and Meyer, 2010). A revenue model can consists of one or more revenue streams that indicates source, amount and frequency of compensation. For example, a simple revenue model for a mobile game could consists of advertisement and an upfront payment, for ad-free version, revenue streams. Yet, the revenue models in mobile application stores are often complex and multifaceted (Hyrynsalmi et al., 2012).

The change from the traditional game-as-a-product to the modern game-as-a-service model has changed how these games are monetised (Smed and Hakonen, 2017, pp. 307–309). Traditionally, the main monetisation model for games has been retail sale (i.e. premium games). Before the advent of digital distribution, this would have meant paying upfront for a hard copy of the game. This premium model has been transported also to digital distribution, but online games employ mainly other

monetisation models. Pay-to-play (P2P) games require the player to pay periodically (typically once a month) for an access to the game. Free-to-play (F2P) or freemium games are provided free for the player. However, there are many different business models for the sources of revenue. The most obvious ones are advertising and in-application purchases, which can ease the player's progression in the game. Revenue can be generated also by selling cosmetic enhancement to the players (usually without affecting the gameplay) or giving specialised account services. Pay-to-win (P2W) is an extreme variant of F2P, where the game content is available to the player in the beginning, but, at some point, the player will hit a "pay wall". A pay wall is a challenge in the game that cannot be solved (or it is extremely hard) by playing alone and instead requires the player to pay a certain amount to bypass. In some sense, P2W can turn into P2P game, if these pay walls are encountered evenly during gameplay.

The two factors that have facilitated this transition are online metrics and digital distribution. Earlier feedback from the game player had a long delay (in weeks or months), because the channels were non-digital (e.g., reviews in game magazines) or simple (e.g., a feedback form on a website). Moreover, the turn-over rate and coverage was smaller (i.e., player would typically give feedback once – if at all). This reflected the rate of change in the game design as the feedback could be accounted for possibly in the next version or in the sequel of a game. Nowadays, feedback from the players is continuous, automatic (i.e., the player does not have to initiate it) and more detailed. When this is combined with digital distribution, the design can be updated in a very short term. Moreover, it is possible to provided different instances of the game to different players to conduct (e.g., A/B testing).

Next, let us turn the discussion to the apparent – and maybe also non-apparent – ethical issues that this change from product to service has created (or amplified).

4 Ethical problems

The ethical problems present in the game experience stems from how the game is taking away the player's control of their resources. We can differentiate the following resources (although they are partly overlapping):

- money,
- time and attention,
- social capital,
- mental and physical energy, and
- security.

Playing a game means that the player is willing to invest the aforementioned resources. Simply put, the player invests money to buy the game, reserves time for playing, uses social capital to invite others to join in the game, exerts mental and physical energy in the process of playing, and assumes to be secure in the real world whilst engaged in virtual risks in the gameworld.

In the following subsections, we will look at each of these resources from the perspective of how ethical the game design and experience is in letting the player to retain control.

4.1 Money

There are various ethical problems related to the inclusion of real-world money in the game design. The biggest one is the unspecific nature of the expected monetary relationship. As the player is not given upfront an expected cost but rather a (possibly partly hidden) table of prices, they are in no position to make an educated guess of the actual costs. This *design by obfuscation* hides the expectations from the player, which is understandable from the point-of-view that games are about surprise and reacting to matters as they occur. It would be unfeasible to list them out, if they have not even occurred yet.

A counter-argument would be that many services work on a similar basis: When you enter a restaurant, you do not know what the bill will be at the end, because you order the courses, drinks and dessert on the way. Similarly, when you have your car serviced, you cannot anticipate what kind of costs might occur due to replacement parts and extra work required.

The question here is not that monetising the gameplay experience is unethical per se – which it clearly is not – but what is the *intention* behind how things are priced. Design by obfuscation alters the design to hide the cost. It would be like ordering a meal where prices are not listed on the menu, but related to hidden or hard to understand factors such as the size of leftovers on your plate, the total time spent in chewing and the number of swallowed fish bones. Moreover, these prices would vary based on the retail value of the car that the restaurant visitor parked outside. If this example seems far-fetched, consider a case where a mobile game requires the player to buy in-game resources (e.g., diamonds), which will be needed to access content otherwise unavailable, speed-up the processes that would take hours, and to avoid situations which would otherwise cause the game to end – and the real-word price of the diamonds would depend on the country and operating system of the player (i.e., the price would be higher for a player from Western Europe using iOS than for a player from a developing country using Android).

4.2 Time and attention

The second concern is the use of addiction inducing mechanics. Bluntly put, the core loop of a game is trimmed to maximise the dopamine release, giving a constant flow of mini-rewards and keeping the player's mind occupied. These even have defined term like "appointment dynamics" (e.g., "come back in one hour and claim your reward"; when the players cannot have it now, they keep thinking about it) or "fading

opportunities" (e.g. "you can get this for half the price only today" or "limited edition"). In a broader sense, these issues riddle the social media as well.

Again, the key question here is the intention behind the design. Naturally, a good game is immersive and keeps the player in a flow state, but we must make a difference whether this is because of providing the player entertainment or whether it is to keep the player from leaving or putting the game aside and preventing them to play any other game. It is established that for mobile games, retention (i.e., keeping the player coming back) is the key metric (Smed and Hakonen, 2017, pp. 310–311). This can be achieved by updates giving more content or by game mechanics trimmed to draw the player regularly back. For example, the mobile game *Kim Kardashian: Hollywood* (Glu Mobile, 2014) requires the player to come back to the game every day to buy a present for an in-game boyfriend; failing this would cause the player to lose all the progress. Similar "streak" mechanics have adopted by also some social media sites such as Snapchat. Simply put, the problem is that the game is taking away from the player the control of their time and attention.

4.3 Social capital

The social network of the player is a key for the game to spread. This was done – quite crudely – by early Facebook games such as *Farmville* (Zynga, 2009), where some tasks required input from the player's friends hence allowing the game to spread among the social network. It also allowed the game to control the player's friends by shaming them into participation (e.g., "how can you leave your friend alone and not help him in this small farming task"). Further examples include, e.g., *Pokémon Go* (Niantic, 2016) which allows player to sent and receive gifts from friends.

A reversal aspect of misusing social capital is that mobile gaming can throw the player into a company that they would actually like to avoid. This way they could be susceptible to abuse or bullying.

4.4 Mental and physical energy

Gameplay takes energy, usually and sometimes even physical. As the control is taken away, the player can be exhausted more than is appropriate. For example, several games allow the player to perform actions after a certain time. *Travian* (Müller, 2004), a browser-based massive multiplayer game, allows the player to construct a building every predefined hour. Players who ordered a monthly-based premium service are allowed to queue buildings whereas those without it are known to wake up even in the middle of night to be allowed to continue playing. This and similar mechanisms can affect sleeping patterns, which is a critical question especially when we are dealing with children and youngsters. Even for adults this can be a challenge.

Related to this is game addiction, where the player has lost the control of gameplaying completely. World Health Organization (2018, Sect. 6C51) defines that "gaming disorder" is characterized "by a pattern of persistent or recurrent gaming behaviour ('digital gaming' or 'video-gaming'), which may be online (i.e., over the internet) or offline". More specifically, its manifestations are

- impaired control over gaming,
- increasing priority given to gaming taking priority over other life interests and daily activities, and
- continuation or escalation regardless the occurrence of negative consequences (e.g., impairment in personal, family, social or occupational areas of functioning).

One can argue that adding *knowingly* features promoting this kind of addictive behaviour – considered a disorder by the WHO – is unethical. It resembles the stance taken by Big Tobacco in denying and discrediting the research showing that their products cause cancer.

4.5 Security

Typically after downloading and installing a mobile game, the player is faced with a list of permissions that the game wants to have such as the use of microphone or access to photographs and contacts. Many give these permissions without even stopping to think what they are doing. A critical review of the asked permission raises questions, why and for what purpose the game needs all this data and access. But as the game will not work without granting them, the player does not have much selective choice other than either take it or leave it.

The given access can be utilised in an alarming fashion (Sulleyman, 2018). For example, the access to microphone has been used to scan the player's surroundings to create a profile of the social status and wealth of the player – which is used, in turn, in setting higher prices for the more affluent players.

Apart from collecting data from the player's in-game decisions, the game can also record the player's decisions on advertisements (e.g., whether they decide to click it or skip it). Although this data is not related to the actual gameplay, it is a valuable asset for the developer in terms of recognizing the most potential advertisers. Moreover, when this data is combined with the gameplay data, the developer can try to modify the game to be more advertisement friendly – even to the extent of blurring the demarcation between advertorial and actual content.

5 Concluding remarks

Would it possible to create ethically sound (mobile) games and game experiences? In some sense, we could try to define factors that contribute labelling a game "ethically

sustainable" – in a similar fashion that we have definitions what constitutes food to be "ecologically sustainable". However, the best we can do is to give suggestions how an ethically sound game should be constructed – but there is no guarantee whether this practice would catch on.

The list of question to be answered by the game designers and the publisher is:

- How much does playing the game actually cost?
- How much time and attention is needed in playing the game?
- Does the game require access to the player's social network, and, if so, why?
- How mentally and physically taxing is the game?
- What kind of access to the hardware the game requires and for what purpose?

This would be a beginning towards an ethical gameplay experience – a clear statement of intent from the game designers. Who will be the first to do this?

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