

Working Paper

Gamification Design for Mobile Marketing Effectiveness

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Abstract

Retailing and other business sectors have been buffeted by the diffusion of mobile technology. Millennials, in particular, consider such technology indispensable and have lately been using it for gaming applications. In order to thrive in the new mobile and game centric world, retailers will need to adapt and leverage mobile game-like applications using the process known as gamification. Our own sense is that the gamified interfaces currently offered by firms mostly miss the mark. We provide a systematic overview of game design and point out how principles derived from that field are highly applicable to gamified retail apps as well as to other firm offerings with game like elements. We are aided in our systematic approach by the work of Schell (2008) whose Elemental Game Tetrad Model allows us to offer a coherent look at the gamification antecedents of its psychological and marketing outcomes.

Introduction

Many businesses have been and will continue to be affected by the growth of mobile telecommunications, but none perhaps more than retailing (Shankar and Balasubramanian 2009; Shankar, Venkatesh, Hofacker and Naik 2010). From time to time cartoonists make fun of Millennials for obsessive focus on their mobile devices but retailers do not find this a laughing matter. What's more, the Millennial age cohort does not consume media the way their elders did. Instead, their sensibilities and habits have been driven by a new media sector, namely gaming (Marchand and Hennig-Thurau 2013). In order to thrive in the mobile centric world that the Millennials will inherit, they will need to adapt and leverage. In this, we intend to help them do just that by adapting principles from game design, and leverage these for gamification strategy.

Our own intuition, based on our interactions with gamified interfaces offered by a wide variety of service firms, is that much of what passes for gamification is fad-like copy-cat work, and poorly done at that. In short, it is our view that game design principles have not been taken seriously by gamification designers. We will be taking the point of view of Jesse Schell (2008), and whose Elemental Game Tetrad Model provides a coherent and logical way to look at psychological and marketing outcomes of gamification.

Before looking deeper into the technological context of gamification, we would like to reiterate Marchand and Hennig-Thurau's (2013) thesis that games are understudied by academic marketers. Games are helping to teach consumers to be active participants rather than passive observers in dealing with companies. Consumers look to go beyond just looking and expect to dive in and, as a result, marketers should be looking to create engaging experiences.

Furthermore, and more specifically, within the mobile gaming market the fastest growing segment is the free-to-play games type followed by the free-to-try segment (Laughlin 2012). This form of mobile gaming puts pressure on firms to develop new ways of thinking, if not entirely new business models. Most commonly, advertising and in-app purchasing are used to convert players into payers and generate external revenue. In order to develop a fundamental understanding of how mobile gaming can be a vehicle for marketing tactics, such as CRM, advertising and creating brand awareness and value, we examine the principles game designers adhere to when creating engaging player experiences. Before we do that, it is appropriate for us to review the technological environment surrounding our topic.

The Mobile Platform and Gaming

Games evolved on specialized devices that are designed for a single function, which is to say the game console. Consoles offer a rich and immersive gaming experience relative to

computers and especially mobile devices. However, the ubiquity and convenience of multi-functional devices like smartphones is causing consumers, especially casual gamers, to move away from consoles. According to the International Telecommunications Union (2015), mobile devices are indeed ubiquitous, with 4.5 billion mobile users across the world in 2014. This represents a very high level of penetration with 96 subscriptions per 100 people (compared to 16 per 100 for fixed lines). In contrast, the penetration of mobile phones with access to broadband quality bandwidth is still quite low at 32 subscriptions per 100 people. This suggests that for a majority of consumers in the world today, the phone is the primary access point for electronic content, including games. In addition, there is also a proliferation of mobile devices within households and individuals, especially in the developed world. These devices span from factors from basic feature phones to smart phones to “phablets” and finally to tablets. While all these devices are mobile, as we will see, consumption of content, including gaming content, can be very different across mobile devices. This impact of the device can be seen even in quick, thoughtless decisions such as consuming or playing in landscape or portrait mode. In addition, customers increasingly expect consistency and continuity in content across mobile devices and beyond.

After holding out for over a decade, Nintendo is now planning to introduce its Super Mario series of games for the mobile market. This would appear to be a harbinger as we believe that gaming and mobile will become more and more complementary industries, with mobile evolving into the primary industry, and gaming secondary. Thus, indirect network effects will play a big role in the future growth of the gaming industry. The growth of broadband capacity will also provide impetus to gaming via indirect network effects. These macro context variables have broad implications for the use of gamification in retailing and other marketing sectors. Game –

and gamification - design will need to be flexible and adaptive to cater to the large variety of form factors across mobile devices. Games will be therefore designed and sold on a continuum (for the same game) with different sets of features and different price points. Thus, each game will represent the analog of a typical product line over time. No doubt, marketing gamification designers will need to think along the same lines. We now turn to the general topic of gamification before looking at design in the section following that.

Gamification

In an effort to enhance enjoyment, engagement, and retention, and to reach millennials, gamification has become an important component of many mobile service offerings. The technique might also be useful to reach consumers in phone-centric parts of the world.

Consistent with prior research (Blohm and Leimeister 2013; Groh 2012; Huotari and Hamari 2012), we define gamification as the use of game design elements to enhance *non-game* products and services by increasing customer value and encouraging value-creating behaviors such as increased consumption, greater loyalty, engagement, or product advocacy. For example, users of My Starbucks Rewards earn gold stars for using the mobile app to pay and are granted status levels and benefits at different star levels. Every day, Daily Challenge from MeYou Health sends its users a challenge to engage in a healthy action. Users earn points for each challenge completed and are encouraged to share their success with their connections who, in turn, are encouraged to provide supportive posts. Gamification is claimed to enhance loyalty, customer engagement, and motivation (Blohm and Leimeister 2013; Zichermann and Cunningham 2011). However, there is limited empirical evidence of these effects (Hamari, Koivisto and Sarsa 2014).

Gamification Features

Gamification includes features such as badges, points and incentives, time pressure, quests, and Avatars (Blohm and Leimeister 2013; Groh 2012). Important gamification elements include challenges and narratives, feedback and reward for progress on goals, social connections, and visual design (Conaway and Garay 2014). Many aspects of gamification are not new (Blohm and Leimeister 2013). For example, many loyalty programs include points (e.g., miles) and status (e.g., platinum, gold, etc.). However, gamification may be distinguished from traditional loyalty programs by providing added social and motivational benefits through product usage rather than just expenditures (Blohm and Leimeister 2013; Huotari and Hamari 2012).

Although current efforts at gamification tend to focus on points and status awards, such as badges, other game design elements can be used to create a more game like experience including social elements such as team members, competitors, and game-specific characters; and elements of immersive narratives including visual imagery, mystery, surprise, and discovery. For example, the Home Depot app identifies when users are in the store and provides detailed store layouts to help them find items and learn about workshops. HelloLocal is used by shopping mall operators to engage consumers in treasure hunts in which beacon technology provides clues to complete a treasure map (Cameron 2015).

Psychological and Marketing Impacts

Although gamification elements, such as points and badges, are extrinsic, some claim that they enhance intrinsic motivation and therefore do not have the demotivating effects of traditional incentives (Blohm and Leimeister 2013). In other words, they are internalized extrinsic motivators (Deci and Ryan 2000). However, other research suggests that reward structures, such as virtual goods and prizes for reaching different levels, need to be continually

offered to maintain interest; taking these away leads to consumer abandonment (Nevskaya and Albuquerque 2015). In other words, for many consumers, these extrinsic incentives are never fully internalized.

Research on video games suggests that game aspects that enhance arousal (Poels et al. 2012); self-efficacy, competence, relatedness, and autonomy (Przybylski, Rigby, and Ryan 2010; Ryan, Rigby, and Przybylski 2006); and facilitate social interactions that enhance learning from and teaching others (Albuquerque and Nevskaya 2015) increase usage. Game aspects enhancing pleasure have stronger effects on short term play whereas arousal has stronger effects on long-term play (Poels et al. 2012). Findings on gamification in non-game contexts are mixed and there has been little examination in business settings (Hamari, Koivisto, and Sarsa 2014). Some research suggests that gamification can sometimes have negative effects. For example Bellman et al. (2011) find that elements of gamification, such as allowing consumers to virtually experience or try-on products, are less effective in terms of enhancing brand attitude and purchase intentions than providing information on retail offerings. One explanation is that experiential apps encourage an external focus that leads to shallow and peripheral processing whereas information-based apps encourage an internal focus and greater cognitive elaboration (e.g., Bellman et al. 2011). Additional research is needed on whether these effects are true for other types of gamification beyond simulated product use.

Some researchers claim that gamification enhances flow experiences, in which consumers feel immersed in exploration and play (Csikszentmihalyi 2014; Novak, Hoffman, and Duhachek 2003). However, there is limited empirical testing of these ideas. Greater perceptions of flow has been found to benefit brand attitudes, purchase intentions, unplanned purchases, and online purchases (Hoffman and Novak 2009). Although earlier research proposed that flow

experiences are more likely to be found in exploratory activities than goal-directed activities (Novak, Hoffman, and Yung 2000), more recent research shows that flow is common in both types of activities. Additional research could examine how different gamification elements affect flow.

We believe that gamification has not lived up to its hype. Our sense is that what is known about game design has neither been rigorously consulted nor applied. We thus turn to what is in fact known about game design to provide guidance for the development of effective mobile interfaces, including apps for retailing and other services.

Game Design

A widely acknowledged framework for designing games is the Elemental Tetrad Model proposed by Schell (see Figure 1). It consists of a number of elemental design characteristics that are interrelated and consistently serve to create an engaging cognitive and affective ecosystem around the universal theme of a game (e.g., competition, skill development, enjoyment). The tetrad model recognizes that in designing games its four elements should be carefully aligned in order to be conducive to player immersion and engagement. The first element, *story* or the narrative format, provides context to a game, it adds and signals meaning to the player experience. *Mechanics*, the second element, refers to rules and structural aspects of games and is concerned with aspects like how success is recognized by reward and incentive structures and game levels. Game mechanics enable players to know how to maneuver through the game and form an impression of what is expected and rewarded at consecutive levels in the game. The mechanics enable a game dynamic that in turn creates a specific user experience (Huotari and Hamari 20112). Thirdly, *aesthetics* or the look and feel of a game, instill games with a sense of purpose and it strengthens the development of the storyline. For many games, a focus on visual

imagery and presentation is important to creating an immersive experience, although other senses may come into play. Finally, *technology* pertains to how the medium (or mobile platform) shapes the message, i.e., the game experience. For instance, the fact that a mobile device is in effect a networked computer creates a flexibility generating opportunities for increasing the dynamics of games.

The tetrad framework thus provides an integral approach to designing games by linking the various elements to the gaming experience. For instance, in case this experience falls short of player expectations, this may be attributed to the fact that maybe the aesthetics are not optimally aligned with the storyline or the technology may not adequately support feedback and incentives structures (mechanics) that engage players. As a start to assessing how the relationship between mobile game design and marketing outcomes like aided brand awareness, ad awareness, message association, brand favorability, online engagement and purchase intention, we will zoom in on each of these characteristics and develop pertinent research questions for marketers.

Please insert Fig 1 about here

Design Element 1: Story

We begin our discussion of the tetrad with story. Today most companies recognize the importance of storytelling as a persuasion strategy, but have limited understanding of how the story element in (mobile) games can be effectively used for marketing purposes (Lieber 2014). In order to shed light on this, we turn to extant research on narrative transportation. Narrative transportation refers to “a convergent process, where all of the person’s mental systems and capabilities become focused on the events occurring in the narrative.” Van Laer et al. (2014) argue that this is a three-step process. In the first place, it is important that a story receiver of the narrative actually focusses his or her attention on the development of the story and analyses it.

Subsequently, narrative transportation is achieved through the presence of two components referred to as mental imagery and empathy. While mental imagery signifies that a story receiver imagines that (s)he feels part of the story, empathy reflects the receiver's attempt to understand and relate to the story character. Taken together, the two components create the illusion (and suspension of disbelief) that one is transported into a particular mental setting. As a final outcome, the story receiver feels getting lost in the story as a psychological experience.

The notion of narrative transportation has originally been developed to account for the impact of oral and verbatim story-telling contexts, but has recently been extended to the study of games based on the premise that these formats are characterized by a higher degree of media richness (Biocca, 2002) which leads to greater narrative immersion. For instance, Polichak and Gerrig (2002) suggest that the use of audio-visual elements in games generates a richer participatory response by triggering the sense of hearing too. In general, developing narratives that are as immersive as traditional stories boosts the variety of player experiences and hence has been identified as an important game design principle, above and beyond media effects (e. g. TV vs. text). Stories provide relevance and meaning to the player experience, context for the application of tasks, and guide action. Building up a narrative depends on the answer to questions, such as, what is the setting?, who is the hero? what can the hero achieve?

Approaching mobile games from the perspective of story-telling has the promise of a powerful persuasion strategy. When transported, players tend to be less aware of their own beliefs, attitudes, and intentions as they become engrossed in how the story in the game unfolds. This is in contrast to being confronted with analytical or factual information during which people are inclined to rationalize and draw on their prior beliefs (Petty, Cacioppo, and Schumann 1983). Consequently, narrative transportation “may lead to at least temporary acceptance of values and

beliefs that represent a shift from the individual's existing beliefs" (Slater and Rouner 2002, p. 177). Taking this into account has the potential to render in-game (sometimes referred to as native) advertising more effective. Most commonly, advertising and in-app purchasing are used to convert players into payers and generate external revenues. Unfortunately, however, the business case may get in the way of the game, as in-game advertising and selling disrupt the gaming experience and are often viewed as intrusive by players. As a result, mobile marketers are looking to develop ways in which mobile marketing and games can be integrated to such a degree that game experience is not threatened and mobile revenues are being generated (Walden 2013).

The theoretical and empirical evidence is equivocal (Krammer 2014). (Banner) ads in mobile games are generally regarded as intrusive as they draw attention away from the purposeful act of gaming (Li, Edwards and Lee, 2002; Truong and Simmons, 2010). On the other hand, however, intrusiveness may make an ad stand out more, and thus be more effective when it comes to advertising recall. These alternative expectations are based on two potential rival effects; (1) a priming effect and (2) an interference effect. While the former is based on the idea that playing a mobile game activates a scheme which makes processing of a congruent ad easier (De Pelsmacker, Geuens and Anckaert, 2002), the latter is derived from the assumption that thematic blending of game and ad will diminish (implicit or explicit) ad recall (Furnham, Gunter and Richardson, 2002). Similar competing explanations may occur when it comes to explaining variance in players' attitude towards the ad. As mobile game advertising is not goal related and players are not likely to actively click through (Cho 1999), players may not interact with the ad beyond the involuntary exposure. Hence, it could be argued that the interference effect will occur. Alternatively, low levels of attention to the ad may involve biased processing and it has

been argued that pre-attentive processing leads to a more favorable advertising attitude (Shapiro, Heckler and Macinnes, 1994). This leads us to posit the following research question:

RQ1: What is the (direct) impact (i.e., main effect) of thematic congruence on marketing effectiveness in mobile games?

An equally important issue to clarify is whether narrative transportation is the mechanism that can potentially explain why the aforementioned could occur (Krammer 2014). When processing narratives, people construct mental models specific to the events that occur in the story in which they are engaged. In case this process is interrupted it is likely to negatively affect narrative transportation (Zwarun and Hall 2012). It has been argued that processing ad information diminishes the ability to process the story line, and therefore, decreases the likelihood of narrative transportation (Wang and Calder 2009). It could also be argued that congruent advertising, which is less disruptive, may have a positive effect on narrative transportation in mobile gaming. A possible alternative explanation, however, is that a thematically congruent ad message in mobile games leads to lower levels of narrative transportation. For instance, Mandler (1982) suggests that information congruent to the media context has a higher chance of being processed, taking processing capacity away from the actual narrative thus reducing transportation.

Additionally, the influence of narrative transportation on advertising outcomes, like recall and attitude toward the ad could be explained taking into account the fact that unconscious persuasion takes place when people are transported and this has the ability to have an impact beyond the narrative of the game (Green and Brock 2000). It is likely that non-disruptive or thematically congruent advertising will have an impact (positive or less negative viz-a-viz disruptive advertising (c.f., Wang and Calder 2009). The positive experience associated with

narrative transportation is then transferred over to advertising evaluations (Green and Brock 2000), although there are some indications that this, in turn, is attenuated when advertising is not goal-relevant (Durkin and Wakefield 2008). This leads us to formulate the following research question:

RQ2: What is the mediating role of narrative transportation between thematic compatibility and marketing effectiveness in mobile games?

Design Element 2: Mechanics

A second game design element is game mechanics. These refer to the game's procedures and rules, how players achieve goals and how they are rewarded. Common mobile game mechanics include badges, points, progress bars, and leaderboards, although it has been argued that these ultimately refer to "forms of feedback within the game" whereas the real power of games is generated by forcing users to make meaningful choices in the pursuit of difficult goals (Deterding 2012). Salen and Zimmerman (2004) also argue that a core element of effective game design is to create an experience that is meaningful in the sense that there is a clear and discernable bond between player actions and game outcomes. Reward systems help in motivating players, creating loyalty to the game. Moreover, they signal feedback which makes game outcomes more discernable and signal social status.

Numerous design choices emerge under the topic of mechanics, including public versus privately viewable incentives, categorical, continuous, symbolic, and pecuniary incentives and the role of goal achievement and progression. We do know that research on meritocratic governance systems has demonstrated that rewards form the basis of ranking systems through which selective incentives to players can be provided (Olson 1965; Willer 2009). This is popularly referred to as "badging" and this provides recognition by assigning visual identifiers to

reflect the merits of a player's accumulated achievement and ultimately a within-game social hierarchy. For example, the World of Warcraft game displays player achievements, making it possible to achieve status. In order to prevent dysfunctional accumulation of symbolic capital (i.e., points or other symbols associated with status) and to integrate reward structures with the (real world) marketing of (game-related) products and services and the transference of game resources to virtual or real world currencies, it has been argued that this may 'break the spell' of a closed gaming world (sometimes referred to as the game's magic circle (Lin et al., 2007)). Also, it is unclear how the conversion of symbolic capital into real capital (i.e., discounts on products or services) can be established to the extent that the rate of conversion does justice to the time and effort that players have put in accumulating capital to avoid player frustration and exit behavior:

RQ3: How can a reward structure that leads to an effective user experience and subsequent marketing effectiveness be designed?

Another specific aspect of reward structure revolves around the appropriate level of challenge. One problem is that increased difficulty in more advanced levels leads to game abandonment (Albuquerque and Nevskaya 2015). Other research suggests that gamification features that rely on tacit knowledge, such as navigation, are better learned through concentrated practice whereas explicit knowledge, such as written instructions, is better acquired by spaced learning sessions. To the extent that consumption, satisfaction, and loyalty depend on consumer proficiency and the strength of practice effects (Johnson, Bellman, and Lohse 2003; Lakshmanan, Lindsey, and Krishnan 2010); and the extent to which interface mastery is required for games to meet the psychological needs of competence, autonomy, and relatedness (Przybylski, Rigby, and Ryan 2010); it is important that marketers consider how and whether

consumers will develop sufficient proficiency to benefit from gamification elements. More generally, ease of use is a critical determinant of the perceived usefulness of mobile services (Gao et al. 2013). Finally, although using gamification may create a superior service offering, this matters little if consumer awareness of the service is low or if marketers fail to identify a clear target segment (Park and Kim 2013).

RQ4: How can reward achievement difficulty be designed so as to lead to an effective user experience and subsequent marketing effectiveness?

Previous research has suggested that mobile interactive environments offer the opportunity to generate several value (in use) propositions. In addition to the financial or economic value of reward structures, mobile gaming offers players the chance to self-develop by gaining experience and obtaining knowledge and engage in social interaction and competition. Social value aspects, such as the appreciation, compliments and reciprocal pleasantries from other players motivate players (e.g., Nambisan and Baron 2009). They create an atmosphere of camaraderie and building further social bonds, and facilitating future interactions (both with the brand and other players). In addition, players are driven by epistemic value. This refers to the cognitive benefits of skills and information acquisition and learning (Nambisan and Baron 2009). Hence, engagement in gaming can be hypothesized to expand players' knowledge and expertise and ultimately contribute to brand value.

RQ5: How do game mechanics in general generate value propositions that contribute positively to brand value?

The phenomenon of negative competition has been associated with game reward structures. This refers to the argument that quantifiable achievements will result in competition,

rather than social exchange, resulting in players playing numbers games and deception behavior. Further research is needed on the dark side effects of reward structures in mobile games:

RQ6: What are the negative effects of reward mechanics on brand value?

In addition to reward mechanics, game designers make a choice about the gamer's role; this can be defined from the perspective of being a participant or of being an observer. A participant with a first person perspective is likely to obtain a more visceral feeling (e.g., a driving game) and be ready to act on limited data (his/her perspective) while the observer perspective can lead to more detached and deliberative actions. Thus, we surmise that "Hot" games that rely on emotion and action under time pressure are likely to be delivered in a first person perspective while "Cool" games that rely on logic and thoughtful decision making are likely to deliver an observer perspective. The marketing effectiveness of such design decisions is unknown, and we therefore ask

RQ7: What are the marketing effectiveness outcomes of game point-of-view or role?

Design Element 3: Aesthetics

A focus on the detail and presentation is an important element for creating an engaging experience. In the game design literature, it is argued that this relies heavily on the aesthetics of a game. A case in point is the Bad Piggies game, developed by the well-known (mobile) game developer Rovio which features one of Angry Birds' supporting characters in its own game. This successful game is often mentioned as an example of effective aesthetics. As pigs feature heavily and consistently in the logo, the mobile icon and the game, pig noses are used to dot the i's throughout to emphasize that bad-piggies is a character-centric game. Since the bad piggies are green, this color is heavily emphasized and different hues of the base color are used to create the

illusion of depth even on the small mobile screen. As the main characters fly airplanes which have to be created, the eyes of the pigs track finger movements as airplanes are being built. The bad piggies are endowed with detailed facial expressions of joy (e.g., as they are tumbling down slopes). All of these (surface) aesthetic features and character quirks are characteristic of a creative vision appear to create an engaging player experience and whether marketing effectiveness (e.g., ads or within-game product displays) occurs through narrative transportation. This leads to a question as to the how this example might generalize:

RQ8: How do aesthetic characteristics impact marketing effectiveness in mobile games?

At a more fundamental level, theorizing in visual semiotics could be helpful in identifying the interaction of commercial information with game design principles. This body of literature focuses on various elements in visual representations and identifies how this signals meaning (Rose 2012). An essential distinction is that between conceptual and narrative representations. Pictorial representations of products in games (e.g., the TNT brand on a Bad Piggie airplane) is a conceptual representations as it is stable and represents a generalized brand signal (Kress and van Leeuwen 2006). In contrast, narrative representations, depict transitory processes of visual elements denoting an in-use approach and avoidance behavior (e.g., a gaming character drinking a branded soft drink). An avenue for further research would be whether branding in mobile gaming that uses narrative representation, as opposed to pictorial (e. g. Paivio 1971 dual process theory), is more or less effective in terms of online engagement, purchase intentions and even price sensitivity.

RQ9: How does the representation of visual elements impact marketing effectiveness in mobile games?

In general we know that mobile games run on much smaller form factors relative to console or computer games. This makes it hard to embed rich graphics into the games. However text heavy games also poses similar challenges. Thus we would posit that mobile games will have bright block graphics, simple layouts and minimal text to draw attention and engagement within the small form factor. This type of thinking leads to the general question,

RQ10. How will the platform (mobile or otherwise) moderate the relationship between visual elements and marketing outcomes?

Finally, given the increased popularity of user-generated images and social network sites, such as Pinterest and Instagram, an important research question is whether snapshot aesthetics are the more effective design parameter to use in conjunction with brand-related messaging. Snapshot aesthetics refers to a style that is generally perceived as more ‘real’ and ‘authentic’ and characterized by off lighting, blurred focus, harsh contrast and shaky movements (Schroeder 2012). A pertinent research direction would be to examine whether snapshot-like design elements do indeed contribute to brand authenticity and whether this would work better for particularly consumer lifestyle brands. Furthermore, the use of this style of aesthetics could be used to re-brand products and services and give them a more dynamic and contemporary look and future research designs could help establish whether this is the case.

RQ11: What is the impact of aesthetics style formats on marketing effectiveness in mobile games?

Design Element 4: Technology

Technology is the medium in which the aesthetics are present, the mechanics operate and through which the story is told. As the shift from specialized consoles to generic smartphones

that we described at the beginning continues, we would expect that mobile games and game-like apps will likely bring new, casual, gamers into the gaming market. These gamers are looking for games to provide transient benefits, e.g., relieving boredom while waiting in line, rather than true immersive gaming experiences (at the same time console gaming will no doubt become more and more specialized, catering to a niche audience). Retailers and others catering to the mass of mobile gamers will need to take into account - given that the cognitive resources available to mobile gamers are low - that games that have very low barriers to entry will become more popular. This in turn will likely lead to the evolution of these games following fashion/fad cycles with new games replacing current games in popularity at a rapid pace. Gamification, in other words, will look much more like a continuous service as opposed to a single, software good.

Despite our view that consoles will become even more specialized for the serious gamer, the mobile platform will keep evolving as well. For instance, the introduction of the iPhone 6 and 6+, as well as the development of Samsung Galaxy models, are driving change in the mobile gaming landscape. With larger devices, including tablets, players are able to immerse themselves in a more engaging experience. There is anecdotal evidence that screen size (and computing power) matters; industry studies reveal that tablet gamers download and play more extensively than phone gamers. A study by Mintel (2013) reports that 38% of tablet gamers play five or more hours per week (as opposed to 20% of mobile phone gamers). A related theme is how the context in which users employ their devices changes their interactions or usage patterns. In 2013, Forbes noted that advances in technology mean that the *“future of gaming isn’t proprietary hardware, it’s in user-choice and cross-platform playability.”* Unlike computers, mobile devices are used while standing, walking, on public transport, etc. Moreover, players hold devices in very different ways (i.e., landscape vs. portrait) and tapping, scrolling, and typing behaviors may

differentially impact click through behavior on within-game banners. These subtle game experience antecedents may have important implications for using mobile games as a marketing vehicle.

RQ12: What is the impact of the mobile platform on the marketing effectiveness of games?

Playing a game necessitates the taking on of a role. These roles can be that of an individual or a person within team. Team gaming (playing together with a team, either chosen or randomly allocated), typically relies on participants taking different roles in order to complement each other in their quest to achieve a common objective. For example, in games such as Battlefield 4, team members play roles as shooters/snipers, prospectors, pilots etc. in order to succeed at a specific mission. However, this kind of joint effort is hard to achieve on mobile devices. Among other things, we might suppose then that individual identities will be preserved more strongly on mobile games relative to group identities. In general we ask,

RQ13: In what ways does the platform, mobile or otherwise, moderate identity expression in games?

Recent advances in mobile technology are spurring the development of new game genres, which are likely to differ in terms of the impact and effectiveness of marketing-related content. In one example of what is known as a serious game, health improvement is often cited as new development in mobile gaming, fuelled by mounting evidence that mobile games help players to relax and improve their general mental health. A game such as Fit Brains is designed to stimulate cognitive abilities and mental effort sustenance. Likewise, mobile games are now technically capable to assist consumers in making healthy food choices, develop math skills and increase reading speed. The technology offers the possibility to monitor behavior and allows for testing at

different levels. It is important that in evaluating the marketing potential of mobile gaming attention is paid differences across genres of games:

RQ14: What is the impact of genre on marketing effectiveness in mobile games?

Finally, a typical console game has a relatively low entry barrier but the difficulty of the game grows in a non-linear fashion as the games becomes more and more proficient at the game. However, with mobile games, the relative lack of involvement and need gratification objective make this non-linearity unappealing. Thus, relative to console games, mobile games are likely to have a more linear reward to effort structure. This leads us to ask

RQ15. In what ways will the platform moderate the impact of game mechanics on marketing outcomes?

Consumer Characteristics and Game Design Effectiveness

The extent to which gamification enhances mobile services should depend on consumer goals and characteristics. For example, gamification can be used to meet enjoyment and entertainment goals but, because gamification may lower ease of use, it may interfere with utilitarian and instrumental goals (Nysveen, Pedersen, and Thorbjørnsen 2005). In terms of consumer characteristics, research on online gaming shows that although the majority of consumers, who are extrinsically motivated, increase participation in response to rewards such as virtual goods; a minority, with stronger use habits and stronger intrinsic motivation, are unaffected by reward offers (Nevskaya and Albuquerque 2015). Other research shows that the importance of different game features is different for older versus younger consumers (Park and Lee 2011). Other research suggests that the attractiveness of gamification features will depend on

consumers existing game use, whether this use is habitual or occurs across different contexts, as well as consumers' addictive tendency to play games (Hartmann, Jung, and Vorderer 2012).

RQ16: What is the moderating effect of consumer goals on the effectiveness of story, mechanics, aesthetics and technology?

Conclusions

We began this work operating under the assumption that game design principles had not been thoroughly leveraged in practitioner gamification design. We conclude by noting that the parameters of game design – the Schell (2008) tetrad of story, mechanics, aesthetics and technology – have been poorly investigated by marketing academics, if at all, both in a general and a specific (mobile) setting. We are of the opinion that gamification is not a fad. We suspect that many aspects of the current monetary economy will converge towards more game-like processes as deflationary forces like globalization and automation prevail. In that case, whenever process design impacts the customer, marketers should take the lead on understanding and improving design.

References

- Albuquerque, Paulo and Yulia Nevskaya (2015), "The Impact of Innovation and Social Interactions on Product Usage," Working Paper, [available at http://server1.tepper.cmu.edu/seminars/docs/Product_Usage_Paper.pdf].
- Bellman, Steven, Robert F. Potter, Shiree Treleaven-Hassard, Jennifer A. Robinson, Duane Varan (2011), "The Effectiveness of Branded Mobile Phone Apps," *Journal of Interactive Marketing*, 25 (4), 191-200.
- Blohm, Ivo and Jan Marco Leimeister (2013), "Gamification," *Business and Information Systems Engineering*, 5 (4), 275-78.
- Cameron, Nadia (2015), "Bendigo Marketplace Embraces Beacons with Digital Treasure Hunt," CMO, (accessed March 8, 2015), [available at

<http://www.cmo.com.au/article/566770/bendigo-marketplace-embraces-beacons-digital-treasure-hunt/>].

Conaway, Roger and Mario Cortés Garay (2014), "Gamification and Service Marketing," SpringerPlus, 3 (1), 653.

Csikszentmihalyi, Mihaly (2014), Flow: Springer.

Deci, Edward L. and Richard M. Ryan (2000), "The 'What' and 'Why' of Goal Pursuits: Human Needs and the Self-Determination of Behavior," Psychological Inquiry, 11 (4), 227-68.

Deterding, Sebastian (2012), "Gamification: Designing for Motivation," Interactions, 19 (4), 14.

Gao, Tao (Tony), Andrew J. Rohm, Fareena Sultan, Margherita Pagani (2013), "Consumers Un-Tethered: A Three-Market Empirical Study of Consumers' Mobile Marketing Acceptance," Journal of Business Research, 66 (12), 2536-44.

Groh, Fabian (2012), "Gamification: State of the Art Definition and Utilization," Proceedings of the 4th seminar on Research Trends in Media Informatics, Ulm, Germany, Institute of Media Informatics Ulm University, 39-46.

Hamari, Juho, Jonna Koivisto, and Harri Sarsa (2014), "Does Gamification Work?--a Literature Review of Empirical Studies on Gamification," in System Sciences (HICSS), 2014 47th Hawaii International Conference on, IEEE, 3025-34.

Hartmann, Tilo, Younbo Jung, and Peter Vorderer (2012), "What Determines Video Game Use? The Impact of Users' Habits, Addictive Tendencies, and Intentions to Play," Journal of Media Psychology: Theories, Methods, and Applications, 24 (1), 19-30.

Hoffman, Donna L and Thomas P Novak (2009), "Flow Online: Lessons Learned and Future Prospects," Journal of Interactive Marketing, 23 (1), 23-34.

Huotari, Kai and Juho Hamari (2012), "Defining Gamification: A Service Marketing Perspective," in Proceeding of the 16th International Academic MindTrek Conference, ACM, 17-22.

International Telecommunication Union (2015), <http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>, accessed Mar 30, 2015.

Johnson, Eric J., Steven Bellman, and Gerald L. Lohse (2003), "Cognitive Lock-in and the Power Law of Practice," Journal of Marketing, 67 (2), 62-75.

Lakshmanan, Arun, Charles D Lindsey, and H Shanker Krishnan (2010), "Practice Makes Perfect? When Does Massed Learning Improve Product Usage Proficiency?," Journal of Consumer Research, 37 (4), 599-613.

Li, Hairong, Steven M. Edwards, and Joon-Hyun Lee (2002), "Measuring the Intrusiveness of Advertisements: Scale Development and Validation," Journal of Advertising, 31 (2), 37-48.

- Marchand, André and Thorsten Hennig-Thurau (2013), "Value Creation in the Video Game Industry: Industry Economics, Consumer Benefits, and Research Opportunities," *Journal of Interactive Marketing*, 27 (3), 141-157.
- Mintel (2013), *Mobile Gaming, US – October 2013*, http://reports.mintel.com/sinatra/oxygen/list/id=637788&type=RCItem#0_1_page_RCItem=0, Last accessed April 28, 2015.
- Nevskaya, Yulia and Paulo Albuquerque (2015), "A Continuous-Time Model of Product Usage: Measuring the Effect of Product Design and Rewards in Online Games," Working Paper.
- Novak, Thomas P, Donna L Hoffman, and Adam Duhachek (2003), "The Influence of Goal-Directed and Experiential Activities on Online Flow Experiences," *Journal of Consumer Psychology*, 13 (1), 3-16.
- Novak, Thomas P., Donna L. Hoffman, and Yiu-Fai F. Yung (2000), "Measuring the Customer Experience in Online Environments: A Structural Modeling Approach," *Marketing Science*, 19 (1), 22-42.
- Nysveen, Herbjørn, Per E Pedersen, and Helge Thorbjørnsen (2005), "Intentions to Use Mobile Services: Antecedents and Cross-Service Comparisons," *Journal of the Academy of Marketing Science*, 33 (3), 330-46.
- Paivio, Allan (1971), *Imagery and Verbal Processes*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Park, Bong-Won and Kun Chang Lee (2011), "An Empirical Analysis of Online Gamers' Perceptions of Game Items: Modified Theory of Consumption Values Approach," *Cyberpsychology, Behavior, and Social Networking*, 14 (7-8), 453-59.
- Park, Hyun Jung and Sang-Hoon Kim (2013), "A Bayesian Network Approach to Examining Key Success Factors of Mobile Games," *Journal of Business Research*, 66 (9), 1353-59.
- Petty, Richard E., John T. Cacioppo, and David W. Schumann (1983), "Central and Peripheral Routes to Advertising Effectiveness: The Moderating Role of Involvement," *Journal of Consumer Research*, 10 (2), 135-146.
- Poels, Karolien, Wouter van den Hoogen, Wijnand Ijsselsteijn, and Yvonne de Kort (2012), "Pleasure to Play, Arousal to Stay: The Effect of Player Emotions on Digital Game Preferences and Playing Time," *Cyberpsychology, Behavior, and Social Networking*, 15 (1), 1-6.
- Przybylski, Andrew K, C Scott Rigby, and Richard M Ryan (2010), "A Motivational Model of Video Game Engagement," *Review of General Psychology*, 14 (2), 154-66.
- Ryan, Richard M, C Scott Rigby, and Andrew Przybylski (2006), "The Motivational Pull of Video Games: A Self-Determination Theory Approach," *Motivation and Emotion*, 30 (4), 344-60.

Shankar, Venkatesh and Sridhar Balasubramanian (2009), "Mobile Marketing: A Synthesis and Prognosis," *Journal of Interactive Marketing*, 23 (2), 118-129.

Shankar, Venkatesh, Alladi Venkatesh, Charles F. Hofacker, and Prasad Naik (2010), "Mobile Marketing in the Retailing Environment: Current Insights and Future Research Avenues," *Journal of Interactive Marketing*, 24 (2), 111-120.

Schell, Jesse (2008), *The Art of Game Design: A Book of Lenses*. Burlington, MA: Morgan Kaufmann Publishers.

van Laer, Tom, Ko de Ruyter, Luca M. Visconti, and Martin Wetzels (2014), "The Extended Transportation-Imagery Model: A Meta-Analysis of the Antecedents and Consequences of Consumers' Narrative Transportation," *Journal of Consumer Research*, 40 (5), 797-817.

Zichermann, Gabe and Christopher Cunningham (2011), *Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps*. Sebastopol, CA: O'Reilly Media, Inc.

Figure 1: The Elemental Tetrad Model (Schell 2008)

