Games as Services

What does the industrial shift mean for design?

Abstract: Games used to be sold and consumed in physical format. Now the introduction of digital distribution platforms has revolutionized not only distribution of games, but also the way they are consumed and used. This, in turn, affects theorizing on the intersection between business and design, as the nature of games has expanded from objects to cover also services.

In this paper we look at two Finnish gaming success stories, Max Payne and Clash of Clans, from the service design perspective. Furthermore, we ask, how has game design changed with the shift from games as objects to games as services, and what does this shift mean for games. Main bulk of our empirical data comes from interviews with eighteen representatives from the Finnish gaming industry, and in this paper we look at what people say about the transition from objects to services, as well as how is it like to play these games.

This paper also provides potential avenues for further research, as we believe the transition from games as objects to games as services to dramatically change the industry dynamics.

Key words: Gaming industry, service design, game, service

1. Introduction

Games used to be sold and consumed in physical format. Now the introduction of digital distribution platforms has revolutionized not only distribution of games, but also the way they are consumed and used. Since the advent of digital distribution platforms, it has no longer been possible to consider games only in physical format. Those in this industry consider this shift as "games as services" [17]. To shed light in this relatively new phenomenon, in this paper we ask the following questions

RQ1: How has game design changed with the shift from games as objects to games as services?

RQ2: What does it mean for design when games shift from objects towards services?

By looking at two Finnish gaming success stories, Max Payne and Clash of Clans, we argue in this paper that the very nature of games has been diversified from being only physical cartridges to a diverse combination between physical and digital, and objects and services.

To solidify and further advance empirically the above argument set forth about "servification" [11], we will draw on our interviews with gaming company representatives located in Helsinki, Finland, and the two

aforementioned games. Our goal in this paper is that by bringing in the 'voice' of those who design and work in the gaming companies that we study, we will increase our understanding of both how and why the industrial shift in games contributing to game design has for years been changing its primary focus on primarily physical cartridges or discs to primarily digital format and platforms.

In addition, from the theory building perspective the purpose of this paper is to participate in the growing discussion on service design. In terms of practical implications for those working within the gaming industry, we hope to provide guidelines on how to organize design and how to do business with participants outside the boundaries of the company so that the latter play a major role not only in a game's consumption and use, or vice versa, but also in its creation and design.

The remainder of the paper is structured as follows. Next we will discuss the ontology of games, and how that has changed with the introduction of digital distribution channels. Building on that, in the third chapter we will review relevant literature from game studies and service design to illustrate how they can be integrated in order to analytically approach games as services. Then, we will present our data and methodology, after which we discuss our findings and conclusion marks the end of this paper.

2. On the nature of games

Question "what is a game?" has baffled both philosophers [15] as well as game designers [12], although the implications and outcomes of these discussions are somewhat distinct. Nonetheless, the way game is conceptualized or pinned down has remarkable implications for intellectual debate and actual game design, which is why it is relevant to look at how we can approach the ontology of games.

Earliest forms of games found today were built on dice, and as such they are regarded as something distinct from the daily life. Or in other words, games marked a departure from the societal norms into a domain where one could, for example, cause trouble to their family members or even humiliate them [6]. Thus, games represent an alternative reality, something that strongly draws from our imagination.

Approaching games from a philosophical perspective, Suits [15] offers the following definition:

...to play a game is to engage in activity directed towards bringing about a specific state of affairs, using only means permitted by specific rules, where the means permitted by the rules are more limited in scope than they would be in the absence of the rules, and where the sole reason for accepting such limitation is to make possible such activity.

In Suits [15], we can see the same departure from the societal norms as described above. To rephrase: a game is not a game, if its rules are broader than the ones found in the society surrounding it. Moreover, as games are about limits, there are also temporal limits to a game – although it is possible for a game to last for long periods of time (consider, for example, tennis or chess). Thus, games are

temporally and spatially bound. This, then, closely resembles the way designers design concrete objects, for example: to design a game is comparable to designing a chair.

The discussion above applies mostly to games that exist as physical objects, be it in the format of video game, board game, or a card game, for example. Looking at these types of games we can see that they have a goal and a set of rules [12,15]. But with the advent of digital distribution – such as Apple's App Store or Valve's Steam – games' boundaries have been irreversibly altered as digital distribution makes it possible to change the game or to expand it, for example, after it has been released. This implies that the game is 'never' finished, but instead it is developed based on how users interact with it. Thus, a game becomes a sort of mediating element between a gamer and a designer; it is not anymore only a cultural object.

From the design perspective, this shift in the ontology of a game has tremendous impact as digitally distributed games can be understood as an on-going negotiation between the gamer and the designer – previously games were designed internally with the mindset that once a game is ready, it is shipped to the markets for customers to purchase. But now it is possible, in theory at least, to release a game quickly and keep on updating it based on the users' feedback.

In the next section we will further elaborate this ontological shift in games from the service design perspective.

3. Literature review

3.1. Contemporary research on games

To put it mildly, research on video games from the organizational or business perspective is rare. Perhaps one of the reasons for this has been the relatively long 'battle' for video games to achieve the status of a cultural object not only in academic research, but also in the public sphere, in general [8]. Thus, for a long time video games have been regarded 'merely' as entertainment, and as such not worthy of intellectual scrutiny. However, in terms of financial figures, video game industry is a huge and thriving industry with revenues climbing towards $80 billion globally [10]. Building on this, with such amounts of money flowing in and out from the industry, there certainly has to been something interesting in the industry for us researchers.

In broad terms, research on video games can be divided into the following thematic perspectives: games as cultural products [8], games as design [12], behavior in games [2], and games as business [4]. Out of these four themes, the latter – games as business – has seemingly received least academic interest, and with this paper we wish to contribute to that stream. Next, we will go through the current literature on this stream by also making a case for our contribution.

Literature on games from the business and organizational perspective is still rare, but continuously gaining momentum [3]. Majority of this stream of research has focused on innovations and communities, thus implicitly highlighting the tricky nature of the gaming industry itself. According to Burger-Helmchen and Cohendet [3], what makes the gaming industry an insightful research setting is its constant balancing between art and business:

on the one hand, games require compelling storytelling and visual design elements, and on the other hand they depend on monetization mechanics that provide the company with adequate revenue streams to maintain producing other games [4].

Additionally, video games have been approached from the physical space perspective, namely how creative industries are organized within a cityscape [5,9]. In Cohendet et al. [5] we can find arguments on how creative industries are organized in Montréal, Canada, and this approach is closely linked with Burger-Helmchen and Cohendet [3] from the community perspective. Thus, it seems that video games have been approached to a large extent from the perspective of innovations and communities.

However, what seems to be missing from the games as business stream of research is the acknowledgement of the transition from games as objects to games as services, and here lies the contribution of our paper. As noted above, digital distribution has made it possible to design games so that they can be modified and updated even after their launch. Some of the earliest forms are found in online gaming (such as World of Warcraft), and smartphones and tablets have taken games as services to a next level as they are no more physically bound. Building on this notion, majority of the literature on games as business rests on the assumption that games are objects, but what happens to the game design process when games are no more only objects but services? To cover this, we now turn to service design literature to show how it can help us in this claim.

3.2. Service design

In service systems value is co-created through bundle of activities and interactions between entities: the user of the service and the producer of the service. As intangibility and abstractness are the defining features of services, these interactions, in turn, become concrete through the diverse tangible, physical and visual elements, or clues, of the service journey. Then, by processing what they can see and understand, users look for evidence of desirable service qualities [1].

To define what constitutes a service, we rely on Katzan's [7] view stating that *"a service is a socially constructed temporal event that possesses a lifecycle comprised of design, development, analysis, and implementation, as with most technological innovations"*. Moreover, in a service event value is co-created through bundle of activities and interactions between entities: the user of the service and the producer of the service. As intangibility and abstractness are the defining features of services, these interactions, in turn, become concrete through the diverse tangible, physical and visual elements, or clues, of the service journey. Then, by processing what they can see and understand, users look for evidence of desirable service qualities [1].

What is the game designers goal, asks Schell (2008, 10). He continues that a game designers goal is not to merely design a game. On their own, games are worthless bundle of artifacts. They gain meaning only when people play them. Moreover, *when people play games, they have an experience*. Thus, he states, it is this experience that the game designer cares about. Without the experience, games remain worthless bundle of artifacts. As we claimed, there is a shift in how games are considered and it is their experience-centric quality that has led to a whole new language of game design.

What is more, service designers understand that experiences cannot be designed; only the conditions that lead to an experience. As Schell points out, the game itself is not the experience but *enables* the experience. Service design discipline offers tools for designers to create touchpoints including material artifacts, environments,

interpersonal encounters and more [13]. These service elements, the objects of service design, are the context within which an experience takes place and, along with service activities, comprise the prerequisites that service designers put forward to enable desired experiences [16,18]. Designer acts as choreographer between the service elements and user experience.

The critical question remains: how to design a game that generates ideal, wonderful, compelling and memorable experiences when players interact with it [12]? Game design process requires identification of the sequence of events and their touchpoints and elements, which are the essential part of the game experience creation.

3.3. Bridging business and service design

In conclusion, as the literature review above illustrates games as business stream of research has mainly looked at how innovations are managed and created in the gaming industry, although the actual game design process has received less attention. Moreover, as we argued above, video games (especially within the mobile gaming segment) have been gradually shifting from static objects towards services that can be altered based on consumer input and technological advancements. Thus, based on this shift we have introduced service design literature as we believe it can provide the games as business stream with the necessary tools and concepts to theorize on innovations and communities within the gaming industry.

Now that we have introduced the contribution our paper can offer to games as business research, in the next section we will illustrate how we designed our research setting.

4. Data and methodology

Ideas and arguments presented in this paper draw on our two-year research project (FLUID, August 2012 – July 2014) on music and gaming industries in Helsinki, Los Angeles, and Tokyo. More specifically, this paper builds on interviews we have conducted in Helsinki-based gaming companies, and on a critical evaluation of two Finnish gaming success stories: Max Payne and Clash of Clans.

On the one hand, we are interested in *how* representatives of gaming companies we interviewed (owners, designers, managers) speak about their games especially in the mobile gaming industry, and on the other hand, we are complementing this data with our actual experiences on playing these games. In total, we have eighteen interviews with gaming industry professionals in Finland and they lasted between 45 and 90 minutes. The interviews were organized according to themes (such as games, business models, ecosystem interaction, and gaming industry) so that they would be more conversation-like instead of static interviews [14]. In addition to gaming companies, we also interviewed representatives of investors, media, and public organizations, and these interviews are used as complementary material, as we are mainly interested in how games are seen as services within the industry.

What was said during the interviews is contrasted with us playing the games, Max Payne and Clash of Clans. We are interested in the experience of playing the game, namely how is it like to play a game that is an object and a service. Data collection in this phase of the study is less formal with main emphasis on discussions about the games between the authors and our colleagues.

From the business and design perspective, this dual approach to data collection enables us to see the production and the consumption side of games, thus illustrating the structure already discussed in the literature review section of this paper.

5. Discussion

As has been noted above, game design process has changed dramatically with the introduction of mobile distribution platforms. This, in turn, has marked a shift from games as objects to games as services, but it has to be noted that both perspectives still exist: with the help of mobile devices – such as tablets and smartphones – service-oriented games have begun to gain momentum. Before iOS and Android, however, online-based games such as Ultima Online and World of Warcraft were already paving way for games that resembled more services than objects. To analytically approach this transition, we will discuss our research questions one at a time before synthesizing them in the concluding phase of this section.

RQ1: How has game design changed with the shift from games as objects to games as services?

Looking at the gaming industry we have identified three issues shaping it based on our data: consumer co-creation, shorter game development process, and the core role of experiences.

Max Payne, perhaps one of the most well known Finnish video games released in 2001, was primarily released for PC, Xbox, and PlayStation 2 – that is to say, in physical format. As a third-person shooter it drew on film noir and Hong Kong action genre thus paving way for video games to be regarded as cultural products. From the game design perspective Max Payne was released as a final product, implying that consumers were able to enjoy from the full experience after they had bought the game. Continuing with this line of thought, the whole process of developing a game as an object is done mostly internally with possible help from freelancers and outsiders as beta testers. In fact, beta testing – the process during which people play the game so that it can be polished to be shipped – is present also in games as services, although in different format.

In Clash of Clans, a strategy game developed mainly for iPad, beta testing has taken place to a large extent *after* the actual release of the game. Since its global release in August 2012, Clash of Clans has gone through eight updates with some of them being season-related (Christmas and Halloween), but with most of the updates dealing with graphic design, gameplay, and monetization. Thus, although Clash of Clans did go through beta testing before its global release, it has ever since been 'tested' by consumers all over the world as Supercell, the company behind Clash of Clans, gathers extensive amounts of data on player behavior.

When it comes to Max Payne, remarkable part of the development process took place internally, while in Clash of Clans' case Supercell continues to develop the game based on the way people play it. This, in turn, makes it possible to shorten the game development process.

While games like Max Payne with financially tremendous budgets[1] usually take several years to complete, games targeted for mobile devices can more often than not released in less than a year. Relatively remarkable temporal difference is explained to a large extent with the technological requirements: since mobile devices are not yet suitable for running as demanding games as game consoles, it also means that they usually require less coding and testing. But technology is only one part of the game, as a compelling storyline and addictive game mechanics also play a role in creating a successful game.

As it is now, games developed for mobile devices can be altered and further developed quickly also after their initial release. From the service design perspective this means that the game can be released quickly – even if it had not reached a final release stage – and even more quickly it can be killed if the consumers do not find it appealing. Or in other words: the idea can be put to the markets fast, and if the consumers find it compelling the developers can continue polishing and fine-tuning it. Thus, from the development and distribution perspective things have changed tremendously, but the importance and nature of experience has still remained crucial.

Indeed, the people we interviewed often talked about the importance of experience and the concept of 'hook' that refers to the basic mechanism in the game. In Max Payne, for example, the hook is to leave a trail of dead bad guys behind as the protagonist tries to solve the mystery plaguing New York City. Here, the experience is closely connected to the story, and as such the game is driven by the player's motivation to unravel the mystery.

Looking at Clash of Clans, on the other hand, the hook is a bit different as it is a social game that one plays with their friends or even strangers. In Clash of Clans player assumes the role of a clan leader who must protect their clan members from other clans (i.e. players) while also attacking other clans to collect resources and awards. As the game is based on the free-to-play model, the game itself can be downloaded for free and with money players can either progress faster in the game or acquire better items and units for defending or attacking. In Clash of Clans, then, the basic hook that makes players addicted to the game is simple: gather resources, gather an army, and attack other clans.

As was shown above, Max Payne and Clash of Clans differ in terms of distribution and revenue model, but the basic hook and the nature of the game is still the same. Both games aim at capturing the interest of potential players in a way that enables them to spend countless hours playing these games. There is one thing, however, that sets the games apart: namely, ending. In Max Payne the game ends once the bad guy has been killed, but in Clash of Clans the game ends only when Supercell decides to stop maintaining and developing it.

RQ2: What does it mean for design when games shift from objects towards services?

Service is something that is co-created between the provider and the user, and as such it implies that the way people play the game can be used as raw data to further develop the game. This can be seen in Supercell's other game, Hay Day, where players take control of a farm and engage in market transactions regarding raw materials

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[1] On today's terms Max Payne's budget ($3 million) is almost nothing compared to Grand Theft Auto IV's $100 million.

with other players. At some point players were dumping eggs to the market thus drastically dropping their price, which lead to Supercell alter the game mechanics so that this would not happen in the future.

In terms of games that are objects, this would not be possible, as the game cannot be changed after it has been released. This can be somewhat tricky, as it means that the development process is longer because the game mechanics and hook need to be carefully designed so that the experience is not affected by unpolished decisions. Games that are services, on the other hand, enable knowledge creation on multiple developer-consumer interfaces through the game's life cycle and beyond. Not only do players generate numerical data on their playing behavior (e.g. how much and when they play, and how much they spend), they can also interact with the developers through various social media channels. In our interviews with the company representatives, many of them were referring to the importance of community management: namely, the various means companies can draw on to energize and engage with their fans in social media. Thus, games that are services make it possible for the companies to generate qualitative and quantitative knowledge through various channels and points of time, and this knowledge requires game knowledge management[2] from the firm.

Managing game knowledge is not the only thing mobile game developers have to claim ownership today: in terms of console gaming developers usually create games that are sold and distributed by others, but when it comes to mobile gaming companies are more often than not wholly responsible for communication, marketing, development, and R&D. This newly acquired freedom is in fact a double-edged sword: even the smallest game developers now have a shot for global success, but at the same time they have to take care of all aforementioned activities by themselves. Building on this argument, it becomes imperative that the developers organize their activities so that they support co-creation between them and the players.

To conclude, the shift from games as objects to games as services is not a new phenomenon, but it has not been covered adequately in academic literature. As we have illustrated above, this transition changes not only the way games are consumed, but it also influences the actual development process.

6. Conclusion

In this paper we have looked into the transition from games as objects to games as services. Some of the pioneers of the service approach were Ultima Online and World of Warcraft that were playable online through one's computer. With the introduction of digital distribution and mobile gaming, however, the service approach to games has become even more important as games are no longer spatially bound but can be played anywhere and anytime.

We started by reviewing contemporary literature on games as business and illustrated that if we are to understand games as services we need to bring in service design literature. This, we believe, further advances the literature we reviewed, as service design literature allows ontological explorations in the interfaces between firms and consumers. By looking at two games, Max Payne and Clash of Clans, we illustrated what it means for games and their players that games move from objects to services.

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[2] We are thankful for Rashid for coining the term 'game knowledge management'.

When it comes to future research avenues, much needs to be done. Research looking at games from innovation and organization perspective is still scarce, but rapidly gaining momentum, which is why large scale studies of gamers and gaming companies are required. Based on the findings of this paper, we have identified two potentially fruitful paths for further investigation: first, how gamers find new games and how do they regard the co-creation process between them, the game, and the developer, and second, what kind of service strategies companies have and how they have integrated design in their game development process and for what purposes.

To conclude, the transition from games as objects to games as services provides us researchers with a plethora of research topics that can yield remarkable contributions at least in the fields of organization studies and design. Furthermore, much work needs to be done both in terms of methodology and theory for us to level up.

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