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Brand image of EVE Online
Users, non-users and fans

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HÁSKÓLI ÍSLANDS

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Preface

Abstract

EVE Online is a massively multiplayer online game (*MMO*) published by the Icelandic game developer, CCP. *MMOs* are games that allow a great number of players scattered all over the world to play together via the Internet. The current study aims to measure EVE Online's brand image among four different groups: 1) users, 2) non-users, which are then categorized into two subgroups: 3) non-users who are not fans of the brand and 4) non-users who are fans of the brand.

The concept of customer-based brand equity is put forward. Keller's approach is applied, where the source of brand equity is defined as consumer knowledge about the brand and consisting of two dimensions: brand awareness and brand image. Studies by Ehrenberg and colleagues have shown a systematic and predictable relationship between usage levels of brands and their image. Brands with larger market-shares (more users) tend to elicit more favorable responses from consumers, meaning that big brands have a better brand image. Since brand image is an essential part of customer-based brand equity, it follows that brands with larger market-shares will also have higher levels of brand equity. Meaning, high brand equity is not a driver of market-share, but a result of it. Here, this relationship was studied on a single-brand level.

Three hypotheses were tested. The first stated that users of EVE Online have a more positive image of the brand than non-users. The hypothesis was not supported by the data and the overall brand image did not differ between the two groups. However, when brand image statements were investigated more closely, a pattern emerged which showed that users were more likely than non-users to agree with positive statements about the brand. The second hypothesis stated that non-users who are fans of the brand have a more positive image of the brand than non-users who are not fans. The hypothesis was not supported by the data but the data exhibited the same pattern which showed that non-users who are fans were much more likely to agree with positive statements about the brand than non-users who are not fans. The third hypothesis stated that non-users who are fans have a more positive image of the brand than current users. The hypothesis was not supported by the data. This would seem to suggest that even if there existed a sub-set of consumers who are passionate about the brand, behavior (usage) will still be a more reliable predictor of its image.

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1   Introduction

Massively multiplayer online games (*MMOs*) are games that allow a great number of players scattered all over the world to play at the same time via the Internet. *MMOs* are not a single genre of games as they can vary greatly in theme and content. One popular kind is massively multiplayer online role-playing games (*MMORPGs*). In such games, players create a character, also known as an avatar, control his or her behavior and interact with other players through a virtual world (Zhong, 2011). These games are different from role-playing games where players play by themselves, or in small groups, for two reasons: first, the number of players is much greater, and secondly, unlike in smaller games, the virtual world in *MMORPGs* continues to exist and evolve even when the players are offline, meaning, the virtual world is *persistent*.

Unlike most other games where players make only one purchase, most *MMORPGs* use a subscription format which means that in addition to making an initial purchase of the game, players pay a regular subscription fee to gain access to it. Usually players will pay the fee on a bi- or tri-monthly basis. These are so-called subscription role-playing games. While these games are still quite popular, there has been a trend that shows more and more players leaving the traditional subscription games and gravitating towards so called "free-to-play" games. Unlike standard subscription games which require both an initial purchase and paying a subscription fee, "free-to-play" games will usually only require an initial purchase. In some cases, no initial purchase is required and the games bring in revenues by offering additional content for low prices. This is also known as "micro-transactions", when players make many small purchases over a long period of time. As they keep playing, these transactions accumulate and can become equivalent to the cost of a standard subscription based game. In some cases, players even end up spending more than they would have on a standard subscription game (Mayyasi, 2013).

The topic of this thesis is the brand image of the increasingly popular Icelandic *MMO*, EVE Online. EVE Online was developed by CCP Games and uses a standard subscription format. The aim of the current study is to assess whether there is a difference in EVE

Online's brand image between four groups: 1) users, 2) non-users, who are then categorized into two sub-groups: 3) non-users who are not fans of the game and 4) non-users who are fans of the game.

The current study is an extension of Ehrenberg and colleagues' studies on the differences of brand image between users and non-users but differs from previous studies in two respects. First, unlike many previous studies on this topic (see Bird and Ehrenberg, 1970; Bird, Channon and Ehrenberg, 1970), the current study does not focus on typical consumer or grocery products. Secondly a new group is added: fans of the brand. Their reactions to the brand are measured along with other non-users and current users.

The study has both theoretical and practical implications.

On a theoretical level, this study adds to the literature of brand image and usage. Ehrenberg and colleagues (See Barwise and Ehrenberg, 1985; Bird and Ehrenberg, 1970; Bird, Castleberry and Ehrenberg, 1990) found that brands with larger market-shares elicit more favorable responses from consumers in brand image studies. This is because they have more users, and users tend to react more favorably towards brands than non-users. Here, this pattern is studied on a single-brand level, using a product which isn't a typical consumer product.

On a practical level, it is useful to know what non-users think of your brand, since that can help explain why they either have never tried the brand or they quit using it. Realizing the reasons behind consumers not using your product could help change either the product or the marketing of it, in order to gain more customers. The study is also useful for CCP managers since it focused exclusively on EVE Online's target group. This means that the results provide an insight into the target group's image of the brand.

2   EVE Online

The game developer and publisher CCP was founded in 1997. Today, the company employs over 500 people and has operations in Reykjavík, Shanghai, Newcastle and Atlanta.

After a three year development period, CCP released the *MMORPG* EVE Online in May of 2003 (Hilmar Veigar Pétursson, personal communication, February 13th, 2013). Three years after being released, EVE Online was being played by more than 100,000 players. In February of 2013, almost 10 years after being released, EVE Online players were more than 500,000 (Long, 2013).

EVE Online is a science-fiction sandbox player-versus-player (*PVP*) game. This means that the theme and content of the game are greatly influenced by science-fiction and include space travel, futuristic technology and more. A sandbox game is a game in which minimal limitations are placed on the players, allowing them to explore and even make changes to, a virtual world without having to follow a set plot or linear progression. Finally, a player-versus-player game is a game in which interactive conflicts between two or more players occur.

The game is set in space, about 20,000 years from now, after mankind begins exploring and colonizing space. When creating their avatars, players choose one of four races who all descended from mankind (EVE Community, n.d.). They then explore space, develop their avatars and interact and work with other players in groups called *corporations*. These are then a part of larger player networks or *alliances*. Players also engage each other in combat, war, economic struggle and more.

2.1   Target group
EVE Online's target group is composed of men between the ages of 20 – 45 (Pétur Jóhannes Óskarsson, personal communication, July 30th, 2013).

2.2   Frame of reference
Defining a competitive frame of reference is difficult since EVE Online is the only science-fiction sandbox *PVP* game currently on the market. The games which EVE Online competes with are multiplayer online games, including both other *MMORPGs* as well as different types of online games. *Mechwarrior Online* is a relatively new game which has

certain features in common with EVE Online and is being played by a part of the EVE Online community. However, players of the game are still relatively few in numbers and it is not considered a direct competitor to EVE Online at the moment.

Other games which the EVE community plays are for example *World of Tanks* and *League of Legends* but these games are considerably different from EVE Online with regard to both theme and content.

2.3   Positioning

Brand positioning consists of defining a brand's *points of difference* and *points of parity.* A brand's points of difference are meant to convince consumers to purchase the brand rather than its competitors. Points of difference that distinguish a brand from its competitors are necessary for successful positioning (Keller, Sternthal and Tybout, 2002). A brand's points of parity establish a frame of reference for consumers so they can know what they will achieve from using a brand. It is important to choose the appropriate frame of reference because it affects the type of associations the brand will have (Keller, Sternthal and Tybout, 2002). In essence, a brand's points of parity convince consumers that the brand is able to serve its intended purpose and explain what it has in common with its competitors.

Here, EVE Online's brand positioning is detailed.

2.3.1   Points of difference

- EVE Online is a single-shard game (all players play on the same server and become members of the same community). This means that the actions of one or a few players can possibly have consequences throughout the entire virtual world (Hilmar Veigar Pétursson, personal communication, February 13th, 2013).

- Events within the EVE Online universe almost always originate with player actions and without the company's involvement. Player actions can often be beyond CCP's imagination or intentions.

- Many events that happen within the EVE Online universe can take place outside of the game (diplomacy, propaganda, spying).

- EVE Online's virtual economy is almost completely player-driven. Players supply about 97% of items that are sold and bought on the market (Pétur Jóhannes Óskarsson, personal communication, July 30th, 2013).
- EVE Online does not use a typical *MMORPG* levelling system. Players accumulate skill points in real time – whether the players are logged in or not. All avatars are able to perform most tasks, regardless of "level", unlike in other games.

2.3.2 Points of parity

- Social interaction between players.

- Players' ability to form groups or alliances to work in teams and start conflicts or wars with other teams of players.

- Technical factors to facilitate social communication and co-creation: built-in text and voice chat, outside forums, websites, wikis, etc.

- Players' ability to gather resources and create or manufacture something out of those resources.

- Customization of in-game avatars.

3 Customer-based brand equity

The model of customer-based brand equity (*CBBE*) was created as an attempt to further describe the relationship between brands and consumers (Wood, 2000). Farquhar (1990) defined brand equity as the added value with which a given brand endows a product. He said that three elements were necessary for building strong brand equity: positive brand evaluations (with an emphasis on quality), an accessible brand attitude and a consistent brand image.

Aaker (1991) defined brand equity as a set of assets (and liabilities) linked to a brand's name and symbol that add to (or subtract from) the value provided by a product or service. There are four main categories of brand assets: 1) brand name awareness, 2) perceived quality, 3) brand loyalty and 4) brand associations. Aaker defined brand awareness as the strength of a brand's presence in the consumer's mind. This is reflected in various ways, such as how familiar a brand is to a consumer and how easily it can be generated from memory.

Even though perceived quality is a brand association, Aaker (1991) felt it necessary to conceptualize it as its own brand asset category. His reasoning for this was that perceived quality was the only brand association that had been shown to drive financial performance. He also noted that perceived quality can often be a predictor of other brand associations. However, it has since been shown that other brand asset categories, mainly brand awareness, can also drive financial performance (Kim and Kim, 2004).

Brand loyalty is not always included in definitions of brand equity, but according to Aaker (1991; 1996) it is appropriate to do so for two reasons: first, the loyalty which a brand commands is the main component of a brand's value to the firm and second, including loyalty in the definition of brand equity justifies using loyalty programs, which in Aaker's opinion helps build brand equity.

Brand associations can be anything from product attributes, celebrity spokespersons or symbols which are associated with brands.

Here, Keller's (1993) model is applied. He defined brand equity as the marketing effects which can be attributed directly to the brand, meaning, the differential effect of brand knowledge on consumer response to marketing of the brand. This means that a brand is said to have *positive* brand equity if a consumer reacts more positively towards

marketing of the brand than towards the same marketing for a fictional or unnamed brand. If the opposite occurs, the brand is said to have *negative* brand equity. Positive *CBBE* can lead to enhanced revenue, lower costs and greater profits (Keller, 1993).

According to Keller's (1993) definition, consumer knowledge about brands is the source of brand equity. This knowledge can be divided into two dimensions: *brand awareness* and *brand image* (See figure 1).

Customer-based brand equity
(Keller, 1993)
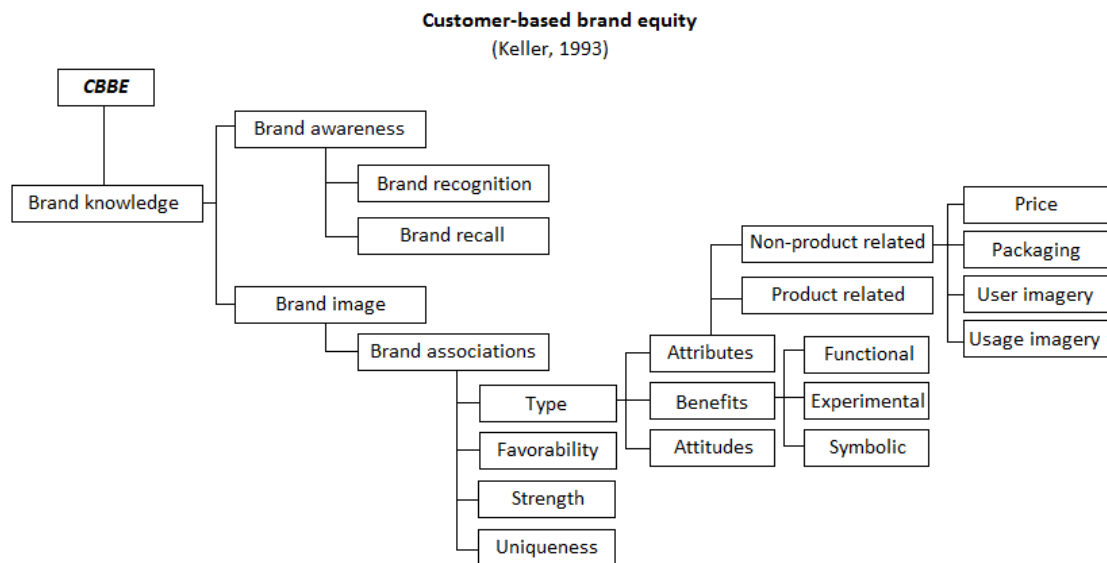
Figure 1. Keller's model of customer-based brand equity.

Brand awareness consists of brand recognition and brand recall. Brand image consists of brand associations, which are then defined by their type, favorability, strenght and uniqueness. There are three types of brand associations: attributes, benefits and attitudes. Attributes are categorized as non-product related or product related attributes. Non-product related attributes are price, packaging, user and usage imagery. Benefits are then categorized into functional, experimental and symbolic benefits. These are all explained in further detail below.

Aaker's (1991) model and Keller's (1993) model are almost identical. Both include dimensions of brand awareness and brand associations. Even though Keller does not specify perceived quality as a distinct dimension of *CBBE*, it falls within the category of brand associations. The only difference between the two models is that Keller leaves out brand loyalty. Even if Aaker (1991; 1996) deemed it appropriate to include brand

loyalty in definitions of *CBBE*, there is a possibility that doing so is reduntant. Brand loyalty is what happens *after* brand equity has been built. The consumer does not become loyal to the brand before he or she has become aware of it and strong, favorable and unique brand associations have been established in his or her memory.

3.1 Brand awareness

Keller (1993) defined brand awareness as the strength of the brand in consumer memory as reflected by their ability to recall and identify the brand under various conditions. It also relates to the likelihood that a brand will come to mind, and how easily it does.

Brand awareness consists of *brand recognition* and *brand recall* (Keller, 1993). Brand recognition reflects a consumer's ability to recognize a brand, meaning, to confirm that he or she has had prior exposure to it. Brand recall reflects a consumer's ability to recall the brand when given certain cues, such as the product category. It requires consumers to correctly generate the brand from memory.

3.2 Brand image

Keller (1993) defined brand image as perceptions about a brand which are reflected by the brand associations held in consumer memory. These associations contain the meaning of the brand for consumers. They can be categorized into three types of associations, according to how much information they contain about the brand: 1) attributes, 2) benefits and 3) attitudes. These are explained in further detail below. According to Keller (1993), a positive brand image is rooted in strong, favorable and unique associations in the mind of the consumer, meaning, the consumers believe that the brand has attributes and benefits that satisfy their needs and wants.

3.2.1 Attributes

Keller (1993) defined attributes as the *"descriptive features that characterize a product or service"*. Moreover, they also define what the consumer thinks the product is or what is involved with purchasing or consuming it. Keller split these attributes into two types: *product-related attributes* and *non-product-related attributes*.

Product-related attributes are intrinsic properties which are necessary for a product to be manufactured or a service to be performed, meaning they relate to the physical composition of a product or service.

Non-product related attributes are extrinsic properties that are associated with the purchase or consumption of a product or service and Keller (1993) divided these into four sub-categories: 1) price, 2) packaging or appearance, 3) user imagery and 4) usage imagery. Keller (1993) considered price a non-product related attribute because even though it is a necessary step in the purchasing process, it does not have a direct effect on product performance or service function. User imagery consists of the associations made between the brand and the type of individual who is perceived as using the brand. Together, these associations form the idea of the typical user of a given brand. They can involve various characteristics such as age, gender, socio-economic status, etc. Usage imagery consists of the associations made between a brand and how, when or where it is used (in what situation). These may contain various factors such as the time of day, week or year, whether the brand is used inside or outside, etc. (Keller, 1993).

3.2.2 Benefits

According to Keller (1993), benefits are the added personal value that consumers attach to a product or service, meaning, what they think a product or service can do for them. He split these into three categories; *functional* benefits, *experiential* benefits and *symbolic* benefits.

Functional benefits usually correspond to a brand's product-related attributes and they meet consumer's basic needs such as physiological and safety needs.

Experiential benefits also correspond to the product-related attributes and relate to what it feels like to use the product or service. They satisfy experiential needs (such as sensory pleasure and cognitive stimulation).

Symbolic benefits have more to do with the extrinsic properties of a product or service and as such relate more to non-product related attributes. They also relate more to the value that a consumer attaches to a brand and they satisfy more social needs, such as the need for acceptance, approval and expression. These benefits can be part of consumers' motivation to purchase brands that carry specific meaning to them – brands

that they think convey a message about them as a person, such as their social status, exclusivity and how fashionable they are (Keller, 1993).

3.2.3 Attitudes

Keller (1993) defines attitudes as the total sum of perceived qualities and benefits of a brand. He notes that attitudes are especially important because they shape behavior, meaning that purchase decisions are more often than not rooted in a consumer's attitudes. Brand attitudes can both relate to beliefs about product-related attributes and experiential benefits as well as non-product related attributes and symbolic benefits.

4 Brand image and usage

As noted before, the model of customer-based brand equity is an attempt to explain the relationship between consumers and brands (Wood, 2000). The main focus of the model is on the *added value* which a brand name or symbol adds to a product or service. In essence, the model aims to explain how brands are differentiated in the minds of consumers. The idea is that if a brand has positive brand equity, it will be chosen for purchase at a much higher rate than brands which have negative brand equity. It follows that positive *CBBE* has become a desirable outcome which marketers strive for.

Measuring *CBBE* can be done by measuring its sources, brand awareness and brand image. The aim of brand image research is often to predict future consumer behavior – if the brand has a positive *CBBE* it should follow that consumers are more likely to purchase it (Romaniuk, 2001). Gaining an insight into future consumer behavior can help marketers make strategic decisions about the brand, such as defining target groups and brand positioning (Keller, 1993). However, very little is known of the relationship between brand image and future behavior (Romaniuk, 2001). Findings by Ehrenberg and colleagues (Barwise and Ehrenberg, 1985; Bird and Ehrenberg, 1970; Bird, Channon and Ehrenberg, 1985) suggest that brand image is much more closely related to current (or even past) behavior, meaning, consumer responses to brand-image measurements

are systematically influenced by the consumer's past history with the brand (Romaniuk, Bogomolova and Riley, 2012). When studying brand image by measuring consumer reactions to brand associations, practitioners often fail to take this usage factor into account (Castleberry and Ehrenberg, 1990).

This relationship between the consumer's history with the brand and brand image is evidenced by the fact that the proportion of people who react favorably towards a brand is highest among its current users (Bird, Channon and Ehrenberg, 1970). However, current behavior is not the only predictor of positive reactions towards a brand. It has been found that former users of a brand tend to react more positively towards it than those who have never tried the brand (Romaniuk, 2001). The proportion of people who react favorably towards a brand is lowest among those who have never tried it (Bird, Channon and Ehrenberg, 1970). All responses to brand image associations seem to be related to current or past behavior in a predictable manner (Romaniuk, Bogomolova and Riley, 2012).

Bird and Ehrenberg (1970) noted that not all users of brands have a positive attitude towards it and not all non-users have a negative attitude towards it. Many non-users react favorably towards a brand while many users do the opposite. However, the incidence of this is very low and it has been shown systematically that usage is a reliable predictor of brand image (Romaniuk, 2001).

Barwise and Ehrenberg (1985) noted that when brand user and non-user responses were compared, attitudes followed two patterns: a) evaluative pattern, where there is more agreement among current users than non-users and b) descriptive pattern, where there is agreement among both users and non-users. Evaluative brand responses elicited during brand image measurement studies do not necessarily describe a real difference between brands, as they are more closely related to attitudes and perceptions. Examples of such responses are for example that a brand "is reliable", "has good value", is "used by young people", and so on. Descriptive responses involve the physical properties of a product or those which have been expressed through a brand's promotion. Because of this, these responses describe a tangible or intangible difference between brands (Bird and Ehrenberg, 1970).

Evaluative brand responses are directly and consistently related to market-share, meaning that brands with large market-shares (and by default, many users), are more likely to elicit the same or similar evaluative responses from many individuals. Brands with small market-shares (and by default, few users), are less likely to elicit similar responses from many individuals. Descriptive responses do not share this association with market-share (Riquier and Sharp, 1997). Not only are bigger brands more likely to elicit similar responses from many individuals, they are also more likely to elicit a positive reaction when brand image is measured (Bird and Ehrenberg, 1970). In addition to this, there is a "double jeopardy" effect which negatively impacts brands with smaller market-shares, whereby even among regular users of the brand, fewer consumers have favorable reactions towards smaller brands than larger brands (Ehrenberg, Goodhardt and Barwise, 1990; Sharp, 2010). This association between evaluative responses and market-share can cause problems when measuring brand image and using that information to compare brands. An example of such a problem is usage bias, which can occur in most attitude measurements since it more often than not includes measuring evaluative rather than descriptive responses (Bird and Ehrenberg, 1970). This means that brands will be distinguished based on specific evaluative attitudes which primarily only reflect differences in market-shares or usage levels. This means that the measurement will not necessarily serve its purpose and ends up yielding information about market-share, which is usually readily available beforehand (Riquier and Sharp, 1997).

If brand image measurements are skewed because of the influence of usage levels, it follows that the same happens to *CBBE*, meaning brands with larger market-shares will have a more positive brand image and a more positive *CBBE* than brands with smaller market-shares. This means that *CBBE* is a reflection of the brand's market-share, and not a driver of it (Romaniuk, Bogomolova and Riley, 2012).

Usage also has an effect on brand loyalty. It has been shown that loyalty is based more on trivial distinctions, often based on former usage, than on anything else. Brand loyalty is something that most consumers gravitate towards, much of the time. Consumers tend to buy from a personal repertoire of brands, which they have often

used before – meaning, consumers are actually buying a lot fewer brands than they could be doing (Sharp, 2010).

At any rate, consumer beliefs, and by default brand image and CBBE are highly influenced by their current and past usage of brands (Castleberry and Ehrenberg, 1990). On a theoretical level, the implication of this is that in order for brand image or *CBBE* measurements to be unbiased, the usage levels or market-shares of the brands being measured must be factored into the calculations (Romaniuk, Bogomolova and Riley, 2012). On a practical level, it would seem that marketers are wasting time by focusing their efforts on improving growing brand image and *CBBE* when they should first and foremost be focusing on growing their customer base (Sharp, 2010).

With the preceding discussion in mind, the first hypothesis is:

H1. *Current users of EVE Online have a more positive image of the brand than non-users.*

4.1 Brand fanatics and communities

Even though most consumers who are loyal to a brand are only light category buyers, there are consumers who buy often from a category and remain loyal to specific brands. There are also consumers who are passionate about brands (Sharp, 2010). These consumers have been called brand fanatics, or even evangelists (Singh and Sonnenburg, 2012). Here, they will be referred to simply as brand fans. These consumers either buy the brand more frequently than other consumers or devote a larger proportion of category purchases to the brand than to competitors (Nenycz-Thiel, Beal and Romaniuk, 2013). In the case of brands that do not necessarily represent repeat buying, such as services, computer software and other, fans may be defined as those who devote a large amount of time and effort to the brand, either to usage or other activities such as content creation (Muniz and Schau, 2011).

Brand communities are specialized communities, based on a structured set of social relations between admirers of a specific brand. The community is not bound by geography (Muniz and O'Guinn, 2001). Brand communities allow consumers to communicate with each other, share experiences, distribute information and assist each

other in using the brand (the existence of consumer help discussion forums is an example of this). Within many brand communities, collective value creation takes place (Schau, Muniz and Arnould, 2009). Companies can benefit from supporting consumers in this process (Muniz and Schau, 2011).

With the preceeding discussion in mind, the second and third hypothesis are:

H2. *Non-users who are fans of EVE Online have a more positive image of the brand than non-users who are not fans.*

H3. *Non-users who are fans of EVE Online have a more positive brand image towards the brand than current users of the brand.*

5   Methodology

This is a quantitative study where an online questionnaire was used to measure the brand image of EVE Online among four different groups: 1) users, 2) non-users, which are then categorized into two subgroups: 3) non-users who are not fans of the brand and 4) non-users who are fans of the brand.

5.1   Participants

Completed responses were obtained from 2911 men between the ages of 20 – 45. The majority (69.7%) of participants were between the ages of 20 and 30. The mean age of the sample was 27.9 years (*standard deviation* = 6.49). See figure 2 for a complete overview of the age distribution of the sample.
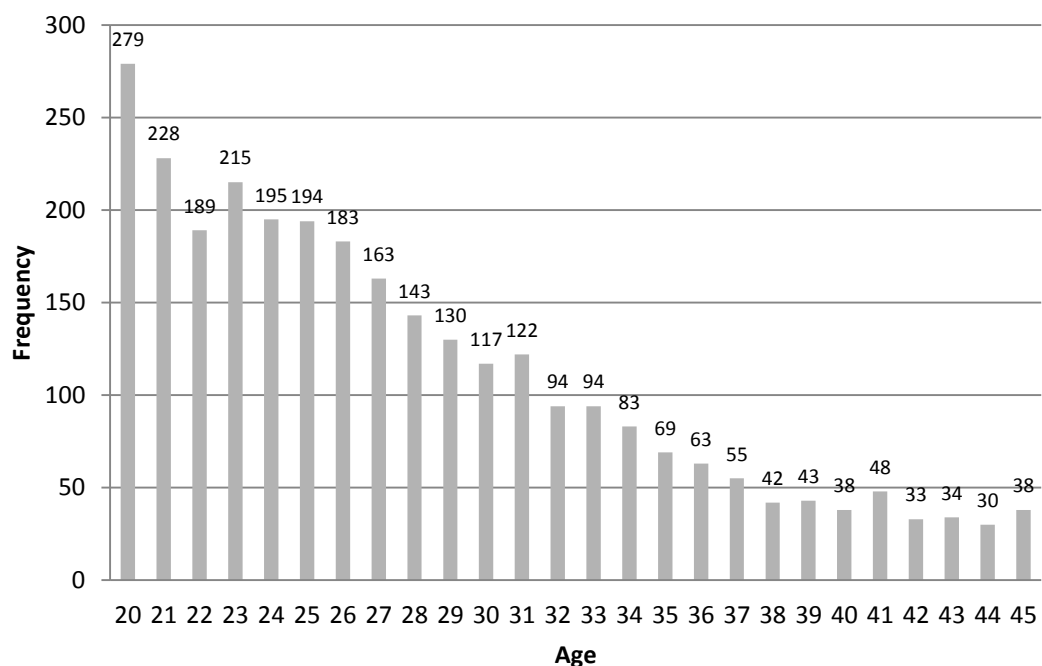
Figure 2. Age distribution of the sample (*n* = 2922).

Almost all participants (2886 or 98.8%) play computer games and 60% play *MMORPG*s. Figure 3 shows the top six *MMORP*s being played by participants.
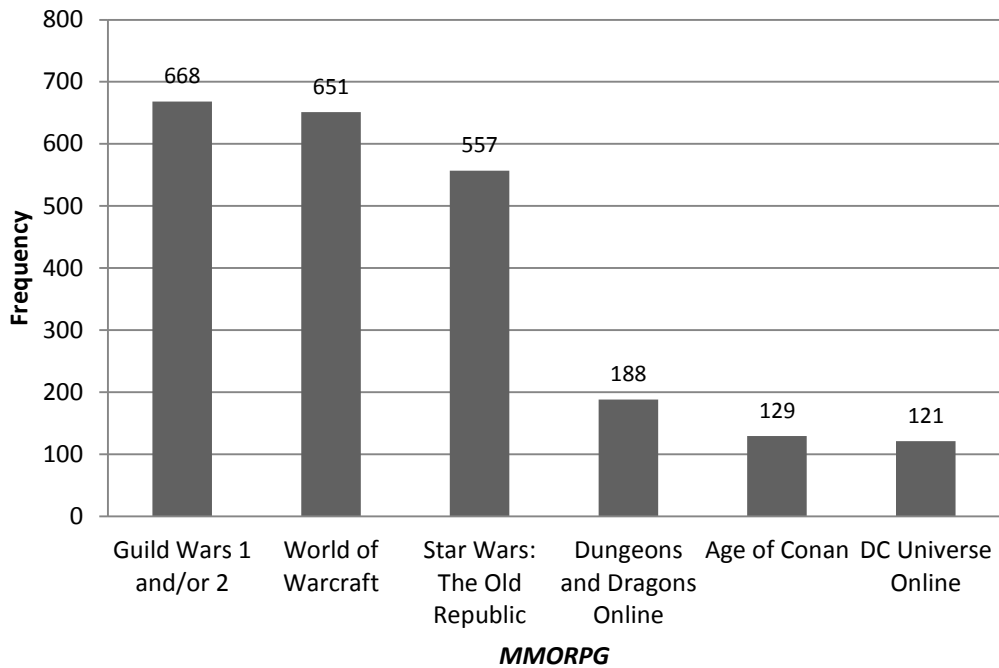
Figure 3. Other *MMORPGs* played by EVE Online´s target group.

In addition to the games listed in figure 3, participants also listed other games they are playing (See Appendix 2).

Current users of EVE Online are 2471 (84.6%). Non-users are 439 (15.0%) and 12 (0.4%) answers were missing. Of the 439 who are non-users, 398 claim they are fans of the brand and 41 do not (See table 1).

Table 1. Sample groups.

	Frequency	Percentage
Users	2471	84.6%
Non-users	439	15.0%
Fans	*398*	*13.6%*
Not fans	*41*	*1.4%*
Answer missing	12	0.4%
Total	*2922*	*100%*

Out of the 439 non-users, the majority, or 416, are former users. Most former users either played for 1 − 3 years (31.6%) or 3 − 6 years (31.8%). The fewest former users played for 8 years or longer (0.9%) (see table 2).

Table 2. Length of time former users played EVE Online.

	Frequency	Percentage
One month or shorter	19	4.4%
Longer than one month but less than 6 months	39	9.3%
Longer than 6 months but less than one year	26	6.3%
One year or longer but less than 3 years	132	31.6%
3 years or longer but less than 6 years	133	31.8%
6 years or longer but less than 8 years	58	13.9%
8 years or longer	8	1.8%
Answer missing	4	0.9%
Total	*416*	*100%*

Almost all users (2423, or 98%) are playing using their own subscription to the game, 21 (0.9%) are using a trial access and 27 (1,1%) did not answer the question about subscription. Most users (710, or 28.7%) report playing 6 – 10 hours a week, while few (244 or 9,9%) report playing less than 5 hours a week (See table 3).

Table 3. Time spent playing EVE Online on a weekly basis.

	Frequency	Percentage
Less than 5 hours a week	244	9.9%
6 – 10 hours a week	710	28.7%
11 – 15 hours a week	594	24.0%
16 – 20 hours a week	449	18.2%
21 hours a week or more	450	18.2%
Answer missing	24	1.0%
Total	*2471*	*100%*

When asked how long they have played the game, most users (833 or 28,5%) report having played for 3 – 6 years. Few 42 or 1,4%) are new to the game, having played for one month or shorter period of time (See table 4).

Table 4. Length of time current users have played EVE Online.

	Frequency	Percentage
One month or shorter	42	1,7%
Longer than one month but less than 6 months	184	7.5%
Longer than 6 months but less than one year	201	8.1%
One year or longer but less than 3 years	599	24.2%
3 years or longer but less than 6 years	833	33.7%
6 years or longer but less than 8 years	380	15.4%
8 years or longer	206	8.3%
Answer missing	26	1.1%
Total	*2471*	*100%*

Out of the 2471 users, a majority (1818 or 62.2%) have taken a break from playing EVE Online at some point. The most common frequency of breaks taken were 2 – 5 breaks (See table 5).

Table 5. Frequency of breaks taken from playing EVE Online.

	Frequency	Percentage
One break	550	30.3%
2 – 5 breaks	1150	63.3%
6 or more breaks	114	6.2%
Answer missing	4	0.2%
Total	*1818*	*100%*

The length of breaks varies but the most common length was 2 – 6 months (See table 6).

Table 6. Length of breaks taken from playing EVE Online.

	Frequency	Percentage
1 month or shorter	348	19.2%
2 – 6 months	1071	58.9%
7 months or longer	387	21.3%
Answer missing	12	0.6%
Total	*1818*	*100%*

Out of the 398 fans, 175 (44%) have not attended EVE Fanfest or watched the

livestream from the event. 13 (3.3%) have attended EVE Fanfest, 197 (49.5%) have watched the livestream from the event and 9 (2.2%) have done both. 4 (1.0%) answers are missing. 107 (26.9%) of the fans have purchased EVE Online related merchandise in the past. 283 (71.1%) have not and 8 (2.0%) answers are missing. 223 (56.0%) fans have either read or written EVE Online related fan-fiction. 172 (43.2%) have not, and 3 (0.8%) answers are missing.

5.2 Instruments

An online questionnaire was created (see Appendix 1). It was designed using the results of ten qualitative interviews with individuals in EVE Online's target group. Because the study included splitting the participants into groups, not all participants answered all questions and participants who said yes to specific questions were then asked follow-up questions. All in all, the questionnaire included 40 items.

The first two questions in the questionnaire ask about participants' age and gender. This was done to filter out responses from individuals who do not fall within the definition of EVE Online's target group. The next part of the questionnaire includes 22 statements intended to measure brand image. Participants indicate how much they agree or disagree with each statement on a 7 point Likert scale, where 1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = neutral, 5 = somewhat agree, 6 = agree and 7 = strongly agree. Participants are then asked whether they currently play EVE Online. If their response is yes, they are then asked 6 follow-up questions about how long they've played the game, how many hours they usually spend a week playing the game, etc. If they answer no, they are then asked follow up questions about whether they have ever played the game, and if so, for how long.

The next part of the questionnaire includes questions about whether the participants consider themselves to be fans of the game. If their answer is yes, they are asked three follow up questions about fan behavior, such as attending EVE Fanfest, purchasing EVE related merchandise and reading or writing fan-fiction.

Lastly, participants are asked three background questions about whether they play PC games, and if so, whether they play any *MMORPGs*. Participants were asked to check off each game they play from a drop-down list of popular *MMORPGs* but they were also given the opportunity to add more games to the list.

The questionnaire was pretested to assess whether participants were able to understand and respond to the items without difficulty. Three items were changed based on the participant's comments.

5.3 Procedure and analysis

Ten qualitative open-ended interviews with individuals from EVE Online's target group were conducted during the period of June 27th – July 4th, 2013. The objective of the interviews was to identify brand associations which could then be measured in a larger sample. Individuals were asked to speak openly about their perceptions of the positive and negative aspects of EVE Online. Participants were volunteers who answered an online advertisement about the study. The mean age of the participants was 29.3 years. All participants had some experience with EVE Online, however, the extent of the experience varied a lot. Some had tried the game for a few hours; others had played it for years.

The questionnaire was designed using the results from the interviews as well as information from CCP about the brand's positioning. The questionnaire was posted online and distributed via social media and email during the period of August 2nd – August 21st, 2013. It was also published on the official Facebook page for EVE Online on August 6th.

In total, 4145 participants answered parts of the questionnaire. 100 (2.4%) answers were invalid because the respondents were female. 455 (11%) answers were excluded because the respondents did not fall within the specified age range and a further 668 (16.1%) were excluded because the respondents answered less than 50% of the survey.

The hypotheses were tested by using a confidence interval method. Total scores for the image statements were calculated and compared between groups. One-way ANOVAs were also performed to see which and how many of the statements produced significant results between groups.

6 Results

The frequency, means and standard deviations of the responses from the entire sample (*n* = 2922) to the brand image statements are shown in Appendix 2. Table 7 shows the frequency, means and standard deviations of responses from current users (*n* = 2471). Respondents in this group utilized the entire 7 point scale when responding to all items.

Table 7. Frequency of responses, means and standard deviations of image statements for current users (*n* = 2471).

Statement	Frequency	Mean	St.dev
1. EVE Online takes up a lot of time.	2468	5.02	1.45
2. EVE Online's realistic market system and economy make the game more interesting.	2470	6.41	0.89
3. In EVE Online, friendships are often formed between players.	2469	5.88	1.17
4. EVE Online has a very steep learning curve.	2464	5.98	1.17
5. EVE Online is repetitive.	2457	4.34	1.50
6. EVE Online includes a lot of in-game waiting.	2458	4.90	1.52
7. EVE Online is for mature players.	2465	5.63	1.28
8. EVE Online stimulates players' creativity.	2466	5.69	1.19
9. Players are often emotionally involved in the events that happen in EVE Online.	2470	5.87	1.11
10. EVE Online players often have to sacrifice real-world activities for in-game activities.	2469	4.47	1.57
11. EVE Online players often get emotionally attached to their in-game character.	2467	4.68	1.54
12. EVE Online provides a deep, immersive experience for players.	2466	5.87	1.13
13. EVE Online is an addictive game.	2461	5.67	1.27
14. In EVE Online, some things take a very long time to happen.	2466	6.34	0.96
15. EVE Online provides players with a certain realism.	2466	5.55	1.22
16. EVE Online is a hardcore game.	2460	5.84	1.27
17. In EVE Online, an emotional connection is often formed between players.	2462	5.37	1.22
18. In EVE Online, the players are in control over what happens in the universe.	2465	5.92	1.16
19. EVE Online provides a social experience for players.	2462	5.98	1.04
20. EVE Online is designed to draw the player in.	2462	5.04	1.48
21. EVE Online is a complicated game.	2465	6.18	1.06
22. To succeed in EVE Online, players need to spend a lot of time playing the game.	2468	4.95	1.64

Table 8 shows the frequency, means and standard deviations of the responses from non-uses (*n* = 439). Respondents utilized the entire 7 point scale for all items apart from item 19, where they did not utilize the first point of the scale.

Table 8. Frequency of responses, means and standard deviations of image statements for non-users (*n* = 439).

Statement	Frequency	Mean	St.dev
1. EVE Online takes up a lot of time.	437	5.41	1.67
2. EVE Online's realistic market system and economy make the game more interesting.	439	6.35	1.06
3. In EVE Online, friendships are often formed between players.	438	5.66	1.34
4. EVE Online has a very steep learning curve.	439	5.83	1.21
5. EVE Online is repetitive.	437	4.62	1.41
6. EVE Online includes a lot of in-game waiting.	436	5.15	1.50
7. EVE Online is for mature players.	439	5.68	1.26
8. EVE Online stimulates players' creativity.	437	5.33	1.41
9. Players are often emotionally involved in the events that happen in EVE Online.	439	5.82	1.15
10. EVE Online players often have to sacrifice real-world activities for in-game activities.	438	4.97	1.46
11. EVE Online players often get emotionally attached to their in-game character.	439	4.81	1.52
12. EVE Online provides a deep, immersive experience for players.	437	5.66	1.27
13. EVE Online is an addictive game.	439	5.56	1.27
14. In EVE Online, some things take a very long time to happen.	439	6.21	1.08
15. EVE Online provides players with a certain realism.	438	5.47	1.23
16. EVE Online is a hardcore game.	437	5.89	1.32
17. In EVE Online, an emotional connection is often formed between players.	439	5.21	1.26
18. In EVE Online, the players are in control over what happens in the universe.	439	5.67	1.33
19. EVE Online provides a social experience for players.	439	5.65	1.15
20. EVE Online is designed to draw the player in.	438	4.89	1.58
21. EVE Online is a complicated game.	437	6.08	1.13
22. To succeed in EVE Online, players need to spend a lot of time playing the game.	439	5.51	1.59

Table 9 shows the frequency, means and standard deviations of the responses from non-users who consider themselves to be fans of the brand (*n* = 398). Respondents in this group utilized the entire 7 point scale when responding to all items.

Statement	Frequency	Mean	St.dev
1. EVE Online takes up a lot of time.	396	5.42	1.63
2. EVE Online's realistic market system and economy make the game more interesting.	398	6.42	0.99
3. In EVE Online, friendships are often formed between players.	397	5.70	1.34
4. EVE Online has a very steep learning curve.	398	5.87	1.15
5. EVE Online is repetitive.	397	4.59	1.41
6. EVE Online includes a lot of in-game waiting.	396	5.15	1.49
7. EVE Online is for mature players.	398	5.73	1.20
8. EVE Online stimulates players' creativity.	397	5.45	1.34
9. Players are often emotionally involved in the events that happen in EVE Online.	398	5.87	1.13
10. EVE Online players often have to sacrifice real-world activities for in-game activities.	397	4.94	1.46
11. EVE Online players often get emotionally attached to their in-game character.	398	4.81	1.55
12. EVE Online provides a deep, immersive experience for players.	396	5.76	1.21
13. EVE Online is an addictive game.	398	5.62	1.24
14. In EVE Online, some things take a very long time to happen.	398	6.24	1.06
15. EVE Online provides players with a certain realism.	397	5.51	1.22
16. EVE Online is a hardcore game.	397	5.95	1.26
17. In EVE Online, an emotional connection is often formed between players.	398	5.24	1.25
18. In EVE Online, the players are in control over what happens in the universe.	398	5.78	1.27
19. EVE Online provides a social experience for players.	398	5.72	1.12
20. EVE Online is designed to draw the player in.	397	4.92	1.57
21. EVE Online is a complicated game.	396	6.15	1.04
22. To succeed in EVE Online, players need to spend a lot of time playing the game.	398	5.44	1.16

Table 10 shows the frequency, means and standard deviations of responses from non-users who are not fans of the brand (*n* = 41). Respondents used the entire 7 point scale for items 1-3, 6-8, 12 and 20. For all other items except item 19, respondents did not utilize the first point of the scale. For item 19, respondents did not utilize the first or second points of the scale.

Table 10. Frequency of responses, means and standard deviations of image statements for non-users who are not fans (*n* = 41).

Statement	Frequency	Mean	St.dev
1. EVE Online takes up a lot of time.	41	5.32	2.07
2. EVE Online's realistic market system and economy make the game more interesting.	41	5.61	1.44
3. In EVE Online, friendships are often formed between players.	41	5.27	1.32
4. EVE Online has a very steep learning curve.	41	5.49	1.59
5. EVE Online is repetitive.	40	4.88	1.43
6. EVE Online includes a lot of in-game waiting.	40	5.10	1.54
7. EVE Online is for mature players.	41	5.15	1.65
8. EVE Online stimulates players' creativity.	40	4.15	1.57
9. Players are often emotionally involved in the events that happen in EVE Online.	41	5.32	1.23
10. EVE Online players often have to sacrifice real-world activities for in-game activities.	41	5.20	1.41
11. EVE Online players often get emotionally attached to their in-game character.	41	4.88	1.20
12. EVE Online provides a deep, immersive experience for players.	41	4.73	1.48
13. EVE Online is an addictive game.	41	4.98	1.40
14. In EVE Online, some things take a very long time to happen.	41	5.95	1.30
15. EVE Online provides players with a certain realism.	41	5.05	1.28
16. EVE Online is a hardcore game.	40	5.35	1.71
17. In EVE Online, an emotional connection is often formed between players.	41	4.88	1.32
18. In EVE Online, the players are in control over what happens in the universe.	41	4.63	1.49
19. EVE Online provides a social experience for players.	41	4.90	1.09
20. EVE Online is designed to draw the player in.	41	4.51	1.67
21. EVE Online is a complicated game.	41	5.41	1.58
22. To succeed in EVE Online, players need to spend a lot of time playing the game.	41	6.17	1.11

The image statements were categorized as either representing positive or negative brand associations based on how they were portrayed and discussed in the ten qualitative interviews with individuals from EVE Online's target group. Whenever an individual expressed either a positive or negative statement about EVE Online, they were asked to explain it further and eventually, the 22 statements were categorized into two groups of 11 positive and 11 negative statements (See table 11.)

Table 11. Categorization of image statements.

Positive statements	Negative statements
2. EVE Online's realistic market system and economy make the game more interesting.	1. EVE Online takes up a lot of time.
3. In EVE Online, friendships are often formed between players.	4. EVE Online has a very steep learning curve.
7. EVE Online is for mature players.	5. EVE Online is repetitive.
8. EVE Online stimulates players' creativity.	6. EVE Online includes a lot of in-game waiting.
9. Players are often emotionally involved in the events that happen in EVE Online.	10. EVE Online players often have to sacrifice real-world activities for in-game activities.
12. EVE Online provides a deep, immersive experience for players.	11. EVE Online players often get emotionally attached to their in-game character.
15. EVE Online provides players with a certain realism.	13. EVE Online is an addictive game.
16. EVE Online is a hardcore game.	14. In EVE Online, some things take a very long time to happen.
17. In EVE Online, an emotional connection is often formed between players[1].	20. EVE Online is designed to draw the player in.
18. In EVE Online, the players are in control over what happens in the universe.	21. EVE Online is a complicated game.
19. EVE Online provides a social experience for players.	22. To succeed in EVE Online, players need to spend a lot of time playing the game.

The first hypothesis states that current users have a more positive image of the brand than non-users. To test the hypothesis, a total score was calculated for the image statements for both users (*n* = 2471) and non-users (*n* = 439). This was done by first reverse-scoring the negative image statements and then calculating an unweighted average for all items. The average for users was 4.29 with a 95% confidence interval of 4.23 – 4.35. The average for non-users was 4.15 with a 95% confidence interval of 4.00-4.30. Since the confidence intervals overlap, the hypothesis is not supported.

A one-way ANOVA was performed to see how many, and which, of the image statements produced a statistically significant difference between the two groups. The results showed that there were significant differences for 14 out of 22 items (See table 12). Even if the brand image of users does not differ significantly on the whole, there are significant differences between the two groups for 6 out of 11 positive image statements.

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[1] It was seen as positive to get emotionally connected to other people but not to the game itself or elements within the game, such as the in-game avatar.

Table 12. Results of a one-way ANOVA performed to test for differences between users (*n* = 2471) and non-users (*n* = 439) in responding to brand image associations.

Statement	ANOVA result
1. EVE Online takes up a lot of time.	$F(1, 2903) = 25.58$, $p = .000*$
2. EVE Online's realistic market system and economy make the game more interesting.	$F(1, 2907) = 1.82$, $p = .176$
3. In EVE Online, friendships are often formed between players.	$F(1, 2905) = 12.98$, $p = .000*$
4. EVE Online has a very steep learning curve.	$F(1, 2901) = 5.96$, $p = .015*$
5. EVE Online is repetitive.	$F(1, 2892) = 13.16$, $p = .000*$
6. EVE Online includes a lot of in-game waiting.	$F(1, 2892) = 9.57$, $p = .002*$
7. EVE Online is for mature players.	$F(1, 2902) = 0.47$, $p = .492$
8. EVE Online stimulates players' creativity.	$F(1, 2901) = 31.45$, $p = .000*$
9. Players are often emotionally involved in the events that happen in EVE Online.	$F(1, 2907) = 0.88$, $p = .348$
10. EVE Online players often have to sacrifice real world activities for in-game activities.	$F(1, 2905) = 38.66$, $p = .000*$
11. EVE Online players often get emotionally attached to their in-game character.	$F(1, 2904) = 2.76$ $p = .097$
12. EVE Online provides a deep, immersive experience for players.	$F(1, 2901) = 12.08$, $p = .001*$
13. EVE Online is an addictive game.	$F(1, 2898) = 2.40$, $p = .121$
14. In EVE Online, some things take a very long time to happen.	$F(1, 2903) = 6.22$, $p = .013*$
15. EVE Online provides players with a certain realism.	$F(1, 2902) = 1.46$, $p = .226$
16. EVE Online is a hardcore game.	$F(1, 2895) = 0.51$, $p = .474$
17. In EVE Online, an emotional connection is often formed between players.	$F(1, 2899) = 6.22$, $p = .013*$
18. In EVE Online, the players are in control over what happens in the universe.	$F(1, 2902) = 16.03$, $p = .000*$
19. EVE Online provides a social experience for players.	$F(1, 2899) = 36.45$, $p = .000*$
20. EVE Online is designed to draw the player in.	$F(1, 2398) = 4.11$, $p = .043*$
21. EVE Online is a complicated game.	$F(1, 2900) = 3.15$, $p = .076$
22. To succeed in EVE Online, players need to spend a lot of time playing the game.	$F(1, 2905) = 42.54$, $p = .000*$

Result showed a significant difference.

The second hypothesis states that non-users who claim they are fans of EVE Online have a more positive image of the brand than non-users who do not claim that they are fans. To test the hypothesis, a total score was calculated for the image statements for both non-users who are fans of the brand (*n* = 398) and non-users who are not fans of the brand (*n* = 41). This was done by first reverse-scoring the negative image statements and then calculating an unweighted average for all items. The average for non-users who claim they are fans of EVE Online was 4.18 with a 95% confidence interval of 4.02 –

4.34. The average for non-users who do not claim they are fans of the brand was 3.87 with a 95% confidence interval of 3.49 – 4.25. Since the confidence intervals overlap, the hypothesis is not supported.

A one-way ANOVA was performed to see how many, and which, of the image statements produced a statistically significant difference between the two groups. The results showed that there were significant differences for 12 out of 22 items (See table 13). Even if the brand image of non-users who are not fans and non-users who are fans does not differ significantly on the whole, there are significant differences between the two groups for 9 out of 11 positive image statements.

Table 13. Results of a one-way ANOVA performed to test for differences between non-users who are fans (n = 398) and non-users who are not fans (n = 41) in responding to brand image associations.

Statement	ANOVA result
1. EVE Online takes up a lot of time.	F (1, 435) = 0.13, p = .711
2. EVE Online's realistic market system and economy make the game more interesting.	F (1, 437) = 22.70, p = .000*
3. In EVE Online, friendships are often formed between players.	F (1, 436) = 3.77, p = .053
4. EVE Online has a very steep learning curve.	F (1, 437) = 3.72, p = .054
5. EVE Online is repetitive.	F (1, 435) = 1.45, p = .229
6. EVE Online includes a lot of in-game waiting.	F (1, 434) = 0.04, p = 836.
7. EVE Online is for mature players.	F (1, 437) = 8.15, p = .005*
8. EVE Online stimulates players' creativity.	F (1, 435) = 32.68, p = .000*
9. Players are often emotionally involved in the events that happen in EVE Online.	F (1, 437) = 8.57, p = .004*
10. EVE Online players often have to sacrifice real world activities for in-game activities.	F (1, 436) = 1.09, p = 297
11. EVE Online players often get emotionally attached to their in-game character.	F (1, 437) = 0.08, p = .775
12. EVE Online provides a deep, immersive experience for players.	F (1, 435) = 25.50, p = .000*
13. EVE Online is an addictive game.	F (1, 437) = 9.79, p = .002*
14. In EVE Online, some things take a very long time to happen.	F (1, 437) = 2.55, p = .110
15. EVE Online provides players with a certain realism.	F (1, 436) = 5.26, p = .022*
16. EVE Online is a hardcore game.	F (1, 435) = 7.52, p = .006*
17. In EVE Online, an emotional connection is often formed between players.	F (1, 437) = 3.13m p = .078
18. In EVE Online, the players are in control over what happens in the universe.	F (1, 437) = 29,14, p = .000*
19. EVE Online provides a social experience for players.	F (1, 437) = 19.80, p = .000*
20. EVE Online is designed to draw the player in.	F (1, 436) = 2.51, p = .113
21. EVE Online is a complicated game.	F (1, 435) = 16.25, p = .000*
22. To succeed in EVE Online, players need to spend a lot of time playing the game.	F (1, 437) = 8.05, p = .005*

Result showed a significant difference.

The third hypothesis states that non-users who are fans of the brand have a more positive image of the brand than current users. To test the hypothesis, a total score was calculated for the image statements for both non-users who are fans of the brand and current users. This was done by first reverse-scoring the negative image statements and then calculating an unweighted average for all items. The average for non-users who are fans of EVE Online was 4.18 with a 95% confidence interval of 4.02 − 4.34. The

average for users was 4.29 with a 95% confidence interval of 4.23 – 4.35. Since the confidence intervals overlap, the hypothesis is not supported.

A one-way ANOVA was performed to see how many, and which, of the image statements produced a significant result. The results show that there are significant differences for 9 out of 22 items (See table 14). There are significant differences for 4 out of 11 positive items.

Table 14. Results of a one-way ANOVA performed to test for differences between users (n = 2471) and non-users who are fans (n = 398) in responding to brand image associations.

Statement	ANOVA result
1. EVE Online takes up a lot of time.	F (1, 2862) = 25.00, p = .000*
2. EVE Online's realistic market system and economy make the game more interesting.	F (1, 2866) = 0.05, p = .819
3. In EVE Online, friendships are often formed between players.	F (1, 2864) = 8.09, p = .004*
4. EVE Online has a very steep learning curve.	F (1, 2860) = 3.20, p = .073
5. EVE Online is repetitive.	F (1, 2852) = 9.98, p = .002*
6. EVE Online includes a lot of in-game waiting.	F (1, 2852) = 9.16, p = .002*
7. EVE Online is for mature players.	F (1, 2861) = 2.11, p = .146
8. EVE Online stimulates players' creativity.	F (1, 2861) = 13.26, p = .000*
9. Players are often emotionally involved in the events that happen in EVE Online.	F (1, 2866) = 0.03, p = .958
10. EVE Online players often have to sacrifice real world activities for in-game activities.	F (1, 2864) = 32.22, p = .000*
11. EVE Online players often get emotionally attached to their in-game character.	F (1, 2863) = 2.27, p = .131
12. EVE Online provides a deep, immersive experience for players.	F (1, 2860) = 3.26, p = .071
13. EVE Online is an addictive game.	F (1, 2857) = 0.37, p = .540
14. In EVE Online, some things take a very long time to happen.	F (1, 2862) = 3.62, p = .057
15. EVE Online provides players with a certain realism.	F (1, 2861) = 0.25, p = .611
16. EVE Online is a hardcore game.	F (1, 2855) = 2.20, p = .138
17. In EVE Online, an emotional connection is often formed between players.	F (1, 2858) = 3.54, p = .060
18. In EVE Online, the players are in control over what happens in the universe.	F (1, 2861) = 4.83, p = .028*
19. EVE Online provides a social experience for players.	F (1, 2858) = 19.98, p = .000*
20. EVE Online is designed to draw the player in.	F (1, 2857) = 2.16, p = .141
21. EVE Online is a complicated game.	F (1, 2859) = 0.27, p = .602
22. To succeed in EVE Online, players need to spend a lot of time playing the game.	F (1, 2864) = 29.84, p = .000*

Result showed a significant difference.

7   Discussion and theoretical implications

The objective of this study was to measure EVE Online's brand image among four different groups: 1) users, 2) non-users, who are then categorized into two subgroups: 3) non-users who are not fans of the game and 4) non-users who are fans of the game.

Based on findings by Ehrenberg and colleagues (See Barwise and Ehrenberg, 1985; Bird and Ehrenberg, 1970; Bird, Castleberry and Ehrenberg, 1990) that consumers' usage of brands heavily influences their propensity to give favorable responses towards it in brand image studies, the first hypothesis stated that users of EVE Online would have a more positive image of the brand than non-users. This hypothesis was not supported by the data. There was not a significant difference of overall brand image between users and non-users. However, when the positive image statements were inspected more closely, an interesting pattern emerged where there were significant differences between the groups for six out of 11 of them. This would suggest that even if users do not have a more positive brand image on the whole than non-users, they do tend to agree more with positive statements about the brand. This is consistent with the growing literature about the effect which a consumer's relationship with the brand has on his or her tendency to react favorably towards the brand (Nenycz-Thiel, Beal and Romaniuk, 2013).

There are groups of consumers who are passionate about brands and might even "preach" the message of the brand (Singh and Sonnenberg, 2012). These brand fanatics, or fans, often connect with each other in brand communities. The computer game industry is an especially appropriate venue for such communities to exist. Users already form a community within the virtual reality of the game which is then extended to other online spaces, where users and non-users alike can join and connect with each other. Moreover, new forms of collaboration and co-creation are taking place between developers and user communities in the video game industry (Arakji and Lang, 2007). Many video game developers have opened up parts of their content to users to modify (also known as "modding") according to their own wishes. Developers are also dependent on user feedback in order to fix problems and add features which are in demand. These factors all create a good environment for brand communities to exist within.

Based on the idea of these passionate consumers, the second hypothesis stated that non-users who are fans of the brand will have a more positive image than non-users who are not fans of the brand. This hypothesis was not supported by the data. However, the same pattern as before emerged here and there were significant differences between the two groups for 9 out of 11 positive brand image statements. This means that even though the brand image between the two groups did not differ on the whole, non-users who are fans of the brand were much more likely to agree with positive statements about the brand.

The third hypothesis stated that non-users who are fans will have a more positive image of the brand than current users. This hypothesis was not supported by the data. Current users react more favorably to the brand than non-users who are fans of the brand. This would seem to suggest that even if there existed a sub-set of consumers who were passionate about a brand, Ehrenberg's generalization that behavior is the best predictor of brand image, holds true. Even if non-users who are fans hold very positive attitudes and beliefs towards the brand, they still lack the usage factor which is the strongest influence on their tendency to agree with positive brand image statements.

7.1   Managerial implications

The results of the study and many before it (See Bird and Ehrenberg, 1970; Romaniuk, Bogomolova and Riley, 2012) have established a predictable relationship between behavior (usage) and brand image. In spite of the fact that the data analyzed was not able to provide support for the hypotheses, analyzing the positive image statements specifically showed a relationship between usage and the tendency to agree with positive image statements. This means that the consumer's relationship with the brand will be a reliable indicator of how he or she reacts towards the brand in brand image measurement studies. For decades, marketers have focused their efforts on building positive brand images and positive brand equities in order to grow their customer bases. However, it is apparent that a positive brand image and positive brand equity are the results, not drivers, of market-share (size of customer base). It follows then that in order to achieve such brand goals as brand equity, the marketer must first and foremost focus on growing the customer base. This is done primarily by acquisition

strategies because even large brands lose customers on a daily basis (Sharp, 2010). So, by focusing on acquiring new customers, marketers will grow their customer base and by extension of that, build a more positive customer-based brand equity which will then help maintain the brand's market position (Sharp, 2010).

The data collected by this study can be implemented by CCP managers. Here, it will be argued that there are two steps that CCP should take based on the data: 1) redefinition of the target group and 2) reestablishing a competitive frame of reference.

First, the current target group is too broadly defined. EVE Online is a product that appeals to a very specific market segment. Because of this, defining the target group only in terms of demographic factors prevents the advantages of advanced targeting, which is especially appropriate in a digital environment. The target group should be narrowed down and should include not only demographic factors but psychographic factors as well (Kotler and Keller, 2009). This means that individuals should be targeted based not only on gender and age, but also based on interests, behavior, needs and wants. The more you know about your target group, the more effective your communication and marketing is (Plummer, 1974). Advanced targeting can make it easier to make decisions about marketing communications, such as when and where it is appropriate to publish advertisements (Kotler and Keller, 2009). It is also a possibility to eliminate the gender-specific approach since there is increasing evidence that numbers of female computer game players are steadily rising (Hartmann and Klimmt, 2006). A possible definition of a new target group could be: *"Computer game players between the ages of 25 – 45 who are interested in science-fiction"*.

Secondly, the results of the study suggest that EVE Online's current competitive frame of reference is too narrow. Defining competitors by their likeness to EVE Online seems to be a problematic approach. This is reflected in the fact that members of the target group are playing a huge selection of other *MMOs*, some with similar content to EVE Online (e.g. *Star Trek Online*), others with vastly different content (e.g. *World of Warcraft*). Two out of the three brands which are currently listed as EVE Online's competitors do not even seem to be very popular with the target group - only 9 participants reported playing *Mechwarrior Online* and *League of Legends*. 42 participants reported playing *World of Tanks*. Even though the content of many games

which the target group shows interest in is different from EVE Online, the games might still be fulfilling the same or similar needs that EVE Online does (need for entertainment, escapism, leisure, social communication in a virtual setting, etc.). A new frame of reference should be established where competitors are defined first and foremost by need-fulfilment and not similarity to EVE Online.

7.2 Limitations and future research

There were two limitations to the authors study. First, the group sizes were skewed. This is because the survey was distributed online and via channels that reached users at a much higher rate than non-users. Secondly, the focus here is on one single brand in one country. Should any similar studies be repeated, it would be of importance to try to gather data about more than one brand on the market, and to reach non-users at a higher rate than was done here.

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Appendix 1

Questionnaire

1) What is your age?

2) What is your gender?

3) Please indicate how much you agree or disagree with each of the following statements on a 7 point scale, where 1 = strongly disagree, 2 = disagree, 3 =somewhat disagree, 4 = neutral, 5 = somewhat agree, 6 = agree and 7 = strongly agree:

1. EVE Online takes up a lot of time.

2. EVE Online's realistic market system and economy make the game more interesting.

3. In EVE Online, friendships are often formed between players.

4. EVE Online has a very steep learning curve.

5. EVE Online is repetitive.

6. EVE Online includes a lot of in-game waiting.

7. EVE Online is for mature players.

8. EVE Online stimulates players' creativity.

9. Players are often emotionally involved in the events that happen in EVE Online.

10. EVE Online players often have to sacrifice real-world activities for in-game activities.

11. EVE Online players often get emotionally attached to their in-game character.

12. EVE Online provides a deep, immersive experience for players.

13. EVE Online is an addictive game.

14. In EVE Online, some things take a very long time to happen.

15. EVE Online provides players with a certain realism.

16. EVE Online is a hardcore game.

17. In EVE Online, an emotional connection is often formed between players.

18. In EVE Online, the players are in control over what happens in the universe.

19. Eve Online provides a social experience for players.

20. EVE Online is designed to draw the player in.

21. EVE Online is a complicated game.

22. To succeed in EVE Online, players need to spend a lot of time playing the game.

4) Do you currently play EVE Online?

    4.1. *(If yes to 4)*: Do you own a subscription to the game or do you play using a free trial access?

    4.2. *(If yes to 4)*: How long have you played EVE Online?

    4.3. *(If yes to 4)*: Have you ever taken a break from playing EVE Online?

    4.4. *(If yes to 4.3.)*: How often have you taken breaks from the game?

    4.5. *(If yes to 4.3.)*: How long are your breaks usually?

    4.6. *(If yes to 4)*: How much time do you usually spend playing EVE Online each week?

    4.7. *(If no to 4)*: Have you ever played EVE Online?

    4.8. *(If yes to 4.7.)*: How long did you play EVE Online?

5) Do you consider yourself to be a fan of EVE Online?

    5.1. *(If yes to 5)*: Have you ever attended EVE Fanfest or watched the livestream from the event?

    5.2. *(If yes to 5)*: Have you ever purchased any EVE Online related merchandise?

    5.3. *(If yes to 5)*: Have you ever written or read any EVE Online related fan-fiction?

6) Do you play computer games?

    6.1. *(If yes to 6)*: Do you play any massively multiplayer online role-playing games (*MMORPGs*)?

    6.2. *(If yes to 6.1.)*: Which MMORPGs do you play?

Appendix 2

Other games mentioned by sample (*n* = 2922).

Game	Frequency	Game	Frequency
Rift	61	Mortal Online	5
Star Trek Online	50	Star Wars Galaxies	5
World of Tanks	42	Ultima Online	5
Lord of The Rings Online	37	Arma 2/3 or DayZ	4
Secret World	36	Elder Scrolls Online	4
Everquest ½	33	Path of Exile	4
Neverwinter Online	32	Champions Online	3
Final Fantasy XI / XIV	30	Darkfall	3
Tera	26	BSG Online	2
Ragnarok Online	24	Diablo	2
Runescape	20	Fallen Earth	2
Firefall	18	Flyff	2
Aion	17	Minecraft	2
Lineage 1 / 2	14	Perpetuum	2
Planetside 2	14	Cabal	1
Defiance	13	Dawn of The Dragons	1
Warhammer Online	12	Dragon's Prophet	1
Anarchy Online	9	Puzzle Pirates	1
League of Legends	9	Second Life	1
Mechwarrior Online	9	Shaiya Online	1
Dark Age of Camelot	6	Entropia	1
DUST-514	6	APB	1

Appendix 3

Frequency of response, means and standard deviations of image statements for the entire sample (*n* = 2922).

Statement	Frequency	Mean	St.dev
1. EVE Online takes up a lot of time.	2917	5.08	1.49
2. EVE Online's realistic market system and economy make the game more interesting.	2921	6.40	0.92
3. In EVE Online, friendships are often formed between players.	2919	5.84	1.20
4. EVE Online has a very steep learning curve.	2915	5.96	1.17
5. EVE Online is repetitive.	2906	4.38	1.49
6. EVE Online includes a lot of in-game waiting.	2906	4.94	1.52
7. EVE Online is for mature players.	2916	5.64	1.28
8. EVE Online stimulates players' creativity.	2915	5.63	1.23
9. Players are often emotionally involved in the events that happen in EVE Online.	2921	5.86	1.12
10. EVE Online players often have to sacrifice real-world activities for in-game activities.	2919	4.54	1.56
11. EVE Online players often get emotionally attached to their in-game character.	2918	4.70	1.54
12. EVE Online provides a deep, immersive experience for players.	2915	5.84	1.15
13. EVE Online is an addictive game.	2912	5.65	1.27
14. In EVE Online, some things take a very long time to happen.	2917	6.32	0.98
15. EVE Online provides players with a certain realism.	2916	5.53	1.22
16. EVE Online is a hardcore game.	2909	5.85	1.28
17. In EVE Online, an emotional connection is often formed between players.	2912	5.34	1.23
18. In EVE Online, the players are in control over what happens in the universe.	2915	5.88	1.19
19. EVE Online provides a social experience for players.	2911	5.93	1.06
20. EVE Online is designed to draw the player in.	2910	5.02	1.49
21. EVE Online is a complicated game.	2912	6.16	1.07
22. To succeed in EVE Online, players need to spend a lot of time playing the game.	2917	5.03	1.64