



Why do people buy virtual goods? Attitude toward virtual good purchases versus game enjoyment



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ABSTRACT

In this study we investigate purchase behavior for virtual goods in three free-to-play game environments. In the modern free games, publishers sell virtual goods in order to generate revenue. However, game publishers face dire negative attitudes toward the business model as it can entice publishers to degrade the enjoyment of the game in order to sell more virtual goods that address the artificial gaps in the game. This study focuses on this looming question in the game industry whether people buy virtual goods because they enjoy the game and want to keep on playing it or rather because their attitudes toward virtual goods are favorable and they believe it is also accepted in the peer-group. Player responses ($N = 2791$) were gathered from three different game types: social virtual world (Habbo) ($n = 2156$), first-person shooters ($n = 398$), and social networking games (Facebook games) ($n = 237$). The results support both main hypotheses (1) enjoyment of the game reduces the willingness to buy virtual goods while at the same time it increases the willingness to play more of the game. Continued use, however, does positively predict purchase intentions for virtual goods. (2) Attitude toward virtual goods and the beliefs about peers' attitudes strongly increase the willingness to purchase virtual goods. Beyond these interesting results the paper points to several further lines of inquiry.

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1. Introduction

Games and virtual environments are increasingly developed and maintained like services as well as published online (DFC Intelligence, 2007, 2011). This shift has implied many new challenges to the business models, game design and marketing of games. Furthermore, the number of companies developing games has dramatically increased due to cost efficient publishing. This development has led to a fierce competition for not only potential players, but also for product visibility (e.g. in Apple Appstore and Facebook). This increased competition has effectively led to a situation where most games are now offered for free to the customers. In fact, today most online games are “free-to-play” and those which still rely on older business models are increasingly converting their business models toward this approach. For example, Valve (one of the biggest PC game publishers) transformed one of their most popular retail online games called Team Fortress 2 (also investigated in this study), into a free game, effectively multiplying their customer base (GeekWire, 2011). Most games developed on

social networking services (SNS) are free-to-play (such as FarmVille and Clash of Clans). However, it is clear that no game can survive without some kind of a revenue stream and thus game publishers have started to sell virtual goods inside their games not only to generate revenue, but also to better meet the wider willingness-to-pay spectrum (Hamari & Järvinen, 2011). In this context, virtual goods refer to digital in-game objects which are only usable within the game environment. These may include for example, extra lives, clothes for an avatar, more powerful weapons or tools (Hamari & Lehdonvirta, 2010; Lehdonvirta, 2009).

Selling virtual goods entails problems of its own (only 2% from registered users convert into buying customers according to Forbes, 2013). Free-to-play developers have faced the problem of how to create demand for the virtual goods, or in other words, how to create situations in the game which would justify and create value for the virtual goods in order for the players to perceive them as desirable. This has led to a balancing act between making the game as enjoyable as possible, but at the same time, trying to create caveats in the gameplay that would make players more likely to purchase virtual goods (Hamari, 2011; Hamari & Järvinen, 2011; Hamari & Lehdonvirta, 2010). The idea is that, if a customer already enjoys the game enough, then there might be no reason for the customer to pay additional money for augmenting virtual goods. One of the

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methods to entice players to pay for virtual goods has been to create artificial obstacles. This may happen by making the game mechanics burdensome, and then offering virtual goods with which the players can circumvent the inconvenience (Hamari & Lehdonvirta, 2010). These methods of artificially creating demand for virtual goods have further fueled negative attitude toward the free-to-play business model.

Moreover, opening one's wallet and using real money within a gameplay experience has been regarded highly incompatible. Previous studies have discussed how such transactions could decrease the engagement, immersion and flow of the game as well as skew the competition between players (Alha, Koskinen, Paavilainen, Hamari, & Kinnunen, 2014; Bartle, 2004; Hamari & Lehdonvirta, 2010; Lin & Sun, 2011; Paavilainen, Hamari, Stenros, & Kinnunen, 2013). As such, a lot of negative attitudes toward virtual goods have been voiced in popular discussion. For example, Wired Magazine covered this phenomenon and quoted from a player interview: "You are buying your way to the top of the leaderboard with no gaming skill required" (Wired Magazine, 2012).

From these highly practically relevant problems arise two main research questions: (1) how does the enjoyment of the game and intention to continue playing the game predict purchases of virtual goods sold within and/or (2) whether the positive/negative attitudinal aspects and beliefs about using purchased virtual goods are more important predictors. This study aims to address these looming questions by investigating the phenomenon with a survey data across three different free-to-play game types. Player responses ($N=2791$) were gathered from three different game types: social virtual world (Habbo) ($n=2156$), first-person shooters ($n=398$), and social networking games (Facebook games) ($n=237$).

2. Background and hypotheses

2.1. The role of enjoyment and use continuance in purchase intentions for virtual goods

The connection between perceived enjoyment of the game and purchase intentions has been shown in general in different environments (Guo & Barnes, 2011; Lin & Lu, 2011; Park & Lee, 2011). However, previous studies on purchase behavior for virtual goods provide an inconclusive understanding (see e.g. Guo & Barnes, 2011, 2012; Hamari, 2011; Hamari & Järvinen, 2011; Hamari & Lehdonvirta, 2010; Kim, 2012; Kim, Chan, & Kankanhalli, 2012; Lin & Sun, 2011; Mäntymäki & Salo, 2011, 2013; Paavilainen et al., 2013), mainly due to five reasons: (1) purchase intentions for virtual goods are modeled only as a consequence of continuous use (e.g. Mäntymäki & Salo, 2011); (2) other factors (such as attitude and self-presentation) are used as mediators and no indirect effects are reported (e.g. Kim, 2012; Kim et al., 2012); (3) some studies focus on the player-to-player trade of virtual goods (e.g. Guo & Barnes, 2011) instead of the sale of virtual goods by the game developer; (4) the environments under study employ a wholly different business model (Guo & Barnes, 2012), which is here theorized to be the cause for the theorized phenomena; (5) the studies are more oriented toward qualitative/conceptual description (Alha et al., 2014; Hamari, 2011; Hamari & Lehdonvirta, 2010; Lehdonvirta, 2009; Paavilainen et al., 2013).

We argue that in such freemium business model, the relationship of enjoyment of the core product (the game) and purchases may be more complex than in situations where the customer would be buying more of the same product. Previous literature (e.g. Alha et al., 2014; Hamari & Järvinen, 2011; Hamari & Lehdonvirta, 2010; Hamari, 2011; Lin & Sun, 2007, 2011; Paavilainen et al., 2013) and general developer discourse (e.g. Wired Magazine, 2012) support the notion that in order for firms to sell virtual goods they may be

enticed to negatively affect the value of the game by creating artificial obstacles and gaps in the game which can further be reflected in the lower perceived enjoyment of the game. The mechanism behind this rationale is that the purchasable content can then fill the gaps intentionally left in the game. This is especially a pertinent strategy for freemium products where the core product is free of charge and the revenue is strictly generated through the sales of augmenting products. Given these observations, it could be fathomed that in some situations lesser enjoyment may lead to more purchases. The situation is interesting, since the companies at the same time attempt to increase the value of the core product in order to improve the longevity of the service.

The relationship between the enjoyment of the game and its use continuance, on the other hand, can be seen to be more straightforward. For utilitarian systems, *usefulness* has been regarded as the primary driver for use of such systems (Davis, 1989). Conversely, for hedonic systems, such as games, *enjoyment* has been regarded as the primary driver of use (van der Heijden, 2004). Within the studies on hedonic systems, perceived enjoyment has been shown to be a strong predictor for outcome variables, such as use continuance and purchase intentions (van der Heijden, 2004; van der Heijden, Verhagen, & Creemers, 2003). As done in other studies on games, we also operationalize the value aspects of game systems as *perceived enjoyment*. Previous studies on games have shown a positive association between perceived enjoyment and continuous use in a variety of environments (See Hamari, Keronen, & Alha, 2015 for a review): for example online games (Hsu & Lu, 2004), web 2.0 (Shin & Kim, 2008), and Facebook games (Shin & Shin, 2011). In the same vein, the relationship between enjoyment and purchase intentions has been studied in different online environments: Second Life (Guo & Barnes, 2011), social networking sites (Lin & Lu, 2011) and when generally surveyed in Internet Cafes (Park & Lee, 2011). All the studies find a significant positive effect between perceived enjoyment/satisfaction and purchase intentions.

In order for customers to purchase augmenting products, they also have to have, firstly, already adopted the core service, and secondly, evaluated how long they will use the service in the future (Venkatesh & Agarwal, 2006). If a customer thinks her time with the service will be short, then also the life-cycle of the augmenting products could be short since virtual goods are commonly locked into the specific game in which they are purchased. Therefore, we should see a continuum from continued use intentions of the game to the purchase intentions toward virtual goods, since the adoption and evaluation of continued use intentions happens before determining the individual purchase intentions.

Previous literature on purchase behavior also posits that the greater the amount of time customers spend in an environment where related products are being sold, the more likely they become to purchase those products (Jarboe & McDaniel, 1987; Rosen, 2001). Related to the environments in the present study, this association has been demonstrated in electronic channels (Venkatesh & Agarwal, 2006) and in social virtual worlds (Mäntymäki & Salo, 2011). The relationship between these constructs is of special interest with regards to Facebook games, as they are often found to have a short customer lifetime, although the customers still use money to buy virtual goods.

Therefore, pertaining to the role of enjoyment and use continuance in purchase behavior for virtual goods, we hypothesize the following:

- H1.** Perceived enjoyment of the game is positively associated with continuous use intentions for the game.
- H2.** Perceived enjoyment of the game is negatively associated with purchase intentions for virtual goods.

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