



Why do gamers buy 'virtual assets'?

An insight in to the psychology behind purchase behaviour

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Abstract

The present study investigated the phenomenon of buying 'virtual assets' for game avatars. Virtual Assets are items that are bought with real-world money for an avatar in-game. Weapons, items, pets, mounts and skin customisations are the most popular examples. Using a qualitative methodology – in this case Interpretative phenomenological analysis (IPA) – six gamers that regularly bought in-game assets were interviewed. IPA was chosen because of its emphasis on lived experience, and each participant had subjective experiences of gaming and purchase behaviour. Of particular focus in this study were the superordinate themes of motivations for purchase behaviour, the resulting psychological impact on the gamer, the social benefits of gaming and virtual asset purchasing, emotional attachment, self-expression through the avatar, impulsivity versus thoughtfulness in purchase intention, and the impact of a transaction machinery on the 'game experience'. Motivations that were found to be of particular importance were item exclusivity, function, social appeal, and collectability. It was found that virtual items enable the gamer to express themselves, feel real satisfaction, and build lasting friendships. Essentially, virtual assets and gaming mostly had a very positive impact on the participant's psychological wellbeing. Implications for gamers and games production companies are considered.

Keywords

Online gaming; Online purchasing; Buying virtual assets; Interpretative phenomenological analysis; Qualitative research

I. Introduction

Video gaming has evolved from a single-player platform to a multi-player realm where interaction with other players is often a necessity (Pontes & Griffiths, 2014). In order to enter the game, players must first create an avatar, a representation of their self in the game that is used to explore and interact with the virtual environment. When creating an avatar, players can also buy virtual assets to augment and/or enhance their online character. Virtual assets are items or customisations for video game avatars, bases, and characters that are purchased with real money. For researchers, the buying of virtual assets provides an opportunity to try and understand why people become so immersed in games and what motivates gamers to spend real money on items that some would consider as having no value. In a multi-player environment, it becomes clear that the avatars seen on screen are graphical representations of someone real and may be part of human desires to be noticed, respected, and interacted with. Furthermore the gamer controlling their avatar has motivations, emotions, thoughts, and feelings. Virtual item purchases are therefore likely to impact on a gamer's psychological wellbeing.

The virtual item industry across the globe is worth an estimated \$15 billion (Nayak, 2012). The growing market for virtual items indicates that transactions are becoming commonplace in gaming. Manninen and Kujanp (2007) suggest that an environment that humans interact within will develop humanistic economics, highlighting to those involved in the transactions that there is a real value attached to virtual items. The virtual market functions similarly to real markets in that there is demand, fluctuating markets, and profits to be made. The importance of virtual items to some people is illustrated by a divorce claim in which a wife made a claim for over half of her husband's virtual assets (Hyped Talk, 2010). In a different case, Qiu Chengwei, a middle-aged man killed a fellow gamer over a dispute involving a virtual item (Lee 2005). Obviously these cases are extreme but they highlight the fact that virtual items can have both financial and psychological value for gamers.

But why do people buy virtual items? Performance and general quality of an item is seen to be an important motivation whether the item is real or virtual (Lehdonvirta 2009). Online, an appeal to social status may be a better predictor for purchase behaviour than function (Li, 2012). However, some claim that appealing to social status has no motivational significance in purchase behaviour (Guo & Barnes 2011). Another unique element of buying virtual items is the potential exclusivity. Exclusive or limited items tend to be unattainable through gameplay and instead must be bought with money. Exclusivity online has been shown to be of importance, and segmentation is a technique used by the games producers that limits certain items to certain classes, levels, or races. This has been shown to stimulate purchase behaviour (Hamari & Lehdonvirta 2010). The amount of time invested in a game is also key to understanding spending patterns, and gamers will often buy virtual items after a dedicated amount of gameplay has been spent building an avatar (Kaburuan, Chen & Jeng, 2009). A further difference between the real and virtual is that in-game, a player is judged essentially on their material goods and the effectiveness of their items, where how hard they are to acquire becomes a measure of skill and achievement and impacts on the player's popularity (Lehdonvirta, Wilska & Johnson 2009). For example, a player with rarer items will likely have had to gain them through being good at the game. Though there could be different motivations for purchasing virtual items it is evident that a major ingredient to a successful multiplayer game is the enabling of social interaction (Griffiths, Hussain, Grüsser, et al., 2013).

Naturally, the longer the amounts of time that are spent online and in-game, the more the player emotionally and psychologically invests in the game (Griffiths, 2010). The concept of 'flow' (Csikszentmihalyi 1992) has been applied to gaming and can involve becoming emotionally attached to a character (Hull, Williams & Griffiths, 2013). Flow is the feeling of complete absorption in an activity and affects consciousness and emotions of the individual experiencing it. A key element of feeling 'flow' is the experience and perception of the world of the avatar and has been applied to electronic media (Witmer & Singer 1998). The adaptation of 'flow' to the virtual world suggests that just like other leisure activities, an individual investing time in an environment where they feel socially accepted can become emotionally attached to their avatar. Gaming has been shown to affect consciousness and emotions of gamers (Tay 2005) that are both necessary in experiencing 'flow'. It could be that purchasing of virtual items is also motivated – at least in part – by the feeling of emotional attachment to an avatar.

Gamers are being drawn in to an environment by the appeal of social interaction, manipulation of objects, exploration, and identification with the avatar (Griffiths et al., 2013; Witmer & Singer 1998). To some gamers, the virtual world can take on more significance than 'actual' life and residency in their preferred games is what they consider their actuality (Castranova & Wagner 2011; Pontes & Griffiths, 2014). This suggests that the reward of gaming is great, indicating that those individuals who buy virtual items are doing so because they feel involved in an environment that benefits them personally. The differentiation between the real and virtual raises questions about a person's identity. The issue of the true/ideal self has been explored by Kim, Lee and Kang (2012) who found that virtual items contributed to identification with the avatar and this identification reaped psychological benefits for gamers who might otherwise lack confidence. The 'ideal self' links to the avatar as an extension of the self. In the same way as choosing clothes for themselves, gamers may select virtual items such as weapons and vanity items (such as pets, mounts, and skin customisations) in order to portray their identity through their avatar. It could also be the case that an avatar is a medium to test an unrestrained side of one's personality that otherwise might not get noticed (Hussain & Griffiths, 2008). To date, there has been little research on why gamers buy virtual items. Huang (2012) reported that affective control, identity, involvement, cognitive involvement, flow, and communication with other players are major influences in purchasing virtual assets.

Given the lack of empirical research, the present qualitative study examined the (i) motivations for purchasing virtual items, (ii) psychological impact of purchasing virtual items on self-esteem and confidence, (iii) social benefits of gaming and virtual asset purchasing, (iv) emotional attachment to an avatar, (v) choice of items and customisation of the avatar as a form of self-expression, (vi) impulsivity versus thoughtfulness in purchase intentions of virtual items, and (vii) impact of transaction machinery on the 'game experience' from a gamer's perspective. Using interpretative phenomenological analysis, the study was exploratory and aimed to understand the psychology underlying purchase intention of virtual items and assets among online gamers.

II. Method

a. Participants

The participants were recruited from the research team’s university gaming society. Participants volunteered to take part in the research after a talk given at a society meeting indicating that gamers from a multiplayer background where money can be spent for in-game items were required as part of research into ‘virtual assets’. Prospective participants were notified that gamers of all genres were required including online strategy games, massively multiplayer online role-playing games (MMORPGs), and social media site games. To be included in the study, the gamers had to have spent money on virtual assets (irrespective of how much they spent buying virtual gaming item). A total of six gamers were interviewed (see Table 1 for socio-demographic details). A small sample was selected in order to keep with the ideographic nature of IPA (Smith 2004).

Participant	Sex and age	Preferred game(s) played
Participant 1	Male, 19	Battle Pirates
Participant 2	Male, 18	Guild Wars, World of Warcraft
Participant 3	Female, 21	World of Warcraft
Participant 4	Female, 21	World of Warcraft, League of Legends
Participant 5	Male, 22	World of Warcraft, Lord of the Rings Online, Farmville
Participant 6	Male, 29	Entropia, Diablo III, League of Legends, Guild Wars 2

Table 1. Summary of gamers’ socio-demographic characteristics

b. Research design and methodology

The present study utilized a qualitative methodology – in this case interpretative phenomenological analysis (IPA) – due to its focus on lived experience. IPA like many other qualitative methodologies provide much ‘richer’ data than that collected via quantitative surveys. IPA is a useful tool that has the potential to provide a rich and detailed, yet complex, account of data collected. IPA allows participants to disclose thoughts on their experiences (Smith 2004). Participants were recruited using a variant of purposive sampling (Willig, 2001). Patton (2002) highlighted the importance of selecting participants based on their ability to provide rich data, making purposive sampling the most effective method of recruitment for an IPA study. In the present study, each participant had unique experiences of purchasing virtual items and assets, and IPA enabled each participant to share their thoughts with the researchers. Interpretative phenomenological *analysis* “offers an adaptable and accessible approach to phenomenological research intended to give a complete and in-depth account that privileges the individual” (Pringle, Drummond, McLafferty & Hendry 2011, p.20).

Analysis of the interviews is carried out by initial familiarisation with the transcriptions of each interview. Any emerging themes are highlighted and brought together to establish superordinate themes. Superordinate themes are selected by the researchers depending on how salient they were deemed to be. Each superordinate theme contains a number of specific focus areas and these

are categorised as subordinate themes. It is possible for IPA to contribute to theory and understanding at a much more detailed level than quantitative approaches (Pringle et al. 2011) as the experiences are subjective. Each participant comes from a different background and has different experiences with virtual item and asset purchasing.

c. Procedure

All the gamers underwent a semi-structured interview. They were informed that the study aimed to explore the purchasing of 'virtual assets'. Each interview lasted between thirty minutes and one hour. Gamers were assured that all data were confidential and anonymous. Gamers were notified that if they felt uncomfortable with any questions that they did not need to answer and they could withdraw from the study at any point during or after the interview up until a specified date. The gamers were notified that the interviews were being recorded for transcription purposes. The study was granted permission by the researchers' University Ethics Committee.

The analytic process was essentially idiographic where each case was analysed in its entirety before commonalities across the transcripts were extracted and retained as the essence of the experience of buying virtual assets. Each cluster of themes was provided with a super-ordinate descriptive title that accounted for the incumbent themes. Continuing the idiographic nature of the study, care was taken to interpret data and extract themes on a case-by-case basis initially. After each of the six transcripts had been independently analysed and reduced into hierarchical thematic structure, attempts were made to merge the thematic structure of each transcript into a more coherent, global model that maintained the essence of the phenomena being studied.

In order to maintain credibility of analysis, the interpretative process and the final model of super-ordinate and their sub-ordinate themes were audited by the second author (Smith, 2003). There was a dialogue with the second author who ultimately was satisfied with inductive reasoning and representation of data. Finally, the agreed hierarchical structure of themes was transformed into a narrative account, supported substantially with verbatim extracts. The inclusion of a substantial amount of verbatim accounts is important as it retains the voice of the participants while also providing an opportunity for the reader to critically appraise the interpretations made by the researcher (Newton, Larkin, Melhuish, & Wykes, 2007).

III. Results and preliminary discussion

Seven superordinate themes were identified as a result of interviewing the gamers: (i) *Motivation for purchase*, (ii) *Social aspects of the gaming and purchasing*, (iii) *Emotional attachment to the avatar*, (iv) *Psychological reward and impact*, (v) *Self-expression*, (vi) *'Stock market gaming' and gaming culture*, and (vii) *Research/impulse buying*. These are highlighted Subordinate themes have been identified and pooled.

Superordinate theme	Subordinate themes
Motivation for purchase	Necessity, exclusivity, function, commitment, impressed by/impressing others (social shopping), collectability/'cool factor'
Social aspects of gaming and purchasing	Real and lasting friendships, replacement for going out
Emotional attachment to avatar	Yes/no, pride, emotional enjoyment
Psychological reward/impact	Superiority, true/ideal self, self-torment, satisfaction, immersion
Self-expression	Role-play, extension of self, detached from avatar
'Stock market' gaming and gaming culture	Stock market gaming, ruining of game experience
Research/impulse buying	Recommendations, impulse buying, trying items on

Table 2. Summary of superordinate and subordinate themes regarding buying virtual assets (n=6)

a. Motivation for purchases

To a non-gamer, the motivation for purchase behaviours may seem simple – the item has a function and is superior to the current item that holds its place on the avatar. While function was a recurring theme for some of the gamers, there were more meaningful and unique motivations. These are expanded upon below.

Item exclusivity

Virtual items are not often thought of as degradable or 'limited' in any sense, as they are a result of programming code. However, when there is a time limit on the availability of items, the urgency to obtain the items increases. It was observed across most of the interviews that exclusive items with expiration were the items in which most money was spent by the gamer.

Extract 1: *"Because of Christmas they had this winter coat that made my character quite like a pimp, so I got these shades as well which made me look pretty cool"* (Participant 2)

Extract 2: *"It was mostly if it was limited edition and it was going to run out"* (Participant 3)

These extracts suggest that the fact the item is going to expire provokes the gamer in to purchase behaviour. This has been supported by research by Lehdonvirta, Wilska and Johnson (2009) who found in *Habbo Hotel* (an online life simulation), that the rarity of an item was indicative of its importance. In *Habbo Hotel* there is no in-game currency so items that were more exclusive became symbolic of success. However it must be considered that for the gamer, if an item can be obtained by working instead of purchasing, then the gamer is likely to spend time (as opposed to money) achieving it.

The influence of others (social shopping)

In an environment where the gamer is exposed to interaction with other players, the items themselves take on a meaning of expression and success. For most of the participants, the fact that someone else could see an item they had obtained was of significant importance. In a community where personality traits are not prevalent and a reliance on the observable is, items took on a social role. This has been termed 'social shopping' and has been explored by Hassouneh and Brengman (2011). They found that compared to psychological motivations for purchase behaviour online (e.g., self-esteem), social motivations were of equal importance (e.g., highlighting to other players that they are successful, or establishing a point of discussion). Hassouneh and Brengman's (2011) findings were supported by the present research.

Extract 3: "You see people with that stuff and think "oh wow, they look cool" and I want it as well and want that same first impression and social status so it's kind of copying because that's how they made you feel when you first saw them wearing that or showing their pet off and you think I want to have that effect on other people" (Participant 4)

Here, the term "social status" is used by Participant 4. The purchasing of virtual items for some gamers has potential to appeal to social status and increase the gamer's standing in the virtual world. To be impressed with another gamer's items is a feeling that makes an impression on some gamers, and that they may want to recreate.

Extract 4: "In World of Warcraft, one person had a mount and I asked them where they got it...a year later it went down to £10 and I thought I'd buy it because it still looked really good" (Participant 5)

Extract 4 is useful as it not only indicates that being impressed by another gamer's items is a key motivation for virtual item purchase behaviour, but it also highlights that seeing an item that stands out leaves a lasting impression which led to the purchase of the same item. An appeal to social status does not only apply to online friends. Participant 2 suggested that appealing to his friendships in real life was a motivation for buying certain items:

Extract 5: "We try and make each other's characters the blackest and with most outrageous hair but I didn't have very outrageous hair. I didn't have this so I felt a need to buy it so I could joke with him" (Participant 2)

The purchase of virtual items for Participant 2 served a purpose in a real social setting. Similarly to gamers influencing other gamers, he felt the necessity to buy hair for his avatar in order to make his friend laugh. Virtual items appeal to sociality, and social shopping leads to the possibility of more respect from other players or even the facilitating of a joke among real friends. It could perhaps be suggested that the research by Li (2012) and Hassouneh and Brengman (2011) in which social factors were shown to be the most influential purchase predictor are more consistent with the findings of the present study than Guo and Barnes (2011) who found social factors had little significance in purchasing behaviour.

Purchase behaviour as sign of commitment, predominant pastime

Typically, the longer the length of time spent on any hobby the more likely it is to lead to some sort of monetary investment. This is also true of gaming.

Extract 6: *"I played for seven years so that's, I kind of used that time frame as a reason as to why I could buy stuff for the game"* (Participant 4)

Justification for purchase behaviour was necessary for Participant 4. In order to buy items for their character, gamers have to have spent what they consider a justifiably large time investment. This investment can be considered to contribute to attachment of 'sentimental value' to virtual items, especially when spending real money on them.

Extract 7: *"It has a sentimental value more than the actual value. Especially if I'm buying it with real money it's got more sentimental value"* (Participant 5)

The spending of real money on items must be attributable to having considerable "sentimental value" attached to the game. This sentimental value then gets attributed to the items in which the gamer has spent a large amount of time to achieve. Compared to single-player games, multi-player games require much more time commitment online. Throughout the interviews, it was clear that each gamer had spent an average of 20 hours per week online – a considerably large time commitment. Gaming as a 'predominant pastime' was a recurring theme:

Extract 8: *"It's what I do in my spare time"* (Participant 1)

Extract 9: *"I'm playing about 2-3 hours a night. It can be anywhere up to 6 hours so quite a lot"* (Participant 5)

Gaming has evolved in to something more than a leisurely activity. The games offer an investment and the purchasing of virtual items is viewed as a justifiable time commitment. The items then appear to develop sentimental value. Therefore, it is expected that monetary investment will occur at a certain threshold over time. This is consistent with Kaburuan et al.'s (2009) finding that gamers will start purchasing behaviour once a dedicated amount of gameplay has been reached.

Function, Necessity to progress

Supportive of Lehdonvirta's (2009) findings that item quality is an important motivation for purchase behaviour, the present research also highlights the importance of function.

Extract 10: *"Functional things that can help me in the long-term, that's why I buy those things"* (Participant 5)

It seems logical that function is a key motivation. However, attached to the importance of function is the use of transactions as a necessity to progress in-game. Similar to buying items is the option to buy in-game currency in order to buy upgrades and items. It is up to the gaming companies to decide how exactly they capitalise on this, but to gamers it is expected that real money investment aids their progression through the game.

Extract 11: *"You do go in and you know what to expect, they've not got to that level by playing without 'coining' "* (Participant 1)

Here, Participant 1 terms the buying of gold as "coining", the game's nickname indicative of the acceptance of currency purchasing within the gaming environment. Although the gamers may clearly see companies nudging them towards spending money, necessity to progress and function remain motivations underlying purchase behaviour of virtual assets and is supportive of research findings by Lehdonvirta (2009).

Collectability/'Cool Factor'

Novel items can also be collected by gamers. Some examples of novel items (or 'vanity items') are collectible pets, mounts, clothing, and skin/hair customisations. The collectability or 'cool factor' also played a role as a motivation for buying virtual items among some of the gamers:

Extract 12: *"They were pet and mount collectors which is why they spent money, they wanted all of them"* (Participant 3)

For Participant 3's guild members, some items were classed as collectibles. In this case the items are 'vanity items' as they have no functional benefit for the avatar. Therefore, something aesthetic or virtually superficial proved to be a motivating factor in buying virtual items. This was also the case for Participant 6 who placed importance on items having the "cool factor".

Extract 13: *"I tend to go for things not because they will be make me better at the game but for the cool factor, not more efficient"* (Participant 6)

When considering motivations for virtual asset purchasing for gamers, function alone is not enough. There are more superficial features of the items that also appeal to social status. Exclusivity and collectability must also be considered, as well as (in some cases) "coining", viewed as an accepted necessity to progress in-game.

b. Social aspects of gaming and purchasing

When spending large amounts of time in an environment populated by other people, it is almost inevitable that the gamer is going to have to interact with some of them. Research by Tay (2005) highlighted the possibility of building friendships online, and was supported by findings in the present study. Gaming offered a medium for building enduring friendships and these are important when considering why gamers purchase virtual assets. Purchase behaviour could be a result of spending time in a socially rewarding environment. One participant no longer spends as much time in the game as they used to but still remains in contact with the friends she met through the game.

Extract 14: *"Since quitting I still talk to everyone so it's, we weren't just friends in game"* (Participant 3)

The online game was also a replacement for going out for some gamers. The social aspect offered by the game was as beneficial to the gamer socially as going out with friends. The game was more suited to some people socially than socialising in a real environment is (something that has also been reported in previous research [e.g., Cole & Griffiths, 2007; Griffiths et al., 2013]).

Extract 15: *"I'm able to jump straight out of the box online because in theory I'm hidden but viewed in a different way at the same time"* (Participant 4)

The 'barrier' of being behind a computer screen when interacting with others meant that for Participant 4, social interaction carried less threat and she could "jump straight out of the box" online. She had no need to hold back in social interactions online. This was evident in other gamers:

Extract 16: "I feel I get more satisfaction and more enjoyment [playing online games] than going out drinking" (Participant 1)

The alternative social aspect of the game was also important to these participants as they felt social satisfaction. The benefit for the gamers' social lives is an appeal of the games themselves. Hassouneh and Brengman (2011) suggested the environment and social aspects of the in-game world with things such as freedom from embarrassment and the absence of rude staff contribute to a more enjoyable shopping experience in the virtual world. 'Flow' in electronic media is reliant on the feeling of 'social presence' (Witmer & Singer 1998). Social presence is a result of social interactions and feeling emotional response to other gamer's actions. It could be that the feeling of immersion in the game and the resulting purchase behaviour could be due to the fulfilment of social needs enabled by the game.

c. Emotional attachment to avatar

Research has shown that it is possible for gamers to become emotionally attached to their items and avatar (Rab 2007). In terms of attachment in the present study, some gamers felt that they were attached to their avatar and items. When the gamer was attached, it was seen to influence feelings of pride and impact on the emotion of the gamer:

Extract 17: "I have guild members who considered it a point of pride to have all these items" (Participant 3)

Pride is one feeling attributed to emotional attachment to items. In Participant 3's case, the guild members placed more emphasis on obtaining certain items than she did, but the items did influence the positive feelings of attachment felt by her friends. Linked to the notion of pride is the emotional investment in the game.

Extract 18: "If it's got a sappy ending I'm crying my eyes out but watch [the film] 'Titanic' and I'm cold hearted" (Participant 4)

Here, Extract 18 summarises how encapsulating gaming is for Participant 4. The environment provides a medium in which she can *feel* her character's story and invest emotion into the development of her character. An interesting point to consider is that those gamers in the sample who considered themselves unattached to their avatar spent less money on virtual assets. One participant explicitly stated the necessity for emotional attachment in purchase behaviour:

Extract 19: "I would have gone for that in a heartbeat because I put a lot of time in to that game and I was really attached to it. Attachment is definitely important in purchasing" (Participant 6)

Attachment is important in the purchasing of virtual items as Extract 19 highlights. As previously mentioned, those who spent less money on virtual items were less attached to their avatar and those who were more attached to an avatar were more attached to the items and were likely to spend more. This is related to research by Bowman, Schultheiss, and Schumann (2012) who found that attachment to the game influenced pro-social or anti-social behaviour of their participants. Just like pro-social or anti-behaviour, purchase behaviour may also be influenced by emotional attachment. Participant 1 was a less serious spender and emphasis was placed on emotional attachment being important in his spending patterns.

Extract 20: "You do get a lot of people who get emotionally attached because of the money put on...Me personally, I wouldn't say I'm emotionally attached" (Participant 1)

This addresses how money spent on the game increases attachment for a gamer. Considering how emotional attachment can influence and be influenced by spending is supportive of the findings by Bowman et al. (2012).

d. Psychological reward and impact

Gamers mentioned feeling psychological reward as a result of purchasing virtual items. Only one of the gamers mentioned feeling no satisfaction with their virtual item purchases. Item purchases impacted on the feelings of self-esteem as a result of being 'better' than other players. The motivation of superiority to other players is consistent with the 'reward' element of the 'Model of Desire' in purchase behaviour by Eyal (2012) in that the gamer is being rewarded for spending. The following extract highlights this feeling.

Extract 21: "If I feel good and I know that most other players don't have it, it makes me feel better about myself" (Participant 4)

Extract 21 exemplifies the reward of purchasing items. Psychological reward is evidently important in purchase intention and notions of the 'ideal self' and 'self-torment' were raised (see below).

Ideal self: For Participant 4, online gaming provided a medium to express her true self. Her real self was not the way she interacted and acted in real life, it was the way she interacted and acted through her avatar in-game. This has been explored by Hussain and Griffiths (2008) who suggested that simulated environments give people a chance to explore their personality and test boundaries which is hard to do offline. It has also been found that gamers wished to portray their 'ideal self' through 'Wishful Identification' (Hoffner & Buchanan 2005) where the user felt greater self-efficacy and satisfaction if their avatar had a vast range of powerful items (Kim et al. 2012). The present study supports this finding.

Extract 22: "You have this personality but you can't show your real self and true self in person and it's easier to be able to do it online" (Participant 4)

The importance of social interaction online has been discussed, but attention should be drawn to how important it is to some gamers. For Participant 4, expression of her true personality was the main motivation for gaming and virtual asset purchasing. She was able to portray what she felt her actual self was without real life limitations. The gaming world is a medium for this portrayal. She used the term "perfect" to describe her avatar:

Extract 23: "I always create myself with like massive elf ears and perfect skin, eyes, just the perfect look. I'm not going to be able to look like that in real life I might as well imagine myself, portray myself as looking like that in my own mind online" (Participant 4)

To be "perfect" online is a major motivation here. Self-expression and identity have been shown to be of major importance in purchasing of virtual assets (Lehdonvirta 2010). For Participant 4, it could be that expression of her ideal identity was a strong motivation for gaming and purchasing.

Self-torment

The lack of self-torment associated with shopping for items for an avatar meant that virtual shopping was more enjoyable than real world shopping for Participant 4. Shopping for her actual

self was associated with negative emotions such as disappointment, but when it came to shopping for avatar items this was not the case:

Extract 24: *"I torment myself with it. With clothes I try it on; I don't look good and just put it back. I don't have the same self-torment that I do with buying online items"* (Participant 4)

Here, self-torment linked to the psychological reward of buying items. There was more psychological reward from buying items online than in the real world. However, it must also be acknowledged that for some gamers there are differing levels of emotional attachment and although the gamer may have feelings of attachment, there is a decision as to whether the purchase can be justified. Taking in to account how they will feel after buying an item is important:

Extract 25: *"I always do the calculation, if it's a virtual asset it's always going to be a luxury purchase...Can I justify this to myself?"* (Participant 6)

Here, self-torment is associated with feelings of disappointment and justification, perhaps like real world shopping. A decision must be made over spending to acquire an item and the gamer must be able to justify spending. It appears that purchasing virtual items can have very real psychological benefits on self-esteem and confidence. The findings of the present study are also consistent with the 'reward' aspect in the 'Model of Desire' suggested by Eyal (2012).

e. Self-expression

Self-expression appears to have had significance as to why virtual items are purchased. Previous research has highlighted that self-expression occurs online through avatars (Kim et al. 2012). This was consistent with the findings from the interviews in the present study. One of the gamers was an actor, and role-playing motivated his buying of virtual items, creating a role for his character an extension of his desire to act:

Extract 26: *"It's like improvised acting within the game; you take on a role...rather than just playing a game and thinking in numbers you take on elements within with world and its history"* (Participant 2).

Virtual items can provide a means to creating character story and history. Creativity is a channel that can be opened in the online gaming world and virtual transactions are a possibility to further customise and express oneself through the avatar.

Extract 27: *"I like the creative side of creating my characters and I usually base my first character on me and what I believe my primary traits to be"* (Participant 2)

The avatar as an extension of the self was recurring theme among the interviews. However, Participant 5 felt the avatar was a detached entity from the gamer. In relation to success online, he expressed his mental detachment from other gamers and their avatars. Whilst he may know them in real life, he saw the avatar separately to the gamer:

Extract 28: *"When I play with my friends I don't interpret them as I do in real life, I interpret them as their avatar"* (Participant 5)

It could be argued that the avatar is therefore an opportunity to create a more successful self. There is a unique nature of self-expression online. One can at the same time express themselves through their character and act how their avatar would be expected to. There is no contradiction in this mentality. At the same time, it is possible to be oneself and someone more desirable as highlighted by Extract 29.

Extract 29: *"Anything I'd say was going through my head like 'is this something my character would say?'"*(Participant 6)

The purchasing of assets enables the gamer to customise their avatar in order to express themselves online. This supports the findings of Kim et al. (2012) who highlighted that it was necessary for gamers to identify with their avatar and this has potential to contribute to greater self-efficacy through 'wishful identification' (Hoffner & Buchanan 2005).

f. 'Stock market' gaming and gaming culture

The option to buy items had significant impact on the playing experience for the gamers in the sample. One gamer expressed his concern over the opportunistic nature of making money in-game and its resulting dominance over the enjoyment factor of playing due to having to spot the best times to buy and sell items. It has been observed by Garrelts (2009) that *"the economic systems in place also created several problems relating to "accumulated wealth and real estate," players creating characters solely for economic gain"* (p.1). This is something that some gamers voiced concern over:

Extract 30: *"It killed a lot of the fun aspect of it as everything was suddenly viewed as this financial transaction...I would look in the auction house for trends, buy low and sell high rather than actually playing the game itself"* (Participant 6)

Participant 6 felt that once the end of the game has been reached, the items became opportunities to make a profit rather than enjoying the game for its content:

Extract 31: *"There is always that looming button on the screen which is like 'hey, you know that new item you just got for your character, why don't you sell it?'"* (Participant 6)

Supportive of Garrelts (2009) claim that item markets can establish too much focus on transactions, the present research found the introduction of an official transaction system changed the *"game experience"*. Too much focus can be placed on knowing in-game markets. One gamer spoke about how games with immersive storylines are more enjoyable and engaging than *"stat bashing"* games. This has implications for how much impact an item can have on the gaming experience and this should be taken in to consideration by games developers who need to consider how much importance individual items have in-game. For researchers, it is important to consider the impact items have on gamers.

Extract 32: *"In Neverwinter Nights which is basically dungeons and dragons online I was playing a role...Whereas playing something like Diablo or World of Warcraft, no I don't really care. That's a batch of stats and killing potential"* (Participant 6)

Too much focus on the items themselves can lead to a devaluation of assets as gamers may be more inclined to spend on 'role' focussed games where having the best items holds less importance. Despite potentially affecting the gaming experience for players, virtual items can take

on a deeper meaning than coding within a framework. Games developers must consider this when creating transaction machinery for players to use.

g. Research and 'Impulse buying'

Buying items online can be seen as convenient as in the virtual world, transactions are only a couple of clicks away from completion. How the ease of conducting transaction impacts on gamers' decisions to purchase virtual items was therefore explored. Despite the ease of purchasing online, gamers were more guarded with spending because purchases were seen as a luxury and gamers were more cautious in an online environment where spending is potentially easier.

Extract 33: *"In an environment where impulse buying is very easy and quick I tend to be more guarded with what I buy"* (Participant 6)

Because of this, recommendations from friends were of major importance in purchase decisions. This supports the findings of Safferling and Lowen (2011) who found researching items before buying was commonplace, and the more researched an item was, the better price it got from the buyer. This also supports the findings of Huang (2012) who highlighted the role of communication with friends in the online world as a contributing factor to subsequent purchasing behaviour.

Extract 34: *"I asked him the best ways on getting an edge and trying to get this ship. I knew the answer would be to 'coin', for the repairs"* (Participant 1)

Extract 35: *"If I see something nice I ask them where they got it from"* (Participant 5)

Being able to research items is essential before making purchases of virtual assets. Related to this is the ability to preview items virtually (similar to a real-world changing room where the gamer can preview an item on their avatar). The availability of previewing meant that gamers were not impulsively buying their items – they were 'experiencing' the item before conducting a transaction.

Extract 36: *"You can preview how it would look on your character. For the items on Guild Wars that's all I really need, all the research I need"* (Participant 2)

Although Participant 2 did not rely heavily on recommendations from friends, he did prefer researching items. This came in the form of 'previewing' them in a virtual dressing room. It could be that virtual assets can be heavily researched, requiring recommendations and being more guarded in an online environment a result of the unique nature of virtual transactions. Communication with friends was found to be of importance in the present study supporting the findings by Huang (2012). However, recommendations alone may not be motivation enough, and previewing items may also be significant as highlighted by Extract 36.

IV. General Discussion

The present study explored psychological aspects of purchasing virtual items and assets. The use of Interpretative phenomenological analysis (IPA) allowed each gamer to share their unique experience of playing and purchase behaviour. Despite the negative aspects of online gaming, the gamers in the present research emphasised a more positive side to buying virtual items and gaming more generally. As highlighted in the analysis, each gamer experienced their playing behaviour subjectively and such things as motivation for purchase behaviour and psychological impact of buying items hold different meanings for each individual.

The study highlighted many different motivations for purchasing virtual items. Lehdonvirta, Wilska and Johnson (2009) found item exclusivity contributed to an item's importance in-game. This was supported by the findings in the present study in that gamers were more likely to spend money if an item expired. Another key motivation for purchase behaviour is the appeal to social status. Hassouneh and Brengman (2011) found that items take on social roles. The 'social shopping' theory applies to the present findings as throughout the interviews there was the feeling of needing to impress other gamers. Attainment of items demonstrates to others how powerful the gamer is. It might be – in line with Li (2012) – that social motivations are integral for purchasing virtual items. Item function was also of importance in the present study.

Naturally, if an item has benefits for the avatar it is more likely that the gamer will spend money to obtain it (Lehdonvirta 2009). Function linked to progression, purchasing items, and buying in-game currency are all sometimes a necessity to progress. Novelty and collectability were also important motivators for some of the gamers. Combining the findings of the current study and previous research demonstrates that there is a wide range of motivations and each individual will place different levels of importance on certain factors such as exclusivity, function, or social status. Despite subjective motivations, purchasing virtual items arose out of gaming as a predominant pastime. All of the gamers in the sample were dedicated gamers who spent relatively large amounts of time online and as perhaps expected larger gaming commitment to led to purchase behaviour (Kaburuan et al. 2009).

An integral part of multiplayer gaming is the interaction with other gamers. The feeling of 'social presence' in an online environment is reliant on an emotional response to social interaction (Witmer & Singer 1998), and the gamers in the present sample felt social satisfaction. The game sometimes enabled social interaction that might not otherwise be present. This supports the theory suggested by Tay (2005) that gaming enables the building of new friendships. Virtual assets can play a number of roles in facilitating friendships such as enabling the gamer to make their character unique. Hassouneh and Brengman (2011) also pointed out that the shopping environment is more enjoyable online as it removes embarrassment and rude staff. The real social benefits of purchase behaviour should not be underestimated. The virtual world can remove normal social taboos and potentially acts as a social buffer between gamers.

Previous research by Bowman et al. (2012) has shown how emotional attachment to games affects behaviour. This also applies to the present study. Similar to the findings by Bowman et al. (2012), the present study highlighted the role of emotional attachment to an avatar as a predictor for purchase intention. As well as emotional attachment increasing likelihood of spending, the spending of real money on items increases the attachment felt. It could be that purchasing virtual items may be a cyclical behaviour. It is also the case that purchasing affects the cognitions and emotions of gamers – 'pride' was a feeling that resonated in the present study. Emotional attachment to items and characters may be commonplace among gamers. Future research should further investigate feelings of emotional attachment in a virtual world.

Virtual worlds offer gamers the chance to feel psychological reward and elevated self-esteem. Eyal's 'Model of Desire' (2012) can be applied to the present research as many of the interviewees spoke of feelings of superiority. The 'reward' element of the 'Model of Desire' is that the gamer is rewarded for spending as they become more powerful with better items. The feeling of superiority over other gamers enhances self-esteem. The present study also demonstrated notions of the 'ideal self' and self-torment. 'Wishful identification' (Hoffner & Buchanan 2005) leads to gamers portraying their 'ideal self' through an avatar and a wide range of powerful items can lead to greater self-efficacy and satisfaction (Kim et al. 2012). Therefore it could be argued that gaming

and virtual asset purchasing has real psychological benefits for gamers and as suggested by Hussain and Griffiths (2008), simulated environments may be an opportunity for people to explore their personality and test boundaries.

The acquisition of virtual assets enables more detailed role-playing and self-expression. Self-expression has been shown to occur online through avatars (Kim et al. 2012) and buying items has the potential to further customise a character. Self-expression can be related to feelings of psychological reward as gamers are able to portray their selves in a manner that they may not be able to in real life (Hussain & Griffiths 2008). It may also be possible to apply 'Wishful Identification' to self-expression. Kim et al. (2012) highlighted that it was necessary for gamers to identify with their avatar and this has potential to contribute to greater self-efficacy. Virtual assets potentially allow the gamer to explore their creative side through their avatar. The fact that gamers may consider their avatar as personal is indicative of the psychological impact games and virtual transactions can have.

Financial transactions can be easier to conduct in an online environment and the present study took this in to consideration. Supportive of Safferling and Lowen's (2011) findings, the present study highlights how gamers research items before purchasing them. It might be expected that easy-to-use transaction machinery might facilitate spending. However, in reality, gamers were guarded with their spending online and recommendations from friends played a major role in purchase behaviour. This is supported by Huang (2012) who found communication with friends was a predictor for purchasing behaviour. Recommendations alone may not be enough of a predictor and previewing how items look on an avatar was also of importance. Virtual assets can be then researched and the placing of real monetary value on the virtual items indicates the value they may hold to the gamer.

Limitations and future research

The present study is not without limitations. The sample was small (although perfectly adequate for IPA). The sample was also self-selecting and the gamers that participated are unlikely to be representative of all gamers that make in-game purchases. The data were all self-report and are therefore subject to various biases (social desirability biases, recall biases, etc.). Replication using larger samples and other methodologies are therefore needed.

Despite the limitations, the present study was an exploratory study into a relatively new research area. Although video gaming in itself has been studied in depth, transactions for virtual assets have arisen from technological advancement. The present study focussed on the psychological motivations and impact of transactions for virtual items, and future research could study more one or two of the themes analysed in the present paper in more depth. This would develop a greater understanding of the research area and contribute to understanding the underlying psychology and motivation behind gaming and asset purchasing. With a more specific research question in mind future studies may want to employ a different analytical approach. IPA was chosen in order to gain an understanding of the subjective experiences of gamers 'lived experience'. Future studies may want to employ different analytical methodology in order to establish a wider understanding of virtual transactions in gaming. A large proportion of online gamers are younger than eighteen years old and are less financially independent. Problematic spending may be more prevalent in a younger cohort. Future research should take this in to account.

Implications

The findings of the present study have implications both for game developers and gamers. Game developers looking to incorporate transaction machinery into their games must consider things from the gamer's perspective as too much focus on purchasing items may affect the gaming experience. For gamers, appealing to social status and wanting to gain rewards, 'flow' can be applied to item purchasing (Witmer & Singer 1998, Csikszentmihalyi 1992). The feeling of immersion in-game may stimulate purchase behaviour. Despite the emphasis on the 'positive' in the present study gamers must be aware that feelings of immersion could potentially lead to problem behaviour such as addiction or excessive spending on virtual items (Pontes & Griffiths, 2014).

In the present study, characteristics of the items themselves such as exclusivity and function influenced spending.. The fact that gamers develop emotional attachment to avatars and may use these as self-expression is also something games developers should consider. Whether placing more emphasis on the 'game experience' or generating a profit should affect how item transactions are used in-game. Game developers should also consider that black markets for items exist already (Garrelts 2009) and that introducing an official transaction system could improve the game experience. One certainty is that transactions for virtual assets are becoming integral to online gaming.

Conclusion: The present study aimed to explore the phenomenon of buying virtual items. Motivations for purchase behaviour, the social and psychological benefits of purchase behaviour, emotional attachment to an avatar and items, self-expression through the character, how the transaction machinery impacts on the game experience, and how research contributes to purchase behaviour have all been considered in this study. Unlike media coverage focussing on the more negative impact of online gaming, the present study highlighted the positive aspects of purchasing virtual assets for the gamer. They are able to feel connected socially, feel confidence in themselves and their success, express their inner and ideal self without constraint or fear, build lasting relationships, impress people, and generally benefit from gaming and buying virtual items.

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