Virtual Celebrities and Consumers: A Blended Reality

How virtual celebrities are consumed in the East and West

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Abstract

The goal of this study is to research how virtual celebrities are consumed in the East and West. The digital revolution has led to a surge in circulation of information. This has contributed to the transformation of human attention from an innate information gathering tool to a profitable resource, paving the way for the economy of attention. Therefore, it is significant for marketers and companies to understand how to attract attention. As celebrities enjoy large amounts of attention, they have been widely used in endorsement campaigns. Yet, their human flaws can still lead to scandals. Therefore, we argue that virtual celebrities can be used as an alternative. They are a new type of celebrity, who are able to perform 'real life' activities and earn money. Examples from the East include the virtual singer Hatsune Miku and the virtual YouTuber Kizuna AI, while the West is represented by the virtual band Gorillaz, or virtual model Lil Miquela, among others.

A descriptive approach is used to describe the preferences of Eastern and Western consumers in context of virtual celebrities. Our research philosophy consists of objectivism and positivism. Applying a deductive research strategy, we draw hypotheses from literature, which will be tested using quantitative methods. Data was collected through a survey applying a snowball sampling method. The subsequent data analysis in SPSS involved factor analysis to verify the survey validity and reduce the dimensions of our survey. Afterwards, the Independent Samples t-Test was applied to examine whether there are significant differences between our two groups, i.e. Eastern and Western consumers.

Four factors – interaction, misbehavior, appearance, and opinion – were tested to see if there are any differences between how virtual celebrities are consumed in the East and West. Based on our results and discussion, we have pointed out how virtual celebrities are consumed in the East and West. Market practitioners could take these subtle differences into account when planning on using virtual celebrities in their marketing strategies.

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1. INTRODUCTION

"All the world's a stage, and all the men and women merely players."

(Shakespeare 1623, Lines 139-166 in "As You Like It")

The digital revolution has made it possible for the rise of virtual celebrities that challenge our ideas about what is real and what not, blending illusion and reality. In context of the attention economy, such virtual celebrities may deem useful for marketers to capture the attention of consumers and differentiate from competition. In order to draw relevant practical implications, it is necessary to understand how virtual celebrities are consumed, which will be the aim of this study. At the core of the attention economy lays human attention with its limited capacity, which makes it a scarce and desirable resource (Franck, 2018; Simon, 1971). Harnessing this resource is of utmost importance to marketers. Therefore, researchers have engaged in studies about the effectful composition of visual elements in advertisements (Kinchla & Wolfe, 1979; Treisman & Gelade, 1980; Pieters & Wedel, 2004; Van Meurs and Aristoff, 2009) and used eye-tracking methods to measure consumer attention towards various marketing efforts (Malhotra, 2008; Wedel & Pieters, 2006).

As the major earner of attention, celebrities have been widely used as endorsers (Agrawal & Kamakura, 1995; Mathur, Mathur & Rangan, 1997; Byrne, Whitehead & Breen, 2003; Biswas, Hussain & O'Donnell, 2009; Farrell, Karels, Montfort & McClatchey, 2000; Tantiseneepong, Gorton & White, 2012; Keel & Nataraajan 2012; Dwivedi, Johnson & McDonald, 2015; Bergkvist & Zhou, 2016; Zhang & Huang, 2017). Yet, collaborating with celebrities may also cause financial and reputational risks, if the endorser is involved in a scandal (Bartz, Molchanov & Stork, 2013; Knittel & Stango, 2014). The idol economy in East Asia seems to circumvent this issue by meticulously fabricating celebrities, more commonly known as idols. What has started with Japan's *jimisho*, a system made up of

performer management companies, has quickly been adapted to other East Asian countries as well (Aoyagi, 2005; Galbraith & Karlin, 2012). These performer management companies are coordinating everything from the idol's public image, the songs they perform to how they behave. This gives them not only ultimate control over the idol's career but also personal life. Being created to serve as an object of fantasy and desire for fans, idols enjoy little freedom of developing their own identity. This has been faced with skepticism (Oi, 2016). At this point, virtual celebrities may offer a solution to the problems that are followed by the non-virtual celebrities and idols.

Compared to non-virtual celebrities and virtual characters, there is a considerable lack of research involving virtual celebrities. Studies about virtual characters have mainly focused on the design or technical creation of virtual characters (e.g. Poznanski, Thagard, 2005; Gebhard, Mehlmann, Kipp, 2011; Vieira, Vidal, Cavalcante-Neto, 2012) or studied them within an educational context (Reategui, Boff, Campbell, 2008; Endrass, André, Rehm & Nakano, 2013; Okita, 2014; Kistler, Endrass, Damian, Dang, André, 2012). It was rarely the case that virtual characters were imagined to become virtual celebrities. A few studies about the virtual celebrity Hatsune Miku have been the pioneers in this sense. Hamasaki, Takeda and Nishimura (2008) have concentrated more on the collaborative ecosystem and network of creators with different skills that can jointly produce videos of Hatsune Miku on the platform NicoNico. Later studies recognized the potential of Hatsune Miku and explored her relationship to consumers (Oppenneer 2011; Jenkins, Ford & Green, 2013; Lam, 2016; Russell, 2016; Jørgensen, Vitting-Seerup, Wallevik, 2017). Meanwhile, there has been rarely studies about virtual celebrities in the West, besides one about the British band Gorillaz. In that sense, we would like to contribute with our study to the discussion of virtual celebrities.

As there is no widely accepted definition of the phenomenon yet, we will apply our own definition of virtual celebrities as a hybrid between virtual characters and non-virtual celebrities - the latter being the common understanding of human celebrities. Even though their existence is computer generated similar to virtual characters, they seem to live among us by engaging in professions and activities usually associated with non-virtual celebrities. These can range from modeling, singing, vlogging to collaborations with

brands. Among the most popular so far are the virtual celebrity Lil Miquela, the Japanese vocaloid Hatsune Miku, KFC's latest virtual colonel Sanders, or the virtual supermodel Shudu. The way these examples came to popularity and the power they have to draw in millions of consumers, resembles much that of a celebrity, which is why we will draw our hypotheses from celebrity literature.

Looking at the existing body of literature on celebrity, celebrity endorsement and marketing, little research has been done on viewing virtual characters as celebrities and examining their relationship to consumers. At this juncture, it was our aim to make a contribution to the literature gap. Furthermore, we are enriching the study by looking at consumer preferences in the East versus West for comparison and more nuanced managerial implications. To our best knowledge no research has combined the notion of celebrity, idol, consumer preferences and virtual celebrities yet. For this reason, we formulate our research question as followed:

How are virtual celebrities consumed in the East versus West? And what are the implications for using virtual celebrities in marketing to attract attention?

First, we will start with an introduction to the attention economy, which will lead us to the celebrity and idol economy. Next, we will introduce virtual celebrities and separate them from virtual characters as well as argue for their advantages compared to non-virtual celebrities and idols. Then, we will look at both celebrities and virtual celebrities in the East and West, to see how they are consumed by Eastern and Western consumers, and formulate our hypotheses based on the literature. Afterwards, we will use a survey to collect data and apply statistical analysis to test our hypotheses. Results from the data analysis will be discussed subsequently. We will then suggest relevant implications and point out limitations of the study. Finally, we will answer our research question in the conclusion.

2. LITERATURE REVIEW

2.1 Attention Economy

Cultural intermediaries take a crucial position in the attention economy, functioning as the mediator between produced images and the public eye. Publicists, stylists, photographers, journalists, marketing staff, agents, make-up artists, personal trainers and assistants, promoters, etc. are examples of such cultural intermediaries who carefully curate and manage the public image of celebrities (Franck, 2018). By disseminating carefully curated images of celebrities, idols, or other public figures, the audience is drawn into a created reality behind pages and screens. In the extreme, that created reality can blend with the personal one, making the distinction between what is real and imaginary ambiguous (Franck, 2018). This has led companies to test the boundaries of consumers by offering everything from virtual reality glasses to virtual celebrities to challenge traditional ways of capturing attention. In this study, we will focus on the latter and examine how these arising virtual celebrities are consumed.

The advance of the internet and concomitant increase in circulation of information has turned human attention from an innate information gathering tool to a profitable resource, paving the way for the economy of attention (Franck, 2018; Davenport & Beck, 2010). In such an economy, the new kind of capital is the attention of human beings, which can be measured and monetized through social actions such as the exchange of ideas by downloading, uploading, commenting, sharing, following, viewing, liking, etc. In this sense, the economy of attention can also be referred to as the economy of socialization and ideas (Goldhaber, 1997; Davenport & Beck, 2010; Goldhaber, 2006; Terranova, 2012). The scarce and perishable nature of human attention drives competition in this economy, which intensifies with every new product or service entering the market (Simon, 1971). Realizing this, Berman and McClellan (2002) have proposed "10 strategies for survival in the attention economy" to help companies stay competitive. In this regard, our research can add relevance by examining how virtual celebrities are consumed. Therefore, businesses can use the findings and implications of this study to integrate it in their marketing strategies.

With attention being the new kind of capital, marketers need to consider more original ways to hold the attention of consumers as they face great challenges due to the nature of human attention and fierce competition (Davenport & Beck, 2010). As humans cannot expand their attention with every new product or service entering the market, they are required to split their finite attention capacity to more and more marketing stimuli, which results in spending on average merely 1.73 seconds looking at a magazine advertisement (Pieters and Wedel, 2004). Humans' inability to completely focus on more than one task at the same time (Charron & Koechlin, 2010) affects marketing efforts negatively, as well. In 2012, consumers paid 77% less attention to TV commercials compared to the early 1990s (Teixeira, 2014), which might be caused by the increasing use of mobile phones during such activities (Deloitte, 2015; 2018). As smartphones keep offering new possibilities for digital content, consumers are increasingly becoming addicted to that device, drawing their attention away from the real world towards a carefully curated and virtual reality, e.g. Instagram. Considering this, attention has increasingly become a desirable resource that marketers not only have to fight for in the real world but increasingly in the virtual world as well.

Researching how attention can be captured is a key issue in marketing. This has been examined through studies exploring reasons and practices for effectful composition of visual elements in advertisements (Kinchla & Wolfe, 1979; Treisman & Gelade, 1980; Van Meurs and Aristoff, 2009; Pieters & Wedel, 2004). With the development of eye-tracking technologies, researchers were given concrete tools to record and trace the attention cued by those visual elements and other marketing efforts (Malhotra, 2008; Wedel & Pieters, 2008). Using irony in advertisements to attract attention has been increasingly popular by market practitioners and has been proven effective as well (Kim & Kim, 2018). Yet, to our best knowledge, very few have researched virtual celebrities in relation to how to capture consumers' attention. This lacking literature body, probably due to the rather recent rise in popularity of virtual characters in the media, i.e. virtual celebrities, underscores the relevance of our study.

2.2 Celebrities & Celebrity Economy

The accumulation of social actions within the attention economy has eventually led to the popularity of certain personas and their rise to a celebrity - laying the path for what has been coined "celebrity economy" or "celebrity culture". But what exactly is a celebrity? What makes it so special? In the following paragraphs we will attempt to fill the word with meaning.

Literature has shown that the phenomenon surrounding celebrities is multifold and cannot be defined in a simple maxim (Boorstin, 1962; Rojeck, 2001; Bell, 2010). One of the first people to address the celebrity phenomenon was Daniel Boorstin (1962) who states that celebrities are people who are "known for their well-knownness". He lays the foundation for celebrity studies, which separates them from skills and talents. This is taken up by Rojek's (2001) notion of *attributed celebrities,* who are ordinary people elevated to celebrity because the media deems them "noteworthy" and "exceptional" - but not because of their outstanding skills, such as Paris Hilton. This type of celebrity relies heavily on the recognition of mass-media, according to Rojek (2001). *Celetoids* are a very compressed version of attributed celebrities and have only a very short life in the spotlight, such as whistleblowers, lottery winners, etc. DIY ("do-it-yourself") celebrities, such as reality stars or winners of music competitions, are considered to be celetoids as well, but could make the jump to becoming a more prestigious celebrity through great achievement, such as Kelly Clarkson (Rojek, 2001; Bell, 2010). In such cases they become *achieved celebrities* who rely on their "rare talents or skills" and are known for their singular accomplishments, such as Usain Bolt or Chopin. Boorstin (1962) would refer to such individuals as "heroes". The third and least controversial type of celebrities classified by Rojek are individuals who inherited their celebrity status through bloodline, such as Prince Charles or other children of famous people (Rojek, 2001).

Regardless of which celebrity type, they all rely heavily on the recognition of mass-media (Krieken, 2012) and their private life becomes an interest of the public besides their initial source of fame (Turner, 2014). The media plays a vital part to every existence of each celebrity. They have the potential to turn every unknown individual into a well-known

celebrity. Without the dissemination and circulation of their beauty, achievements, heritage, etc., the public would not even get to know them, which ultimately defeats the point of a celebrity's "well-known" feature. In that sense, whatever has been and is cultivated by the media, has the potential of becoming a celebrity. This widens the spectrum of what can be coined celebrity. In our study we introduce the virtual celebrity as a new type of celebrity, which we will elaborate on in a separate chapter.

Harvesting the attention of entire nations, Couldry & Markham (2007) take Black's (2012) notion of a celebrity as entertainer to the extreme, exposing celebrities as a weapon against mass distraction. They claim that if anyone who does not want people to focus on pressing issues in society, needs to present the public with images and news about celebrities. Making them engage in conversations about these celebrities will distract their attention from the actual problems.

Besides a celebrity's dependency on mass-media, another commonality of them is their universal purpose to "add value to economy and culture" (Rojek, 2001; Littler, 2015) and enable their audience to connect as a community through conversations about them (Faircloth, 2002). As the major earner of attention, studies have revealed celebrities' influence on consumer identity (Boon & Lomore, 2001; Kanai 2015), their body image (King, Touyz & Charles, 2000) and consumption (Blue Fountain Media, 2019). Further studies examined celebrities in relation to social movements (Meyer, 1995), religion (Maltby, McCutcheon, Ashe & Houran, 2001) and politics (Lahusen, 1996; Brockington, 2015; Street, 2012). All these studies give a glimpse into the complexity of a celebrity's influence on our lives. However, there is none thus far, that talks about virtual celebrities. This is where we want to make a contribution to existing literature.

In terms of a celebrity's economic value, researchers have outlined the positive benefits of using celebrities as endorsers for branding opportunities and marketing communication strategies (e.g., Agrawal and Kamakura 1995; Mathur et al. 1997; Byrne et al. 2003; Biswas et al. 2009; Farrell et al. 2000; Tantiseneepong et al. 2012; Keel & Nataraajan 2012; Dwivedi et al., 2015; Bergkvist & Zhou, 2016; Zhang & Huang, 2017). Considering the dynamics of the attention economy and the need for more innovative ways to attract

consumer attention, we assumed that virtual celebrities could be a way of capturing attention. In our study, we will focus on how these arising virtual celebrities are consumed and draw meaningful implications for marketing practitioners to capture consumers' attention.

Within marketing research, studies about celebrity endorsement have shown that consumers' cultural background and religion can influence the effectiveness of the respective marketing campaigns. Ohanian (1990) has developed a scale for measuring celebrity effectiveness on three levels: *trustworthiness*, *appearance*, and *expertise*. This has been widely applied to different contexts. Fitrianto, Daud and Nailis (2017) have shown that among Indonesian students both attractiveness and expertise of celebrities only have an insignificant effect, while trustworthiness of a celebrity had a significant effect on consumer behavior. Yet, in a comparative study between Muslim and non-Muslim consumers, celebrity expertise plays a more crucial role than trustworthiness for Muslim consumers (Suki, 2014). In regards of attractiveness, Chinese adolescents prefer celebrities who seem attractive, funny and expressive (Chan, Ng & Luk, 2013), contradicting the findings by Fitrianto et al. (2017). Additionally, Biswas et al. (2009) have also found differences in how Indian and American consumers perceive celebrity endorsement. These studies give a glimpse into how differently consumers may react to marketing stimuli with celebrities based on their cultural or religious attitude. Our research aims to integrate this idea by examining whether there are differences in how Eastern and Western people consume virtual celebrities.

Some studies have drawn attention to the potential pitfalls of the use of celebrities in marketing campaigns (Bartz et. al, 2013; Knittel & Stango, 2014), which indicate their uncontrollability that may affect the brand negatively. Fairchild (2007) notes that the idea of an "idol", a specific type of celebrity, has been introduced in an attempt to overcome these challenges.

2.3 Idol & Idol Economy

2.3.1 The Phenomenon of Idols

Fairchild (2007) furtherly goes on to define the "Idol" phenomenon as a type of presentation centered around curating, maintaining and perpetuating a specific and meticulously structured relationship between brands and consumers. Although it has roots in the celebrity economy, and shares many of the same foundations, it is very much an entity of its own. The notion of the "idol economy" originated in the music industry but has progressed into other sectors over time (Fairchild, 2007). Beginning in 2000, following the vertical integration of global cultural production, there was a monumental shift in the way technology was utilized in the distribution, consumption and overall experiencing of music (Fairchild, 2007). Additionally, the music industry itself had become deeply entwined within the overreaching structures of the entertainment industry at large.

These factors presented both unchartered challenges and new exciting opportunities, i.e. generating idols via talent shows, for music producers across the world. The most pressing issue was the fact that audiences had grown tired of performers who were simply good entertainers; they wanted to form closer relationships and feel more connected with these musicians (Maley & Davis, 2003). The creation of "Idol economy" as a business strategy was a direct response to these changing consumer demands. Many producers grabbed the opportunity to transform the process of discovering, cultivating and marketing new talent, which is often unpredictable and costly, into a "marketing juggernaut" (e.g. via TV shows), or a vastly profitable promotional masterpiece (Maley & Davis, 2003). On these television talent shows, the most popular contestants are steadily shaped into recognizable, familiar and marketable brands based around the pop star persona, which creates the foundation of the familial relationship between the contestants and their fans (Maley & Davis, 2003). Interestingly, some virtual celebrities have achieved a comparable relationship to their fans. This illustrates that virtual celebrities have the potential to appeal to a large audience as well, which marketers should not underestimate.

The creation of "idol-fan" relationships is focused on growth and is specifically manufactured to reach beyond the boundaries of the celebrity-fan dynamic to create active, lasting relationships that span far beyond the duration of the show. It is even intended that the primary relationship is not confined solely to the contestants, but, through the use of various different marketing channels, stretches into multiple relationships between the program and the audience. Idol producers aim to first cultivate the audience's investment in specific contestants, and then, over time, seamlessly shift that investment to focus on the ongoing drama and narrative of the show itself (Fairchild, 2007; Marx, 2012; Galbraith & Karlin, 2012). In that sense, idols are deliberately produced to attract attention from consumers and used as a marketing tool to enhance the popularity of the show.

The diversity of merchandise products for idols contribute to building lasting relationships with fans. Idols can be associated with merchandise as diverse as popular music, fashion and accessories, and even photo albums, as well as serving as a currency of exchange for the advertising and promotion of a myriad of other products and services. In the Asian market, an idol is synonymous with consumption, and, in a media system that has become centered on idols, consumers have been positioned as fans. Galbraith & Karlin (2012) state that, in the eyes of the fan-consumer, the idol is an object of desire, a fantasy, and even a mirror reflection of societal idea of perfection or idealism.

Accordingly, Galbraith & Karlin (2012) define "idol" as an overtly produced and widely promoted singer, model or other such media personality. Aoyagi (2005) asserts that an idol can be either male or female, but are often either young, or are presented as such, and are designed to appeal to broad cross sections of society and multiple demographic groups. This fabricated idea of idols could be easily transferred to virtual characters turning them into virtual celebrities who would even outshine their non-virtual counterparts in human aspects. We will explain the advantages using virtual celebrities over non-virtual ones in the next chapter.

Resonating with Rojek's (2001) articulation of the attributed celebrity, idols are not generally expected to be particularly talented in any given area, such as acting, dancing

or singing. Instead, they are created to be disposable and interchangeable commodities that, according to Treat (1993), reflect contemporary consumer capitalism. Idols are painstakingly produced, packaged and marketed to actively encourage mass consumption, which is how virtual celebrities seem to be produced as well.

2.3.2 Idol Economy

"Idol Economy" is a major phenomenon in Asia and first appeared in Japan, but later spread across the whole of Eastern Asia. In this region, idols appear on multiple interconnected media platforms simultaneously, often performing across several different genres. Over time, Japan has developed a robust *jimisho*, a system made up of performer management companies, which has significantly changed the landscape of not only the Japanese entertainment industry, but that of the larger East Asian market (Aoyagi, 2005; Galbraith & Karlin, 2012). These performer management companies are mostly responsible for the content produced by and for the idol industry, as it is very uncommon for idols to be involved with the writing of their music. They create performers for a variety of different genres completely from scratch and have control over all elements of their performers' career, public image and behavior. This means, producers need to consider consumer preferences in different markets to ensure the idol's success. In China, for instance, consumers tend to gravitate towards idols or celebrities with a particular personality type, especially comedic (Chan, Ng & Luk, 2013). It will be interesting to see whether these preferences spill over to virtual celebrities as well.

Aoyagi (2005) notes that not only are the management companies responsible for cultivating the personalities, physical appearances and repertoires of idols, but also for forcefully marketing, or pushing, their talent into mainstream popular culture. Owing to the ability of these companies to manipulate and influence the zeitgeist by leveraging the popularity and fame of their idols, one manager even went as far as calling their work "mass control" (Aoyagi, 2003, pg. 145). Since idols perpetuate the socially understood definitions of identity and adolescence, these production companies are directly responsible for the creation of such meanings on a societal level (Aoyagi, 2003, pg. 32).

In our study we are wondering whether those shaped perceptions affect consumer preferences for virtual celebrities as well.

Japan's successful idol economy inspired South Korean media executives to invent their K-Pop culture, which has impacted music, movies and drama, among other industries. This then started a trend, dubbed 'Korea-Wave', which saw the concept spreading across East Asia (Galbraith & Karlin, 2012). The flow and impact of Korea-Wave across Asia is evident; it is represented by prominent Korean celebrities, particularly K-Pop idol groups, who are distinctly different from existing artists, but have extended the reach of the wave and broadened the target market (Galbraith & Karlin, 2012). Although the content was not localized, several different marketing methods were implemented to bring a new cultural icon to South America, the Middle East and North America simultaneously (Aoyagi, 2003; Galbraith & Karlin, 2012). Besides this wave of K-Pop idol groups spreading across countries, we observed a number of virtual celebrities/idols that are rising in the East and West and capture the hearts of million fans similar to their non-virtual counterparts. How these virtual celebrities are consumed will be the center of our study.

2.3.3 Idol Group Examples from East and West

AKB48, a Japanese idol girl group created by AKS Co. Ltd in 2005, has received a lot of interest from scholars. This group has a slogan "idols you can meet", which goes hand in hand with the daily performances put on in their own theatre, so fans can always see the group live. There are around 134 members of AKB48, who are split into 5 different teams, allowing them to rotate performances, perform at multiple places simultaneously, and attend "handshake" events to meet and greet fans. By June 2018, the group had sold an excess of 56 million records, including over six million albums, making them one of the highest-earning music groups in Japan. Once a year, the group holds a "General Election" – fans vote for their favorite members, and the seven with the highest number of votes form a special team who receive priority PR resources for the next twelve months. This practice is a tactical way of gaining record sales, as in addition to the votes given to fan club members, anyone who purchase a promotional single also gains a vote – one vote

per single purchased, and fans are permitted to purchase multiple copies to gain extra votes. In 2011, the group's third General Election received a huge amount of promotion, or a marketing blitz, which led to the group selling 1,334,000 copies of their single in a week – a new Japanese record. The results of the fan vote were announced during a live ceremony at Budokan, an area in Tokyo which has hosted performances for the world's most famous musical acts. According to Barks Global Media (2011), the ceremony was broadcasted live in 86 Japanese theatres (over 97 screens), as well as Taiwan, South Korea and Hong Kong. The event was overwhelmingly popular, and tickets for the event, both at the arena and in theatres, sold out within minutes. In a further marketing effort, one of the promotional singles sold contained a "five-minute handshake ticket" which allowed a fan the chance to meet and greet the idol group at a handshake event. The resulting frenzy was more than simple fanaticism – it went far beyond this, into the realm of a full-blown public spectacle and media phenomenon. The creation of AKB48 birthed an entirely new mode of operation in the idol business – the group's overwhelming success resulted in an expansion of the concept which saw the manufacturing of sister groups in Japan, China, Thailand, Taiwan, Indonesia, Vietnam, the Philippines and India.

Producers strive for serving the broadest audience as possible by matching consumer preferences in East Asia, which seem to point towards only one singular type of idol. One can argue that it is exactly that type that is also being produced. Hence, cutting down on the variety of distinct individuals and creating a mass of similar looking idols.

Meanwhile, America has created its own idol show. What is interesting to observe is that American Idol tries to reach a most broad audience as possible by creating different types of personalities and styles that would match the heterogeneity of consumers (Bell, 2010), instead of a mass of flat personalities who all look the same. The essential feature of idol shows in the West is creating a very distinct personality around each contestant (Bell, 2010). It is the producers of the show who explicitly create the characters instead of the fans. In Asia, no particular character is formed as to leave enough room for fantasies and imagination. In the West, characters are created to serve a corresponding consumer group. The process of creating a character for the contestant can involve very personal areas as well. Even difficult family situations will be webbed into an identity narrative for

the audience in order to make the contestants feel more approachable (Bell, 2010). In Asia, there is hardly anything known from idol celebrities' family. Around the show American idol and the actual music competition, short videos are shot in support of building the character. Carrie Underwood's image of a country girl in American Idol season four was supported by videos showing her on a farm, feeding cows, father driving a hay baler. Such character creations are very common on idol shows in the West to make the contestants grow closer to the audience and encourage fans to vote for their idol (Bell, 2010). Producers assume they know what consumers want and feed it to them. In Asia, it can be interpreted as a more "lazy way", since producers just step back and let the characters be created by each fan individually. What has to match is the appearance and behavior.

2.4 From Virtual Characters to Virtual Celebrity

Even though idols, especially in the East, seem to be a more controlled version of a celebrity, they are still human and cannot be controlled completely without controversies. And if not controlled completely, companies are always exposed to financial and reputational risks, whenever the celebrity whom they worked with is involved in a scandal. Some businesses have taken the commodification of celebrities and idols to the next level by creating virtual celebrities, which could be a solution to these problems. Next, we will start with differentiating between virtual characters and virtual celebrities and suggest two key advantages of using virtual celebrities over non-virtual celebrities/idols in marketing. This is followed by a brief literature review and finally presenting several successful virtual celebrities to provide a better understanding of the virtual celebrity phenomenon.

2.4.1 Distinguishing virtual characters from virtual celebrities

Even though virtual characters and virtual celebrities are both computer-generated-images (CGIs), the latter differentiates by its purpose of functioning as a celebrity. A virtual character includes everything that is a CGI but does not necessarily have success on its own. Meaning that virtual characters depend on the storyline for which they have explicitly been created for. They only live in and from the story - without the story there would not be the character. That can be any fictional character from movies to games, e.g. the snowman in the movie *Frozen,* Superman or Shrek. Even though there are merchandise products on all of those characters, they do not function on their own and seem to live among us, e.g. make YouTube videos, record music, post on social media, etc.

A virtual celebrity in contrast, is able to perform these "real life" activities and earn money (even though the money will not flow into their account but their creators'). In that sense, every virtual celebrity is a virtual character but not vice versa. However, virtual characters could potentially become virtual celebrities, if they seem to live among us. Important is that it is not a "real" person who markets themselves as virtual just because they appear in the digital media - as Kim Kardashian who is a real person on TV. The technical core of a virtual celebrity should be a CGI and not a human being. In short, our understanding of the virtual celebrity is a hybrid between virtual character and non-virtual celebrity, which is illustrated in Figure 1. This is our own definition of the term virtual celebrity that we will apply for the purpose of this study.
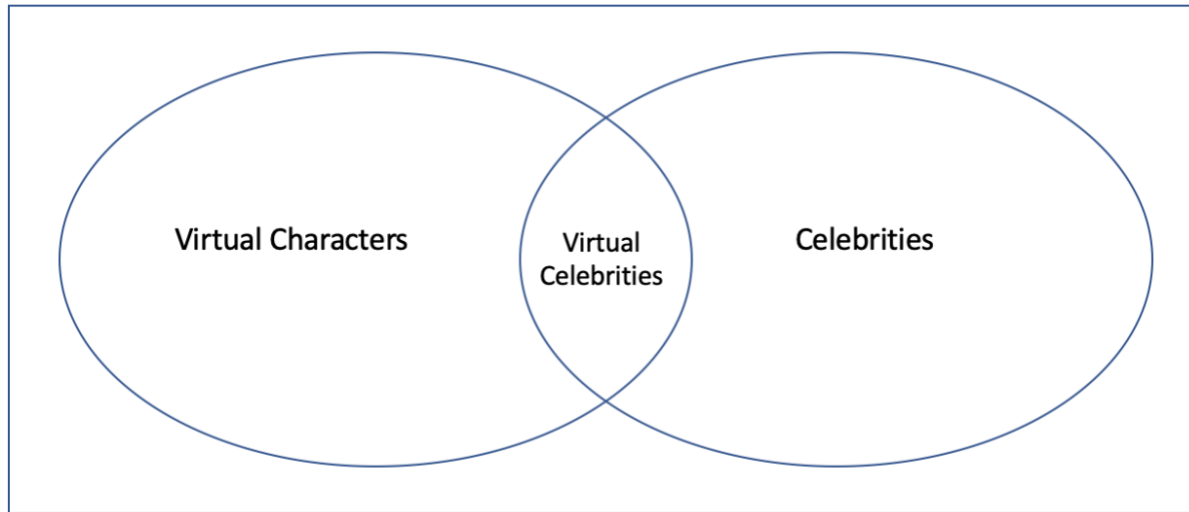
Figure 1 Virtual Celebrities

2.4.2 Virtual Character

Virtual characters have been an emerging research topic of the 21st century, yet there is a lack in studies involving virtual celebrities for marketing purposes. So far, studies surrounding virtual characters can be divided into two broad categories: studies dealing with the design or technical creation of virtual characters (e.g. Poznanski & Thagard, 2005; Gebhard et al., 2011; Vieira et al., 2012), and studies that are more concerned about virtual characters as an "end product" and its application. In such studies virtual characters are investigated as a tool to improve students' learning experience (Reategui et al., 2008; Okita, 2014) or intercultural business training (Kistler et al., 2012; Endrass et al., 2013) rather than looked at from a marketing perspective as virtual celebrities. Examining this rather new field in virtual characters will be the focus of our study and our contribution to discussions about virtual characters.

2.4.3 Virtual Celebrity

The idea of a virtual celebrity has been mentioned in literature a few times in different contexts, but there are no explicit academic studies about the its phenomenon yet. In the

following, we will present the few mentioning of the term for the purpose of exploring its meaning and finally present our notion of a virtual celebrity, which we will apply for this study.

Surprisingly, the first mentioning of the term "virtual celebrity" was linked to the origins of the Azusa Street revival in Southern Wales during the 19th century, which later inspired Pentecostalism in the 20th century (Gitre, 2004). In this context, the former collier and minister-in-training Evan Roberts was referred to as a virtual celebrity. He was well-known across the country for his speeches and the mysterious aura that surrounded him - a man that many people hear and read about but never really met, and whose whereabouts as well as upcoming speech schedule was kept secret. He traveled restlessly to deliver his speeches, seeming to be everywhere and nowhere at the same time (Gitre, 2004). Well-known for being unknown, quite ironic. This contributed to the people's understanding of Roberts as a virtual celebrity. It seems like he only existed in the imagination of the people, since they have never met him.

In a more recent mentioning of the term, Clarke et al (2016) mentions America's First Lady of Food, Betty Crocker, as a virtual celebrity chef. In contrast to Roberts, Betty Crocker was in fact a fictional character. She was created in 1921 to meet the growing demands of Washburn Crosby Company's customers who were asking for baking instructions (BettyCrocker, n.d.). What had started with replying to questions by letter, soon developed into what Clarke et al (2016) called the virtual celebrity on radio and television. Interestingly the term virtual celebrity was mentioned in context of the food industry again, when Gillian Clark (2017) referred to herself as a virtual celebrity chef because she appears on digital media. Harvey (2018) used the term in connection to the mobile game *Kim Kardashian: Hollywood*, where players can become virtual celebrities themselves. Similarly, the gaming character Lara Croft was referred to as a virtual celebrity (Milner, 2010). Among these references, the idea of Betty Crocker comes closest to our understanding of the term.

Virtual celebrities have a great potential of being the next "big thing" among marketers due to their steadiness and controllability. What clearly sets them apart from non-virtual

celebrities and idols is their immortality. No matter what, virtual celebrities stay the same age forever. Just like the example of Betty Crocker showed, even after decades, she did not age - and is still alive. What has never lived (in the real world) may never die (in the real world). Not only are virtual celebrities immortal - as long as their creators keep it this way that is - but it is also possible for them to never age and become wrinkly - if that is what the developer wants. This way, their relevance is not bound to a certain generation but can be adjusted throughout the years to always meet the target group. A quick example: Imagine Justin Bieber would have stayed forever at the young age when he entered his career. Millions of teenage girls today and in the future would have still been able to indulge in Bieber's young angelic voice, and his managers and cultural intermediaries would have still been able to monetize on his success. This is why we suggest virtual celebrities as a constant resource that marketers can exploit.

A second key differentiator between virtual celebrities compared to non-virtual celebrities or idols is the fact that virtual celebrities are 100% controllable. Starting from celebrities whose images are carefully curated through the media and cultural intermediaries to idols behind which an entire company has taken on the mission to fabricate them, virtual celebrities outshine the two aforementioned by far. As they are non-human beings, virtual celebrities can be "filled" with any type of personality, look, racial background, preferences, voice, etc. If brands would leverage this uniqueness of virtual celebrities, they could lower their financial and reputational risks caused by rebellious celebrities/idols, who through their private actions could damage the brand. For this reason, we believe that using virtual celebrities within marketing adds an innovative perspective on the digitalization within both industries.

Studies on virtual celebrities are sparse, so far. Most of the studies of virtual celebrities involved the Japanese vocaloid Hatsune Miku (Hamasaki et al., 2008; Guga, 2015; Lam 2016; Jørgensen et al., 2017). Besides, the British band Gorillaz was the subject of Jeffrey (2017)'s study, which however focused on the bands' Plastic Beach album rather than

the virtual band itself. The lacking amount of studies concerning virtual celebrities call for further investigations in this field, which is where this study will contribute to theory and practice.

Despite the proven existence of the uncanniness among CGIs, some of them still achieved to catch the hearts and attention of the public. The "Uncanny Valley" is the phenomena describing how CGIs can radiate an eerie and rejecting feeling towards humans (Mori, 1970). Researchers have investigated various facilitators of this phenomenon (see Table 1) and even found differences between genders (Mousas et al., 2018). Interestingly, despite the proven existence of this phenomenon, there is a growing number of virtual celebrities that are worth the attention of million consumers. Our goal is to see what exactly it is that makes them so popular. In the following, we will introduce several CGI turned virtual celebrities to give a better understanding of virtual celebrities.

Incongruence in gesture and timing of movements	Ho, MacDorman & Pramono, 2008; MacDorman & Ishiguro, 2006; Minato, Shimda, Ishiguro, & Itakura, 2004
Jerky motion	MacDorman, Coram, Ho & Patel, 2010
Disproportionate facial features	Green, MacDorman, Ho & Vasudevan, 2008; Seyama & Nagayama, 2007
Asynchrony of speech	Tinwell, Grimshaw, & Abdel Nabi, in press
Aberrant facial expression	Hodgins, Jörg, O'Sullivan, Park, & Mahler, 2010; Tinwell, Abdel Nabi, & Charlton, 2013; Tinwell, Grimshaw, Williams, & Abdel Nabi, 2011a

Table 1 Facilitating factors of the Uncanny Valley phenomenon, adopted from Children's perception of uncanny human-like virtual characters, by Tinwell & Sloan, 2014

2.4.4 Examples of Virtual Celebrities in the East and West

Lil Miquela

Picture 1 shows a photo posted on Instagram during the prominent "Coachella festival" in California. It depicts a casually dressed girl holding an ice-cream and looking intensely into the camera, making it seem she is looking right back at the viewer. The caption of this Instagram post says *"I'm having a great time (I think I saw Jaden Smith, but also everyone here looks like a celebrity, so who knows), but... I lost my 19 necklace somewhere. Trying not to stress.".* If you would not know better, you would probably assume this is just another "Insta-girl" showing off another post-worthy moment of her live, which 78.680 people on Instagram agree with (Lil Miquela, 2019, last updated April 20, 2019).

Picture 1 Lil Miquela, (Lil Miquela, 2019)

According to online sources, Lil' Miquela, "born" Miquela Sousa, is merely a fictional character - or "brainchild" - created by Trevor McFedries and Sara Decou in 2016. They created her as an art project and is rumored to be backed by various venture capitalists with $6 million (Stone, 2019). The way McFedries and Decou created Miquela is smart: hyper realistic looks, placing and relating her to "real" world events and famous figures, affiliations with the LGBT community and Black Lives Matter association, wearing fashionable clothes, promoting her as a "musician" - generally, making her seem just like any of us. Adding to this, her Instagram captions serve the whole palette of human emotions revealing everything from struggles of her "life" to her exciting music projects to come. With now 1.5 million followers on her Instagram, she has turned into a powerful influencer making her a valuable partner for brand collaborations (Lil Miquela, 2019). Some of her latest achievements were her photoshoot for the March 2019 cover of the

fashion magazine Evening Standard (Lil Miquela, 2019), her virtual attendance of Prada's Spring Summer 2019 fashion show and her editorials for the sophisticated fashion house Opening Ceremony, besides thriving herself by reaching Spotify's Top 50 charts in six countries (Stone, 2019). Her latest achievement is the opening of an online shop "club404notfound" in collaboration with other creatives (Club 404, 2019). Considering her rather recent popularity, especially after last summer's dramatic incident on her Instagram, there has not been any academic studies conducted on her yet.

Hatsune Miku

Picture 2 Hatsune Miku, (Amazon, 2013)

Japanese pop star Hatsune Miku is phenomenally successful and attracts many thousands of fans to her stadium concerts from Tokyo to Los Angeles. However, not only does this pop star fail to issue any diva-like demands but she also has no need to eat or drink to stay alive; she is a virtual celebrity. Hatsune Miku means "first sound of the future" and was first launched by Sapporo-based company Crypton Future Media in August 2007. She then quickly became the most popular avatar of Yamaha's cutting-edge voice synthesizer "Vocaloid", which is a synthesized voice programme. Using Yamaha software, one of Japan's leading music technology companies designed voice characters and developed Hatsune Miku's unique position as an "editable" singer (Leavitt, Knight & Yoshiba, 2016) who has become a hub for user-generated and network-based artistic works. Miku began as a Vocaloid programme, but the character's moé aesthetics quickly appealed to Japanese subcultures including the geek (otaku) and self-publishing (doujin) cultures and Miku's reach began to expand. Various types of creators have collaborated with Miku, where the character has played roles in various centred and decentred clusters through feedback-oriented media sharing websites such as Niconico. Miku appears in a variety of

electronic visual displays in mediums as diverse as 2D graphics and 3D animation; graphical user interface (GUI); original works and derivative characters; music videos and illustrations, as well as a multitude of other audio-visual formats.

Since 2007, the Hatsune Miku Vocaloid has released more than 170,000 songs on video-sharing platforms including YouTube and Niconico and Miku's popularity continues to grow (Lam, 2016). The popularity of Miku has quickly been reflected in more traditional ways in today's consumer society, where a wide range of products are marketed, including manga, collectable figurines, video games and cosplay (Leavitt et al., 2016). The huge success of Miku in the cyber world has also led to music distributors, including creator Crypton, releasing albums and putting on the concerts mentioned previously, where holographic Miku has performed 'live' in cities across Japan and in other countries including the United States and Singapore (Guga, 2015). While the musicians are human and Miku's vocals are based on human tones, it is the projected, 3D holographic Miku that the audiences come to see, despite the fact that she is a virtual character.

Shudu

Inspired by Barbie, the Princess of South Africa, British fashion photographer Cameron-James Wilson has created one of the world's first digital supermodels as an art project in 2017 ("The Diigitals About", 2019). Her extraordinary beauty has earned her quickly a great followship on Instagram, a collaboration with the fashion company, e.g Soulsky and fashion company, e.g Soulsky and

Picture 3 Shudu (Shudu Gram, 2018)

Ellesse, and editorials in magazines such as WWD and COSMOPOLITAN. A hologram of her was even projected on the red carpet of the BAFTA Awards. With Shudu's success, Wilson soon after created more virtual models, building an entire platform for them. The

Diigitals are both a showroom and a gallery for his virtual models, where he challenges the boundaries between reality and the digital.

Gorillaz

Founded in 1998, the British virtual Band Gorillaz enjoys international popularity, playing concerts all over the world (Gorillaz, 2019). Their versatility in music styles ranging from soul, hip hop, R'n B', pop, reggaeton, and rock and roll, attracts a diverse fan base with the broadest demographics.

Picture 4 Gorillaz, (Sonar, 2018)

Numerous collaborations with other artists have certainly contributed to the diversity of music genres. The first release in 2001 earned the virtual band six million sold copies, which was followed by a Grammy Award, the Jim Henson Creativity Honor Award for their innovative videos, and nominations for the BRITs Award. Around the music an entire "Gorilla-verse" has been built on five social media platforms to connect to their fans. Each member of the band has been developed into a distinct character that matches the brands' "alternative" image.

Kizuna AI

The end of 2017 has seen a rise of Japanese DIY virtual celebrities, predominantly on YouTube. One of them is Kizuna AI (Picture 5). These virtual YouTubers produce video content for their fans just like their non-virtual counterparts. The content is kept rather simple, covering songs and being chatty about random topics. Sometimes they are even live streaming, answering the questions of their viewers.

Picture 5 Kizuna AI, (Tinanime, 2018)

The way these examples came to popularity and the power they have to pull in millions of consumers, resemble much that of a celebrity. This is why we will draw our hypotheses from celebrity literature.

2.5 Cultural analysis of consumer behavior - Idol economy vs. Celebrity economy

What follows is a comparison of how consumers from both hemispheres engage with non-virtual celebrities so far and transpose this knowledge onto virtual celebrities to see whether there are significant differences in the way Eastern and Western people consume virtual celebrities.

Marketing research has looked at variances in consumer behavior among different cultures "including responses to advertising themes (Han & Shavitt, 1994) and quality signals (Dawar & Parker, 1994), decision-making styles (Leo, Bennett & Härtel, 2005), tipping decisions (Lynn, Zinkhan & Harris, 1993), and innovativeness (Steenkamp, Hofstede & Wedel, 1999)" (Nakata 2009, p.181). However, little research has been done on cross-cultural preferences on virtual celebrities for marketing purposes, which is where this study will pick up on.

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Looking at the body of literature on celebrity economy and idol economy, we conclude key differences between the two. A fundamental difference is that we found idol economy to be strongly practiced in the East while celebrity economy is more common in the West. Based on this assumption we derive five research hypotheses, which we test on virtual celebrities. In that sense, we assume that cultural preferences on non-virtual celebrities will be the same for virtual celebrities.

First of all, consumers in the Asian market respond well to the co-creation process used to produce idols (Hamasaki et al., 2008; Galbraith & Karlin, 2012) – for example, in the AKB48 General Election strategy, fans are encouraged to purchase merchandise and music, as well as attend special events, in order to gain the chance to vote for their favorite members. This gives fans the feeling that they are involved in the "idol creation" process, and gives them a stronger link to the group, since their input directly influences the outcome (Aoyagi, 2003). Accordingly, Asian consumers tend to care less about authenticity when it comes to idols, it is more about if an intimate close fan-idol relationship is provided (Galbraith & Karlin, 2012). As such, these consumers are not as concerned with the authenticity of their idols, preferring the intimate relationship created between the idols and fans – they grow alongside the idol, creating the impression that they have been closely involved in their idol's rise to fame (Marx, 2012). Besides, in Eastern countries, consumers usually assume a superior position than the idol whose main duty is to serve the consumers by providing entertainment and moments of happiness (Black, 2012). In contrast, Western celebrities are often put on a podium and are looked upon as trendsetters or opinion leaders. Fans of Hatsune Miku want to be able to sit back and enjoy the show and rather not engage in deeper or more controversial conversations with the virtual celebrity. Here, discussions remain on a rather superficial level. In case of Lil Miquela, an advocate of social movements such as the LGBTQ or Black Lives Matter, her fans value the virtual celebrity's opinions about those pressing issues in society. This leads us to our first two hypotheses:

H1: Eastern consumers want to influence virtual celebrities, while Western consumers want to be influenced.

H2: Eastern consumers do not want virtual celebrities to have a deep level of opinion.

Furthermore, characteristic preferences also differ between Eastern and Western consumers. Black (2012) and Guga (2015) reveal that Asians prefer their idols to appear as polite, hardworking and obedient, or a "good student", while Fairchild (2007) found Western celebrities were more likely to be described as "having an attitude" and be "independent". Furthermore, consumers in Asian countries do not tolerate misbehavior from idols – it is expected that these stars maintain a perfect, clean and positive public image. Even a minor scandal, such as being caught accidentally swearing, would pose a serious risk to an idol's career (Galbraith & Karlin, 2012). Conversely, the West is far more tolerant towards such misconduct – being caught taking drugs is unlikely to have much of an impact on a celebrity's career, where in Asia this would prevent them from becoming idols, effectively ending their career (Fairchild, 2007). A great example of Western consumers tolerance towards misbehavior is reflected in the notorious scandal of Kate Moss, who was caught sniffing cocaine, starting a public hype around her "heroin chic" behavior and gaining her more model campaigns than before (Hanukov, 2015). This underlines the common saying of "all press is good press". From this knowledge, we draw our third hypothesis:

H3: Misbehavior is less accepted by Eastern consumers than Western consumers.

Since consumers are invested and enjoy participating in the development of idols, more mature characters would not offer the same level of satisfaction. At the beginning of their journey, many idols are very young and immature, meaning consumers have low expectations regarding their talents – they are more interested in the idols' appearance than their singing, dancing or acting abilities (Galbraith & Karlin, 2012). Physical appearance and age are far less of a concern in the West, where consumers are much more invested in the talent and productions of their idols – there is no mold that idols must fit into, or physical attributes they must have (Fairchild, 2007; Bell, 2010). Therefore, we hypothesize:

H4: Eastern consumers prefer appearance over talent.

Preferences regarding the appearance and age of idols are different across the world. Youth is a coveted and highly attractive trait in Asia, and similarly, consumers in this region prefer celebrities to appear innocent, cute and young (Black, 2012; Marx, 2012; Aoyagi, 2003). This is also reflected in many Asian animated characters – they frequently appear to be cute, young, and have very large eyes. Taking this into consideration, executives are always able to recruit attractive men and women to create new idols using the 'idol factory' model – younger looking idols are much preferred (Fairchild, 2007; Black, 2012; Guga, 2015). From this we conclude our third hypothesis:

H5: Eastern consumers prefer virtual celebrities who look young.

2.6 Conclusion of Literature Research

The economy of attention, celebrities and idols are very much intertwined and live from the fascination of consumers for extraordinary commodities. These commodities are increasingly embodied by individuals who rose to fame, earning attention of millions of consumers. Enjoying such wide popularity among consumers, celebrities have been much involved in marketing campaigns as endorsers. Companies hope for celebrities to help them draw attention to their own products. Yet, collaborating with celebrities can bear financial and reputational risks, in case the celebrity is involved in a scandal. In East Asia, a more polished version of the celebrity has been created to minimize this risk. Idols are even more fabricated than the celebrity and seem to be East Asian's concept of a celebrity. Everything around the idol is meticulously planned and constructed, leaving hardly space for the idol to engage in activities outside of the set environment. This makes idols more controllable than a celebrity but has been creating controversies as well. In this context, we are suggesting virtual celebrities, a hybrid between virtual characters and celebrities, who could be the solution to the challenges faced in the idol and celebrity economy. Our study aims to research how these virtual celebrities are consumed in the East and West

and contribute to existing literature in marketing and virtual characters. Based on our results we will draw relevant implications for marketing practitioners.
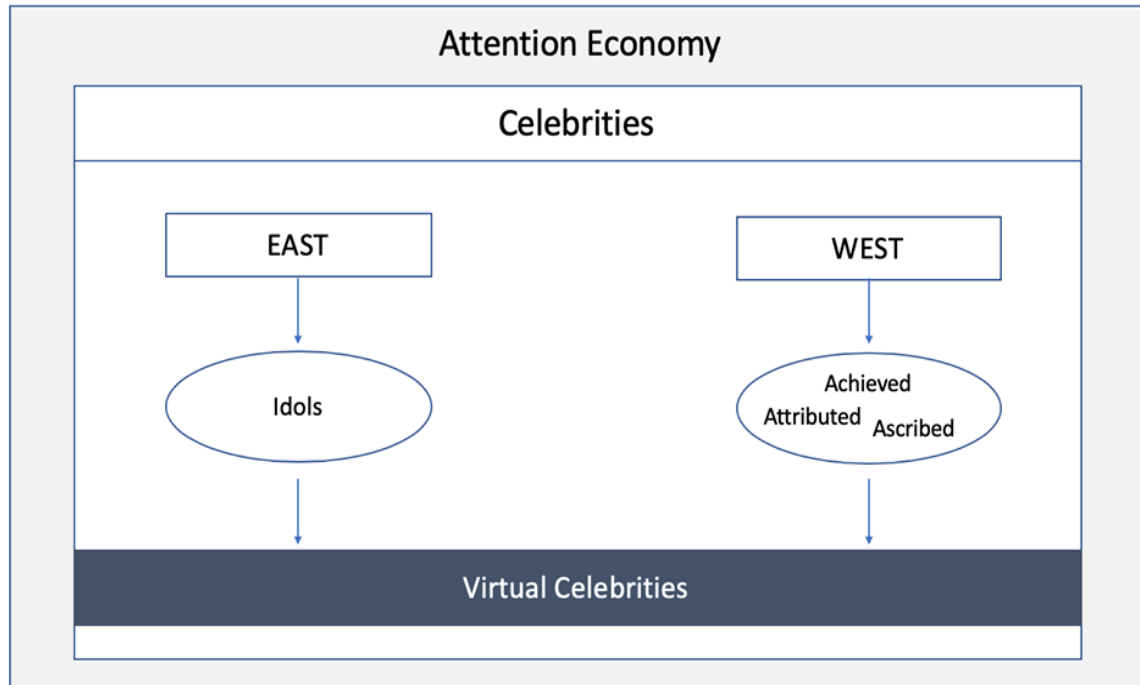
Figure 2 Theoretical Framework

3. METHODOLOGY

In this section, a brief overview of the research methods used in this study will be given, alongside the reasons they were chosen. This methodology should offer logical insight into the processes conducted during this thesis project and will conclude by clearly demonstrating the way in which the research was carried out, including the research setting, materials and procedures used. The "research onion" process (Saunders, Lewis & Thornhill, 2009) will be utilized to guide our research methodology.
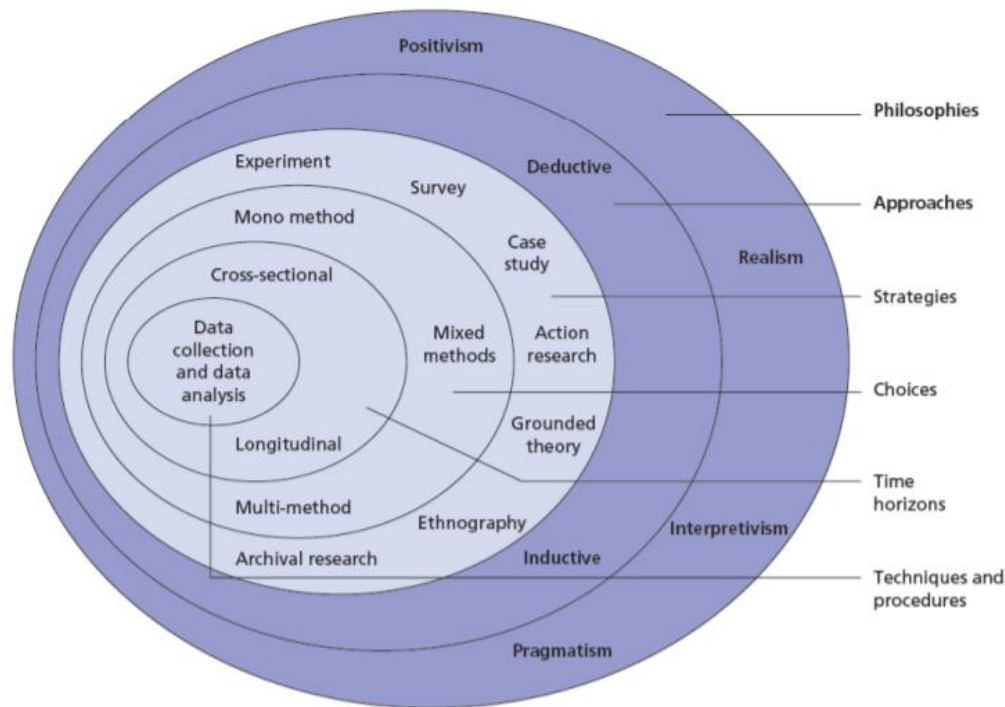
Figure 3 Research process "onion", adapted from Research Methods for Business Student, 5th Edition (p.108), by Saunders et al., 2009

3.1 Purpose of Research

The purpose of the study is to research how virtual celebrities are consumed in the East and the West. There are three different research purposes, or objectives: *descriptive*, *exploratory* and *explanatory*. According to Walliman (2006), in descriptive research, the most common data collecting method is observation, which attempts to examine a situation and establish norms – in other words, determine likely outcomes in similar or the same circumstances. Exploratory research focuses on providing insights to a social phenomenon by researching thematic priorities and operational definitions. Explanatory research is an offshoot of descriptive research, but goes deeper than simply collecting information, instead focusing on understanding the many complex human, political, cultural, contextual and social factors at work. It is typically used to examine, improve and, ultimately, develop a situation or its outcomes. Based on Walliman's (2006) differentiation of the types of research methods, this particular study will be descriptive, since we aim to research the situation of how virtual celebrities are consumed in the East and West. This study is conducted using a descriptive approach – very little research has been carried out in regard to virtual celebrities and consumer preference of the East and West prior to this study. As such, this paper aims to direct future research through the presentation of new propositions based on the findings and conclusions drawn here.

3.2 Research Philosophy

Bryman (2012) has considered "research philosophy" to be the different ways of thinking linked with the nature of the reality under investigation – it can be argued that research philosophy reflects the underlying definition of the very nature of knowledge itself. Bryman (2012) notes that makings assumptions in the research philosophy can provide the explanation of how the research is carried out, in order to do this, ontology and epistemology as two integral parts of research philosophy are essential for the research.

3.2.1 Ontology

Blaikie (2009) has defined ontology as "the science or study of being", since ontology is mainly concerned with the nature of reality in the research. It is an arrangement of conviction that mirrors an understanding by a person about what comprises a reality. That is to say, perceiving the social entities objectively or subjectively is the main argument in ontology. Therefore, objectivism and subjectivism are considered as the two significant perspectives of ontology. "Objectivism portrays the position that social entities exist in reality external to social actors concerned with their existence" (Saunders, Lewis & Thornhill 2012, p.110). The second aspect, subjectivism, "holds that social phenomena are created from the perceptions and consequent actions of those social actors concerned with their existence" (Bryman 2012, p.121).

In our thesis, objectivism is used as the ontological perspective. Since we aim at understanding how virtual celebrities' consumers are in the East and West, in other words, we are looking at consumers' preferences towards virtual celebrities, and we believe there are objective differences between the East and West. Therefore, objectivism is the right approach for our study.

3.2.2 Epistemology

Bryman (2012) has stated that epistemology is a research philosophy concerning the sources of knowledge. To be more specific, he stated that in research, epistemology involves the considerations of different aspects of knowledge (e.g. possibilities, nature, sources and limitations). That is to say, epistemology is based on ontology. What you believe the world is (ontology) influences what you believe knowledge about this world is (epistemology). Epistemology has many branches that include positivism, pragmatism, interpretivism, social constructivism etc. (Bryman, 2012), and each of them is reflecting a different ontology (see Figure 4).

	Positivism	Realism	Interpretivism	Pragmatism
Ontology: *the researcher's view of the nature of reality or being*	External, objective and independent of social actors	Is objective. Exists independently of human thoughts and beliefs or knowledge of their existence (realist), but is interpreted through social conditioning (critical realist)	Socially constructed, subjective, may change, multiple	External, multiple, view chosen to best enable answering of research question
Epistemology: *the researcher's view regarding what constitutes acceptable knowledge*	Only observable phenomena can provide credible data, facts. Focus on causality and law like generalisations, reducing phenomena to simplest elements	Observable phenomena provide credible data, facts. Insufficient data means inaccuracies in sensations (direct realism). Alternatively, phenomena create sensations which are open to misinterpretation (critical realism). Focus on explaining within a context or contexts	Subjective meanings and social phenomena. Focus upon the details of situation, a reality behind these details, subjective meanings motivating actions	Either or both observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question. Focus on practical applied research, integrating different perspectives to help interpret the data
Data collection techniques most often used	Highly structured, large samples, measurement, quantitative, but can use qualitative	Methods chosen must fit the subject matter, quantitative or qualitative	Small samples, in-depth investigations, qualitative	Mixed or multiple method designs, quantitative and qualitative

Figure 4 Comparison between different research philosophy, adapted from Research Methods for Business Student, 6th Edition, by Saunders et al., 2009

Positivism and constructionism, according to Newman and Benz (1998), are the two primary epistemological frameworks that inform research procedures. Positivists believe that reality exists outside of the topic of study, so practically, this indicates that between subjects, the meaning of phenomena is consistent (Newman & Benz, 1998). Therefore, positivism sees knowledge as a passive reflection of the external, objective reality. In contrast, constructionists believe that reality is a construct of human mind, therefore constructionists perceive reality subjectively (Newman & Benz, 1998).

Positivism is the corresponding epistemology to objectivism. Positivists research based on facts, which means that they could be totally objective (Bryman, 2012). Therefore,

philosophy of positivism is centered around what can be observed to produce credible data (Bryman, 2012). In this thesis, our chosen ontology is objectivism, which means that positivism is potentially a good epistemological match. In addition, we are researching the consuming preferences of virtual celebrities in the East and the West, which are observable and measurable facts, thus, from this point of view, positivism is the suitable epistemological approach for our study.

Another important component of positivism is that researchers have to be independent from their research (Newman & Benz, 1998), which means they have to keep the interaction level with research subjects (e.g. respondents or participants) as low as possible. Therefore, positivism encourages researchers to work based around observable data. This thesis will use survey for data collection, because survey does not require too much interaction with research participants and allows to be independent from the research. Using positivism epistemology will help comparing the different ways virtual celebrities are consumed. Furthermore, it has the ability to directly observe this consumption. Therefore, positivism is ideal for our research purpose.

3.3 Research approach

We are very much aware of our own subjectivity, and the variations in the way the world is perceived by different people. To combat this, and to maintain as much objectivity as possible when conducting this research, reasoning methods should be used. As Wilson (2010) confirms, this will not only encourage more validity within the data but will allow for a deeper and broader understanding of the results. There are three reasoning methods: *deductive*, *inductive* and *abductive* approaches (Wilson, 2010). Deduction begins with one or more statements to proceed to draw a conclusion (Wilson, 2010). While induction is the opposite to deduction. It begins with observations or data collection and finally proposes one or more theories in the end of the research process (Wilson, 2010). Abductive reasoning is a combination of an inductive and deductive approach, it allows researchers to jump back and forth between theories and hypotheses (Wilson, 2010). This thesis chose deductive reasoning since it provides "the possibility to measure

concepts quantitatively, to generalize research findings to a certain extent, and to explain causal relationships between concepts and variables" (Research-Methodology, 2019). Using deduction will help us to answer our research question.

The deductive process can be divided as required in the mechanism of the chosen method, hypotheses were deduced from initial theories, hypotheses were expressed operationally, then tested. The specific results of the investigation were closely examined, and, if necessary, the theories were altered based on the research findings (Saunders, Lewis & Thornhill 2015, p. 146-147). Following this guidance, the deductive element of the research will occur during the literature review, where different literature findings and theories are observed, noted and considered. This period of questioning is followed by the formulation of hypotheses. As a result, data will be collected to discover whether or not they support the hypotheses deduced from the literature review.

A major advantage of a deductive strategy is that its use allows findings to be generalized, if the limitations facilitate this, in order to construct hypotheses based around existing theories, giving a specific angle on which to orientate the research going forward (Wilson, 2010). In simple terms, the hypotheses are tested against the original theories in order to produce some kind of outcome that can be analyzed and interpreted accordingly. Moreover, during the literature review, we have noticed that under the topic of virtual celebrity, there is a wealth of information in the East but far less in the West. Therefore, our research will enable us to contribute to the existing theories.

3.4 Research Choices

Research methods in the social sciences filed can usually be broken down into two main categories – qualitative and quantitative (Alasuutari, Bickman and Brannen, 2008). However, in recent years, a third category, mixed method research (Creswell, 2003) has become more popular. Choosing a research methodology is based on the study objectives, the research questions, as well as the authors own preference and

professional judgement. After considering these factors, we found the quantitative research approach to be most suitable to our study.

When using a quantitative research approach, the researcher makes great use of postpositive claims for the creation of knowledge (for example; reducing theories to specific hypotheses and variables, cause and effect thinking), investigative techniques such as experiments and surveys. Such data collection techniques which use predefined measurements are capable of offering statistical information (Creswell, 2003). Quantitative research has been defined by Aliaga and Gunderson (2002) as an approach which researches social problems through the collection of numerical data that is later analyzed with methods based in mathematics. Mujis (2004) goes on to state that the specificity of these quantitative approaches is based on the assumption that social phenomena have the ability to be numerically expressed, quantified and analyzed.

The quantitative approach in general, is well suited to the testing of clearly and specifically defined hypotheses in an attempt to measure observable facts (Creswell, 2003). This thesis aims at describing how virtual celebrities are consumed in the East and West, which makes a quantitative approach the most suitable for measuring such facts.
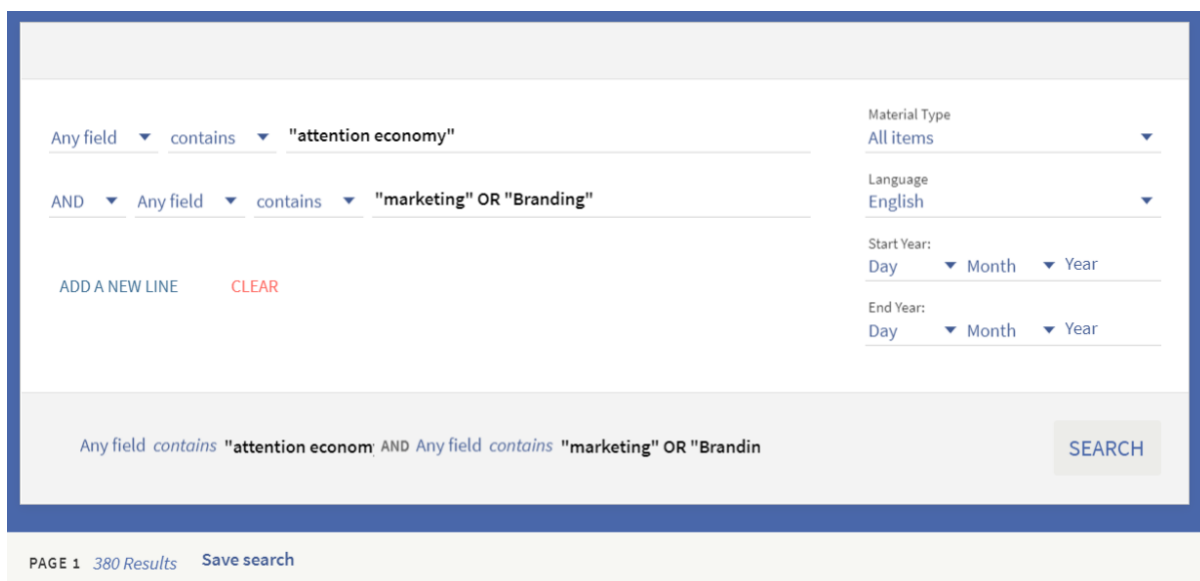
It is important to understand that this approach is not without its faults and weaknesses. It can be argued that the social reality that is to be investigated is often too complex to be reduced and simplified enough to form a handful of hypotheses. This means that, to some degree, quantitative researchers have a restricted perspective. Hence, it is of utmost importance for them to already hold a certain amount of knowledge on their chosen subject, in order for them to be able to formulate the most appropriate research questions (Creswell, 2003). Therefore, extra attention has been paid throughout the process of developing both the relevant research question and the hypotheses; an extensive literature review was completed to counteract the inherent downfalls of the quantitative method.

3.5 Techniques and Procedure

3.5.1 Method for doing literature review

We investigated academic papers and books in order to research how celebrity works in the current attention economy with relation to marketing or branding, as well as how it develops differently in the East and the West.

For the attention economy part, we have set up search strings as Figure 5 to see what has been written about the attention economy in relation to marketing and branding.

Figure 5 Example of Searching Strings

We sorted based on full paper, which resulted in 380 papers and books. In order to narrow down the literature range, we decided to further sort them which include "attention economy" in their titles or subjects. Then, we sorted based on titles, which resulted in twelve papers. Besides, we have also filtered the results based on subjects instead of titles, which resulted in one book and sixteen papers. Two papers appeared under both "titles" and "subjects" searching. Furthermore, we were only interested in peer-reviewed articles. Combining these criteria resulted finally in 2 books and 26 papers which we considered for further reading.

Complementary to the literature regarding celebrity, we used the same string principles (key words: celebrity economy, marketing, branding). We sorted based on full paper,

which resulted in 4641 papers and books. Then, we sorted based on titles, which resulted in five papers. We also sorted based on subjects where eight books and nine papers were found. In order to narrow down the literature range, we decided to consider books and papers which have "celebrity economy" in their titles or subjects, and only considered papers which have been peer-reviewed. After doing this selection, eight books and thirteen papers were selected for further reading.

Since our research question focuses on virtual celebrity, we did further search for the literature regarding virtual celebrity. There was no result found by using the keyword: virtual celebrity in the title or subjects. So, we searched more literature by using the keyword: "Hatsune Miku", we sorted based on full paper, which resulted in 39 papers. Then, we sorted based on titles, which resulted in six papers. We have also sorted based on abstracts where five papers were found. One paper has shown on both "titles" searching and "abstract" searching. Since the amount of literature was limited, we decided to read all 39 articles.

We did the same procedure for other virtual celebrities, such as Lil Miquela, Shudu, Kizuna AI. There were no academic paper related to them yet. For Gorillaz, there was one paper found, which we used. Also, since we were using the Copenhagen Business School's database, the resources are limited. Therefore, we went into the reference list of Hatsune Miku related papers, to get more literature resources. After doing this process, we successfully found 22 useful articles related to our research question.

3.5.2 Survey

Saunders et al. (2015) note that one of the main advantages of surveys is that it allows for the collection of a broad range of samples and provides it in a format suitable for later use in the statistical analysis. There are two main types of surveys: *Self-administered* and *Researcher-administered* (Saunders et al., 2009). The research conducted in this study was online and self-administered. The reasoning for this choice were fourfold. Firstly, it is a quick, inexpensive and easily accessible method of distribution for the survey, of which

the respondents were significantly geographically dispersed. Secondly, it removes the risk of any involuntary researcher influence on the participants or their answers. Thirdly, this format meant that participants can complete the survey at their own pace, at a time and place that was convenient for them. Finally, it removes the social and privacy concerns that participants sometimes experience during face-to-face interviews with a researcher, and, as such, significantly reduces the inclination for respondents to provide answers that are personally untrue, but perhaps more socially acceptable.

3.5.2.1 Question Design

According to Saunders et al. (2012), survey questions can usually be asked in the form of open or closed-ended questions. Open-ended questions normally are broader, from which more detailed answered could be collected. Typically, it is used to get insights of respondents (Saunders et al., 2012). Open-ended questions are usually applicable for qualitative research, because it could help to gather opinions. It is also used for inductive research, which could help to gather opinions and data first. In our thesis, literature review findings already offered insights into customer preferences regarding virtual celebrities. Our aim is to research the preferences rather than understanding why the preferences happened. Therefore, open-ended questions are not suitable. Moreover, open-ended questions are more for exploration, which is not the research purpose of ours, since we only want to test specific hypotheses.

Closed-ended questions are narrower, and it is very suitable to provide data for later quantitative research. Close-ended questions were chosen because it could help us test hypotheses developed from the literature review, and this question type is suitable for larger sample size, which could provide the generalizability of the whole population, therefore, close-ended questions were selected. Furthermore, a matrix question which is a type of closed-ended questions has been used in this survey. In contrast to litem-by-item questions, matrix questions ask participants to answer one or several row questions using the same set of column choices (Saunders et al, 2015). They are easier to complete and are thus less likely to deter respondents from completing the questions. In addition to utilizing the survey space more efficiently. Saunders et al. (2015) suggest that this

approach makes it easier to compare the responses given to different questions, which is beneficial in that it allowed the researchers of this paper to identify tendencies at a glance.

The researchers developed several hypotheses based on the findings of the literature review. In order to test these hypotheses, questions are needed. Since there is very limited research about virtual celebrities, and we failed to find any previously established psychological tests or surveys related to that, the survey questions were developed by ourselves. The following 28 questions in total are created by us:

For hypothesis 1: *Eastern consumers do not want virtual characters to have a deep level of opinion.* Seven questions were designed to present different levels of opinion, which can test this hypothesis:

1. *A virtual character can be interesting to me even if they only talk about the weather and similar topics suitable for pleasant small talk.*
2. *I think it could be interesting hearing a virtual character criticize/praise TV show.*
3. *Virtual characters who share their personal issues on social media would be more interesting to me.*
4. *I would be keen on hearing about a virtual character's opinion on the latest fashion trends.*
5. *I would prefer to follow virtual characters who are pioneers and go their own way*
6. *I would not mind virtual characters talking about politics.*
7. *I would be curious about virtual characters who take a clear stance on controversial topics such as LGBTQ, feminism, racism, climate change, etc.*

For hypothesis 2: *Misbehavior is less accepted by Eastern consumers than Western ones.* Similarly, six questions were designed to present different levels of misbehavior, which could indicate the tolerance level of Eastern and Western consumers.

1. *I want to see virtual characters who can also talk back and have an attitude.*

2. Virtual characters who always act nice and friendly are boring to me.

3. I would stop following virtual characters who use swear words

4. Weed-consuming virtual characters would be funny.

5. I would like to follow virtual characters who challenge rules within society.

6. Even for virtual characters, racism is a no-go, in my opinion.

For hypothesis 3: *Eastern consumers prefer virtual celebrities who look young*, we designed three questions to test if that is true.

1. I would prefer a virtual celebrity who dresses more mature.

2. I think it's fantastic that virtual celebrities won't get old and wrinkly.

3. I would love virtual celebrities that look cute and have big eyes.

For *hypothesis 4: Eastern consumers prefer appearance over talent*, there were four questions designed to test if it is true.

1. The outfit of the virtual celebrity is very important to me.

2. A virtual celebrity who is not good at anything, is not worth following, in my opinion.

3. As long as the virtual celebrity looks beautiful, I can overlook its lack of skills.

4. What would make a virtual celebrity interesting to me is if they are exceptionally smart or good at something.

For hypothesis 5: *Eastern consumers want to influence virtual celebrities, while Western consumers want to be influenced*, there were eight questions designed towards different level of interaction, to see whether consumers prefer to be influenced by virtual celebrities or influencing them.

1. It would be super cool if I could make the virtual celebrity do something (for example sing a song I composed, wear a T-Shirt I designed, etc.)

2. I would love to participate in deciding how the virtual celebrity looks.

3. I only think virtual celebrities are interesting, if I can participate in creating them

4. It is important to me that the virtual celebrity reacts to my comments on its social media posts.

5. I would purchase products endorsed by a virtual celebrity that I like.

6. A virtual celebrity should have a social media presence so I can follow it.

7. I would kill for getting the chance to attend a virtual celebrity's concert where I can meet it in real life.

8. I would like to follow a virtual celebrity who can inspire me in my choice of clothes, music, movies, attitudes, etc.

Besides, we added demographic questions regarding the nationality to finally compare responses from Eastern consumers and Western consumers. Other demographic questions, such as gender, age, etc. were asked for a better understanding of our sample.

3.5.2.2 Measurement

Once the content of the questionnaire had been designed in the form of matrix questions, other personal and factual questions were devised for this research, which resulted in two scales of measurement, the nominal and ordinal scales. The nominal scale relates to personal and factual questions including gender and age, while the ordinal scale was used for questions about the opinions of respondents (Bell, Bryman & Harley, 2018). The Likert scale was used for the ordinal scale. It allows participants to indicate the degree to which they agree with a set of statements that combine to make a multiple-indicator or item measure. In addition, Hair et al. (2009, p.371) argue that the Likert scale is unique since it is the only summation scale that utilizes a set of agreement/disagreement descriptors. The Likert scale has proved effective for measuring attitudes toward a subject and analyzing relationships between variables and has been extensively used in empirical research. Hair et al. (2009) describe the Likert scale as particularly suitable for research designs that use online methods or self-administered surveys to collect data. Therefore, Likert scale is chosen for our questionnaires.

Lietz (2010) suggest that the correct length for a scale is between five and seven response items. Moreover, Lietz (2010) indicates that the more response items there are, the more confusing they might be to participants. Therefore, among these recommended number of items, five-point scale causes less confusion for respondents compared to other scales. Hair et al. (2009) has also stated that five-point scale could potentially improve the response rate due to its simplicity, and it requires less time for respondents to think for the same question compared to using 7-point or 8-point scale. From the reason mentioned above, this research uses a five-point Likert scale comprising: 1 - strongly agree, 2 - somewhat agree, 3 - neither disagree or agree, 4 - somewhat disagree and 5 - strongly disagree.

3.5.2.3 Structure of the Survey

As the survey was being constructed, the layout and flow were considered, and the length of the survey took priority. Taking into account Saunders et al.'s (2015) assertion that surveys which take more than ten minutes to complete have a dropout rate of 40%, while five to then minute surveys see a dropout of just 17%, the survey was tested to ensure it took less than ten minutes to complete, with the average time being six minutes.

The survey (see Appendix 1) started with a short background introduction, which explained the purpose of the survey and provided background knowledge for respondents. Then it led to a judgement sampling question: Do you know or have been a fan of a virtual celebrity? If they answered "Yes", the respondents were directed to the multichoice question "Which of the following virtual celebrities do you know or are a fan of?". They also had the opportunity to write down virtual celebrities who are not listed in the options. Those who answered "No" moved straight to the hypothesis questions described in the previous section. The purpose of this question was to provide a characterization of respondents, allowing us to determine how many are already familiar with virtual celebrities and if yes, which one(s).

To ensure there was no bias related to the order of the questions, we listed them randomly, while a general evaluation of the survey, e.g. content, wording was conducted. We reviewed the survey several times to make sure the questions are understandable and related to our research question. Then we selected three participants from our network (three from Denmark and one from China) to take the test and provide feedbacks of these questions. There was no negative feedback received. All participants only received a draft version; therefore, their responses are not included in the final data.

This reviewing process by two researchers and four participants ensured that the respondents would be able to understand and answer the questions, as well as making sure that the questions were of value to the researchers (Saunders et al., 2015). Furthermore, this also ensured that all potential technical issues were removed before sending out the final survey.

3.5.2.4 Sampling

The survey was initiated online on 3 April 2019. Data was collected through snowball sampling via Facebook and social media distribution. Snowball sampling is a non-probability sampling method where research participants recruit other participants for a test or study (Hair et al., 2009). There are two types of this sampling method: non-probability sampling and probability sampling. The latter one provides better randomity, however, it requires more time to collect the same amount of data compared to non-probability method (Hair et al., 2009). Even though probability sampling would have been more beneficial for our study, the timeframe of this research prohibited the collection of this amount of data, the non-probability sampling method was deemed the optimal choice.

Snowball sampling method normally has a better response rate compared to probability sampling (Hair et al., 2009). By using this sampling method, we will be able to gather data more productively. We encouraged personal contacts from both Asia and Europe to share and distribute the online survey among friends and their networks. As these participants were from within our own networks, it provided a very good response rate.

Yet, we are also aware of the limitation of our sample size. Sample size should be designed based on the target population (Bell, Bryman & Harley, 2018), and the sample size is calculated based on margin of error (normally 5%) and confidence level (normally 95%) (Bell, Bryman & Harley, 2018). For example, in order to analyze the Western and Eastern groups, just for the China part, there are around 1.3 billion people in the China, by choosing a margin of error of 5% and a confidence level of 95%, resulting in 1300 Chinese respondents needed. As we mentioned before, this was unachievable for us due to the limited research period. Therefore, we calculated our sample size by following the sample size requirement of later data analysis.

Since we need to run a factor analysis and t-Test, t-Test requires a minimum sample size of 30 (Mankiewicz, 2004), while factor analysis requires ten times the number of variables (Cattell, 1983). Since we have 28 questions, our sample size goal is 280 respondents. However, we do acknowledge that the weaknesses associated with the chosen sampling method may have affected the survey results. A total of 327 people responded, which exceeded the sample size goal of 280 respondents.

3.6 Data analysis methodology

This section will present a detailed report on the various methods used to analyze the collected data and the reasons for choosing the said methods, while the next chapter talks about the data analysis process and the exact manner in which the data is handled and its results. In this thesis, we have used the Kaiser-Meyer-Olkin (KMO) test, Factor Analysis, Reliability test - Cronbach Alpha Coefficient, and Independent Samples t-Test to help answering the research question.

3.6.1 Kaiser-Meyer-Olkin (KMO)

In the course of the study, Kaiser-Meyer-Olkin (KMO) will be studied to determine the competency of the sample and the reciprocity amongst the variables. The condition is that in order to be classified as substantial, the KMO must be more than 0.5 and the p-

value for Bartlett's test of sphericity score should be less than 0.05. Field (2005) posits that a thorough check of the factor loadings needs to be conducted to ensure the exclusion of items that have a loading value below 0.6, which is one of the prerequisites of factory analysis.

3.6.2 Factor Analysis

As per Cattell (1983), factor analysis is a statistical method employed for defining variations seen amongst correlated variables with regard to the small amount of unobserved variables better known as factors. For example, it is highly probable for changes in nine observed variables to mirror the changes in three underlying or unobserved variables. Such linked variations occurring due to underlying variables are sought via factor analysis. Whereas the observed variables are adapted as linear combinations of potential factors.

The theory driving factor analytic method reads that any acquired information pertaining to interdependencies amongst observed variables has the potential to be used later to lessen the set of variables seen in a dataset (Widaman & McDonald, 1987). It comes in handy while managing data sets with numerous observed variables that in turn point to a lesser number of unobserved latent variables. The design of our survey is based on five different hypotheses. Hence, determining the effectiveness of the questionnaire and finding latent variables becomes easier with factor analysis. The result of which is then used in conducting the Independent Sample t-Test, as opposed to running it on 28 questions. The dimensions of the factors are expected to reduce post factor analysis, thus allowing for an accurate testing.

Widaman and McDonald (1987) further posits that it is a common interdependency technique used in cases where the relevant variables display ordered interdependence and the aim is to ascertain the latent factors that gives rise to the said commonality. This makes it a popular choice in the field of psychometrics, biology, product management,

personality theories, marketing, finance, and operations research. As our thesis is within marketing, it makes sense to use factor analysis.

3.6.3 Reliability test - Cronbach Alpha Coefficient

Reliability and internal consistency of the test items or a set of scale is ascertained using Cronbach's alpha. Simply put the consistency of any measurement is denoted by its reliability and one of the most efficient methods of measuring the power of that consistency is Cronbach's Alpha (yin, 2008). Reliability tests were conducted both before and after the factor analysis to guarantee the stability and consistency of the collected data for each construct. This helps researchers avoid erroneous and unreliable data while working.

Before the factor analysis, we used Cronbach's Alpha to verify the overall consistency of the responses. Cronbach's Alpha was ascertained as the most commonly used measure for internal consistency through a survey. As we used a survey to collect data, this is necessary to verify its internal consistency. Furthermore, it is used to determine the reliability of the questions which are measured by Likert scales (Hair et al., 2009). Since our survey applies the Likert Scale, checking data reliability is imperative for us.

After the factor analysis, we applied Cronbach's Alpha again to test the reliability of each factor. The survey data was collected with the aim to mirror the chosen literature and test the hypotheses. Hence, as discussed earlier, every question set has its own characteristic hypothetical construct. It is imperative to determine the reliability of each factor post the factor analysis. Once the factors pass the reliability test, the results generated from factor analysis are used for the subsequent Independent Sample t-Test.

3.6.4 Independent Samples t-Test

The main purpose of this paper is to test whether two groups, to be more specific Eastern and Western consumers, are significantly different in the way they consume virtual

celebrities. Therefore, Independent Samples t-Test is considered as the suitable approach, since it tests whether two groups are significantly different.

"Student' t-Test is a statistical hypothesis state under which the test statistic represents the Student's t-distribution under the null-hypothesis" (Mankiewicz 2004, p.158). Two of the most common Student's t-tests are (Mankiewicz, 2004):

1. One-sample location test: used to determine if the mean of a population's value is specified in the null hypothesis

2. Two-sample location test: to ascertain that the means of two populations are equal.

The two-sample location test is also known as Independent Samples t-Test. It is most commonly applied when statistical groups pertaining to the two latent samples under consideration do not overlap.

When the pollution mean of both groups is equal – even though the two groups are unrelated – the null-hypothesis is proven.

$$H_0: u1 = u2$$

When the means become unequal, the null hypothesis can be dismissed, and the alternative hypothesis can be approved.

$$H_A: u1 \neq u2$$

In order to achieve this, setting a significance level that makes it possible to either reject or accept the alternative hypothesis becomes imperative. This is also called as alpha and generally valued at 0.05. This value was used to decide whether to reject or accept our hypotheses.

The basic requirement of running an Independent Samples t-Test are two independent and categorical groups that stand for the independent variable, better known as the unrelated, unpaired, or independent groups. They denote the groups wherein the participants for each group are different. More often than not, researchers use this to

study the dissimilarities amongst individuals, this translated to the fact that of two groups are being studied, an individual belonging to one group cannot also be a part of the other. In our research, we use nationality to distinguish participants, so in our test, one individual can only belong to one group.

To conclude, the Independent Samples t-Test will help ascertain the difference between the manner in which Eastern and Western consumers consume virtual celebrities.

3.7 Ethics

In this thesis, ethical concerns have been considered as a significant part of the research, the main ethical consideration has been given to the survey respondents. Consent on allowing us to use their response as research data had to be given in the beginning of the survey, where in the beginning of the survey, we have stated that this survey will be used for research purpose and the proceeding to the question part means consenting it. Therefore, all participants were informed about the data collection, and had the opportunity to quit the survey. Furthermore, this survey is designed as anonymous, therefore, there is no risk of violation on personal data.

3.8 Validity and Reliability

The validity and reliability of the research were evaluated in order to assess the quality of the research. Bell, Bryman and Harley (2018) advise that reliability relates to whether the results of the study are repeatable, which can also be referred to as 'the consistency of a measure of a concept. Meanwhile, validity is closely related to reliability and concerns the integrity of the generated conclusions, or what Bell et al. (2018) suggest refers to whether or not the indicator(s) that have been created to measure the concept do so effectively. Therefore, validity and reliability are significant for our study.

3.8.1 Internal validity

Internal validity refers to the confidence of cause and effect relationship in a study. Yet, we did not test any causality or correlation between our two items: consumer behavior of virtual celebrities and cultural background. We only measure consumer preferences. Therefore, internal validity is not relevant for this thesis.

3.8.2 Survey Validity

According to Hair et al.'s (2009) research, it is necessary to make sure that the questions accurately reflect the content of the concept, or in other words, that they measure the complete construct. Factor analysis can be used to confirm or negate the hypotheses or survey questions structure, as well as suggest or discover new structure (Cattell, 1983). For the sake of verifying the validity of our survey, factor analysis was conducted, and its results show that the different questions which we believe measure the same construct, are most likely doing so.

3.8.3 Reliability

Reliability normally can be considered as consistency, which means that if the same results are consistently found when the study is replicated, then the researchers can claim that their research results are reliable (Bell et al., 2018). Internal reliability and external reliability are regarded as the two common types of reliability. "External reliability refers to the consistency of a procedure from one occasion to another. For example, an experiment performed on two different days, in different laboratories, or by different researchers should still produce similar results" (psychology hub, 2019). This thesis only carried out one data collection, and all respondents answered the same questionnaire. Therefore, external reliability could not be claimed, which is why we will put focus on the internal reliability in this section.

Internal reliability normally means that if there is a consistency of all the items measured in the study (Bell et al., 2018). Applying this to our study, we needed to make sure that the questions on the survey should be testing the same thing as our research questions. The aim of our thesis was to research how virtual celebrities are consumed in the East

and West. As literature suggested differences in consumer behavior between Eastern and Western consumers, our research has strictly stuck to our research aim. And our hypotheses and data collection were all based on the literature. Therefore, if other researchers use the same questionnaire and same sampling method, they should receive the same conclusion of our research question.

3.9 Generalization

Speaking in broad terms, generalizing can be described as the act of obtaining a general concept, statement, or conclusion from particular cases. Generalization occurs in research when a conclusion is drawn about a population after having examined only a segment of that population through the implementation of a sampling technique. Given the nature of the process of generalization, it is universally recognized as a quality standard for studies with quantitative designs. Moreover, scholars such as Kerlinger and Lee (2000) have pointed out that the degree to which a quantitative study's findings are generalizable represents a fundamental indicator of its quality.

Firestone's (1993) taxonomy presents several generalizability models and, in this way, can serve as a valuable reference point when examining the generalizations made in research (whether qualitative or quantitative). The *classical model*, which is also referred to as statistical generalization is concerned with drawing inferences about specific populations through sampling. *Analytic generalization* is used not only in quantitative designs, but also in qualitative designs. Finally, *case-to-case translation* is commonly referred to as transferability. In the case of the first model, this is a standard feature of quantitative research designs; while in the case of analytic generalization and case-to-case translation, the way in which these models engage with the abstract, the general, and the specific means that they can address the seemingly paradoxical features of qualitative designs (Schwandt, 1997). With these considerations in mind, the present thesis utilizes the classical generalizability model.

The starting point of statistical generalization in quantitative research is to specify the target population about which a generalization will be drawn (Lincoln and Guba, 1985).

This population can be defined as the set of all entities, individuals, or – more abstractly – members that satisfy researcher-determined criteria, where these criteria are informed by the aims and objectives of the study itself. In our thesis, we have collected data from China, Singapore, Germany, Denmark, Norway, United Kingdom, Italy, Austria, Netherlands, Finland, Czech Republic, Sweden, Spain, and Slovenia. The variety of countries may contribute to the generalizability of our results to represent the overall population in the East and the West. However, there are only two Eastern countries, and not every European country is included. Hence, our results might be too weak to be generalized to the population.

In this thesis, the researcher sought to recruit members from the target population in such a way as to maximize the likelihood that the resultant sample would be representative. According to Polit (2010), the most effective way in which to achieve representativeness is to employ a probability sampling technique, since techniques of this kind (e.g., simple random sampling) ensure that all members of a population have an equivalent probability of being included in the sample. With this in mind, the fact that a non-probability sampling technique was utilized in this thesis (namely, snowball sampling) may have undermined the generalizability of the study's results, findings, and conclusions.

Moreover, since the survey was undertaken for a specific, and pre-determined, length of time, our study is cross-sectional (Saunders et al., 2012). As such, this study should not be used as a reflection of the truth in the long term. It is more accurate in the short term providing a general overview of how virtual celebrities are consumed currently. Moreover, it is not possible to generalize the results to apply to another period since field evolution is ongoing. Our notes on the generalizability of this study, should be kept in mind when reading the subsequent chapters of this research paper.

4. DATA ANALYSIS PROCESS and RESULTS

The data analysis methodology and the subsequent result is presented in the subsequent paragraphs. The steps of data handling were as follows, firstly the data was imported to SPSS. Secondly, missing data was managed, followed by a detailed outline of the age, gender, awareness of virtual celebrities, and nationality of the respondents to gain an outline of the collected data. In the next step a presentation of virtual celebrities preferred by the respondents was made to better understand their characteristics. The next step was to ascertain the regularity of the data followed by the reliability test. In the sixth step, SPSS was used to conduct an exploratory factor analysis followed by Independent Sample t-Tests to test the hypotheses.

4.1 Importing Data

The free software Qualtrics was selected to collect the primary quantitative data, which was chosen as it automatically codes the Likert scale questions and can convert them to SAV files, which is the most relevant format for using data in the statistical software IBM SPSS Statistics Data Editor. Each question was coded using numbers and the Likert Scales were coded from 1 to 5, where 1 was 'Strongly Agree' and 5 was 'Strongly Disagree'.

After importing the data, we have reversed the scores of negative worded questions 1, 5, 17, 19 and 25. In our survey, we have both positively and negatively worded items to avoid the bias of participants towards positive or negative wordings, and most of questions were positively worded, e.g. "I would like", "I would prefer", or "it is interesting". However, questions like question 5: "I would mind virtual celebrity talking about politics" are negatively worded, which means that if a respondent chooses "2 – somewhat agree", his or her response represents that he or she minds virtual celebrity talking about politics. This would be "4 – somewhat disagree", if the question was phrased as "I would like virtual celebrity talking about politics". Therefore, the scores of questions 1, 5, 17, 19, 25 have been reversed.

For some questions, content in the question requires the scale to be flipped, this situation typically happened in the hypothesis 5: *Eastern consumers want to influence virtual celebrities, while Western consumers want to be influenced*. The questions for test this hypothesis have been divided into two groups: influenced and influencing, which are the opposite towards each other. In another word, if a respondent chooses "2 – somewhat agree" for "I want to be influenced by the virtual celebrity", then this response also can be interpreted as "4 – somewhat agree" to "I want to influence the virtual celebrity". Therefore, the scale of question 14, 22, 26, 28 which belong to "being influenced by virtual celerity", has been flipped, when they are converted to "I want to influence virtual celebrity" type of measurement.

4.2 Handling Missing Data

Hair et al. (2009) proposes that missing data can be defined as data that is incomplete and can be either because of incomplete answers by the participants or absent case values. Missing data is handled with SPSS and seeking missing values in raw data is one of the most essential prerequisites of data analysis (Field, 2005). This is performed to eliminate the chances of unstable results.

Field (2005) opines that missing values can adversely affect the analysis results such as model fit results. Once the data is imported in SPSS, a missing value function check is performed to determine absent values in the data. Missing data was reported only in questions pertaining to the demographics of the respondents. Nevertheless, nationality is one of the most essential questions for the testing of the hypotheses and it cannot be done in case of missing data in this field. In order to avoid this, the missing values were eliminated from the set, which is also a method to handle missing data in a survey (Hair et al., 2009). As a result, eighteen survey responses were deleted from the database due to empty nationality fields. Three respondents who are from Argentina have been deleted as well (see Figure 6).
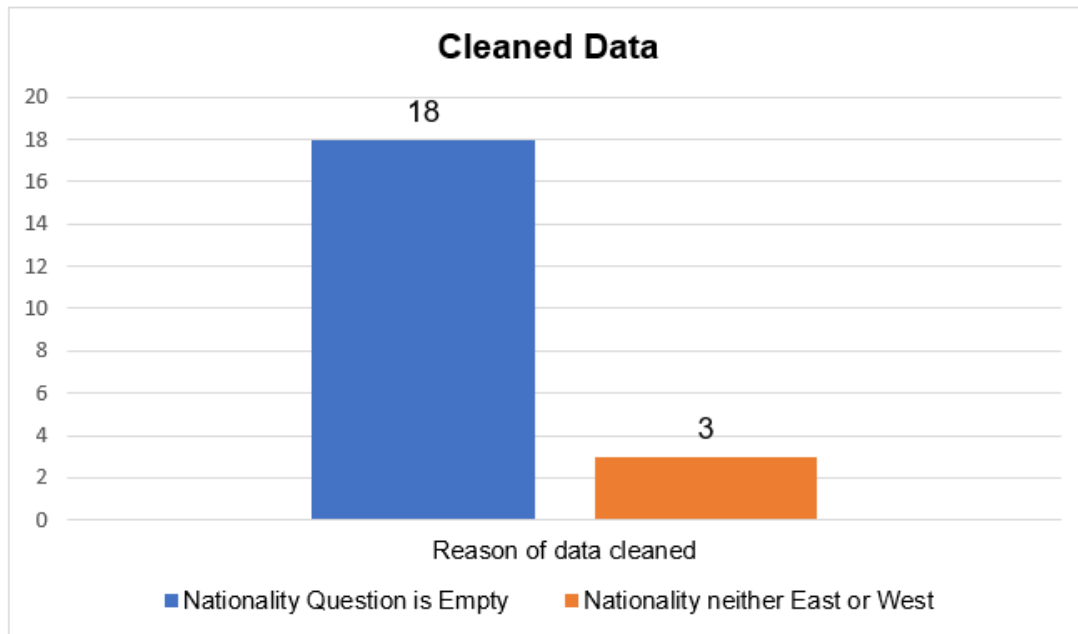
Figure 6 Reasons of Data Cleaned

4.3 Characteristic of respondents

One of the most preferred methods of elaborating on the respondent's information has been using demographic characteristics. Out of a total of 327 respondents, 306 are valid with clean data. The demographic profile of these 306 respondents has been described in detail in this section, wherein Table 2 lists the number of items utilized during characteristic analysis.

Table 2 Items used in analyzing characteristic of respondents

Items	
1. Age	
2. Gender	
3. Nationality	Total number of respondents 306
4. Current residency country	
5. Do you know, or have you ever been a fan of a virtual celebrity	

4.3.1 Age

As shown in Figure 7, out of the 306 respondents, 180 (58.8%) fall in the "18-24 years" group and make up the majority of the respondents. The second biggest group has 90 respondents (29.4%) within the age group of "25-34 years". The remaining eleven respondents fell into the group "under 18 years", accounting for 3.6% of the total respondents. With 24 respondents in the age group of "35-44 years" accounting for 7.8% of the total respondents. Lastly, one respondent belongs to the age group "45-54 years". Despite the division of the respondents into seven age groups, no one fell in the age group of more than 54 years.
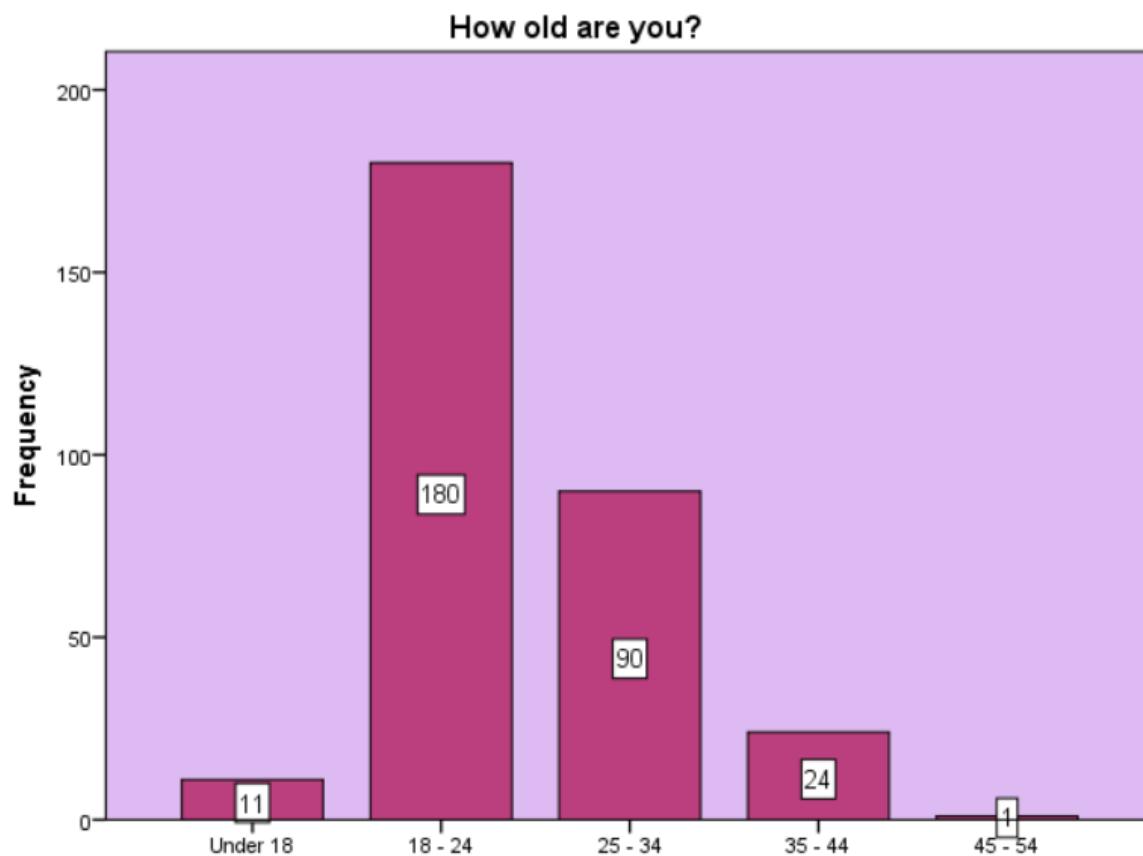
Figure 7 Age of the Respondents

To conclude, it can be said that a majority of our respondents belong to the young generation (88.2%), with a total of 270 respondents between the ages of 18 to 34. It is to be noted that our sampling method is snowball sampling, which means that we encourage

respondents to ask people who they think are relevant to answer our survey. From the age result, it could be assumed that age group of 18 to 34 was considered to be "relevant" by most of our respondents. Or it could be assumed that since we started the survey with this age group, therefore, respondents just mostly know people of a similar age.

This result could also be interpreted that the young generation is more interested in virtual celebrities. In the literature review section, we find out that young people tend to follow celebrities more than older generation (Bell, 2010). Furthermore, they are also more likely to be influenced by celebrities (Rojek, 2001). this conclusion can also be attributed to the fact that the young generation has a higher acceptance for new technology and are not unfamiliar with CGIs (Jeffrey, 2017).

4.3.2 Gender

Figure 8 shows that out of the 306 respondents, in total, 141 (46.08%) are male, while 165 (53.92%) are female. In the East, 113 respondents (52%) are female, and 104 respondents (48%) are male. In the West, 52 respondents (58%) are female, and 37 respondents (42%) are male. Therefore, there is not a huge gender disparity in our data, as was apparent from the literature review. Based on the previous research, no significant gender difference was found, which might change when it came to different industries, e.g. fashion industry might have more female followers, while sports industry may have more male followers. Nevertheless, after running an Independent Samples t-Test on these two groups (see the result in Appendix 2), our survey reports no significant difference between them.
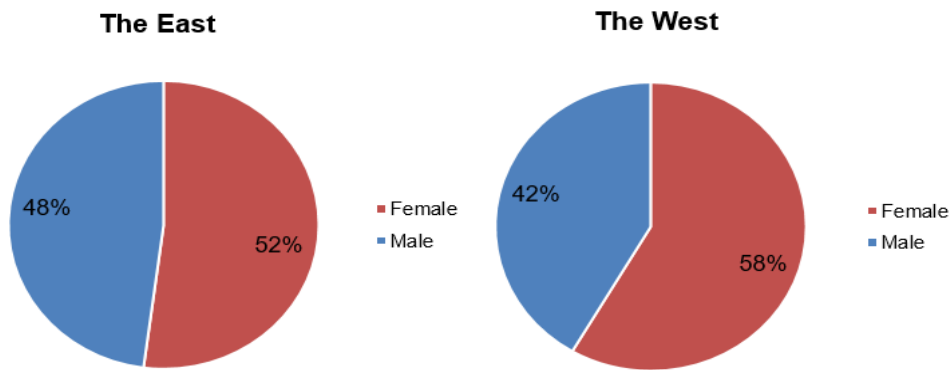
Figure 8 Gender of Respondents

4.3.3 Nationality

We have also taken a thorough look at where the respondents are from, which is very crucial to answer our research question. Figure 9 shows that a majority of the 306 respondents (209, 68.3%) are Chinese. The rest of the respondents are from Germany
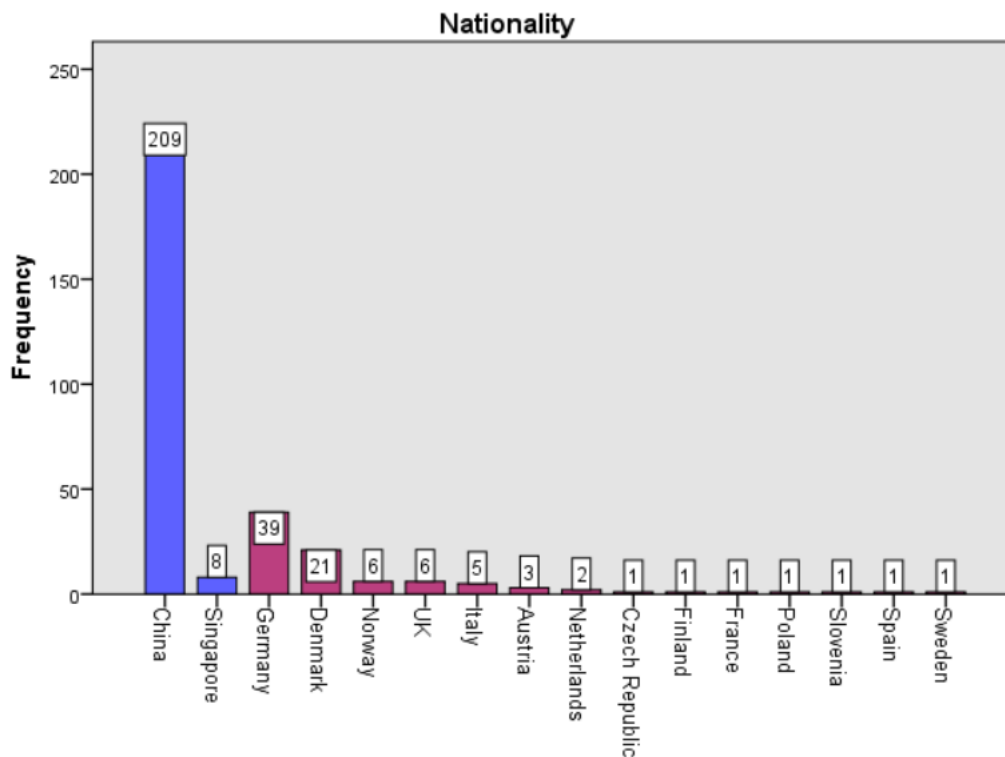
Figure 9 Nationalities of Respondents

(12.7%), Denmark (6.9%), and Singapore (2.6 %), and other European countries (9.5%). One of the major factors for such a huge number of respondents from China is when snowballing occurs in a country like China with a population of 1.4 billion, it occurs at a much faster rate. For example, during the data collection process, we both reached out to our high school classmates, the one with Chinese background has 88 high school classmates while the one with German background only has 20 high school classmates. This also explains the reason why Chinese sample space is big. However, we do argue that the data collected was not perfect and it would have been more balanced if the respondents were distributed more evenly.

We further coded these nationalities into two groups: The East and the West (see Figure 10). The East includes respondents from China and Singapore (217 respondents), while The West includes all western countries (89 respondents), see Figure 10. This process will come into play during the Independent Sample t-Test, which will further test our hypotheses and help answer the research question.
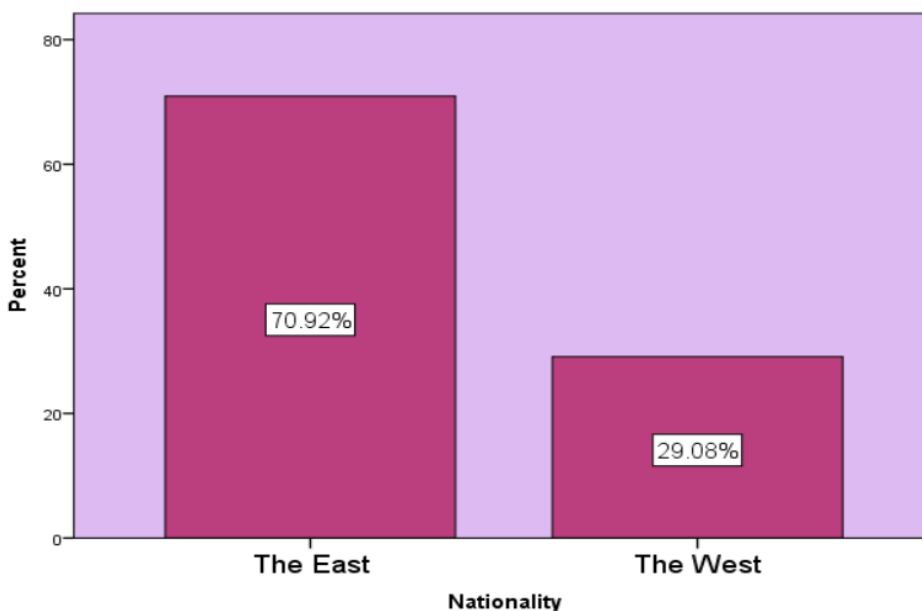
Figure 10 The East versus the West

63

4.3.4. Residency

We have also looked at where respondents are currently residing. 178 respondents are in China, 8 in Singapore. The rest of respondents are currently living in Europe or other Western countries, e.g. U.S.A and Canada. However, this question is just a supplementary question helping us understand respondents better, it will not be used as grouping criteria.
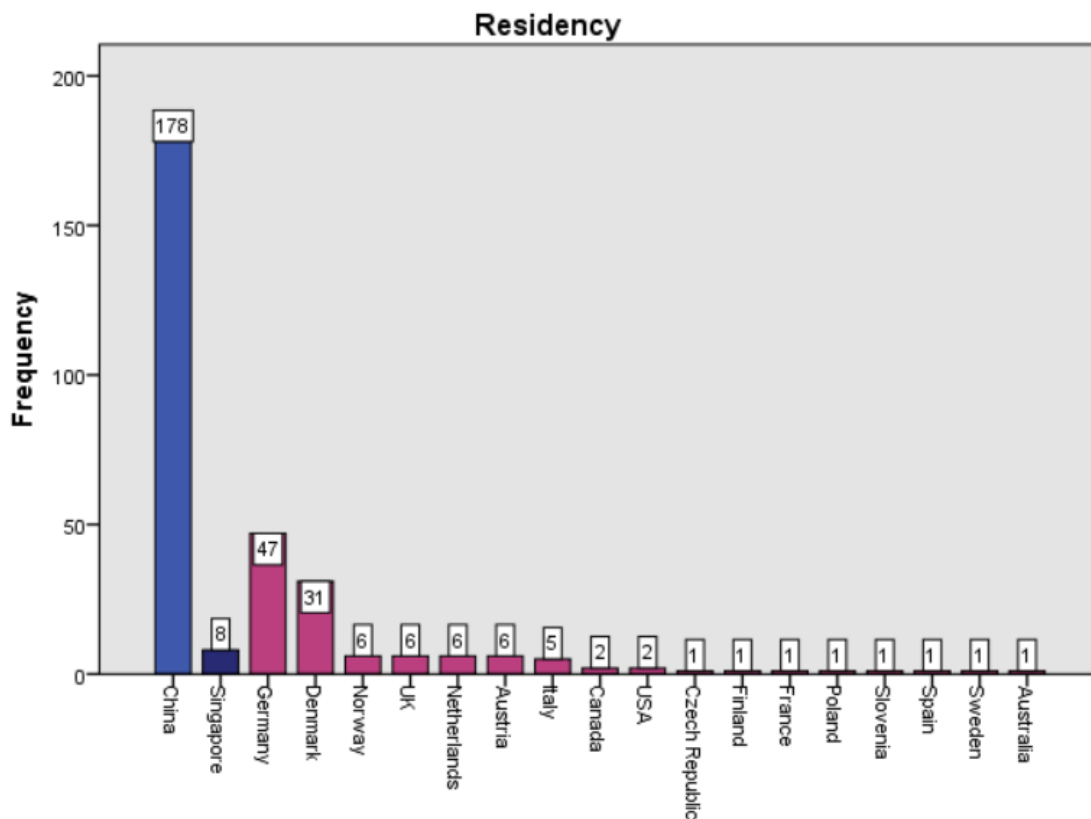
Figure 11 Residency of Respondents

4.3.5 Awareness of virtual celebrity

In the survey, we have also included questions pertaining to whether the respondent is aware of virtual celebrity, and if yes, who do they know. As Figure 12 shows, 186 respondents, forming 60.8% of the total respondents know or are a fan of virtual celebrities, the remaining 120 respondents are not aware of any virtual celebrities. From

this we can say that most of the young generation in the age group of 18 to 34 years knows a virtual celebrity.

Do you know or have you ever been a fan of a vitrual celebrity?
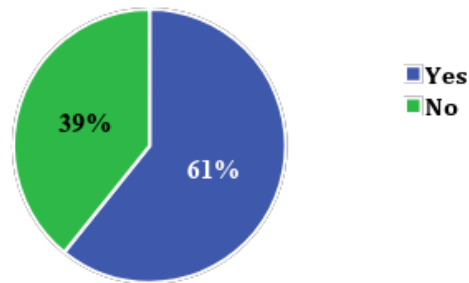
Figure 12 "Yes" or "No" of Respondents

Furthermore, analyzing the respondents who answered in "Yes" or "No", how many Eastern respondents answered yes or no, and how many Western respondents answered yes or no. Figure 13 shows the result of the above statement. In the East part, 128 (59%) of them are a fan of a virtual celebrity, while 89 (41%) of them are not. In the West part, 58 (65.2%) of them are a fan of a virtual celebrity, while 31 (34.8%) of them are not. This result can be interpreted as the ratios of the East and West are comparable.
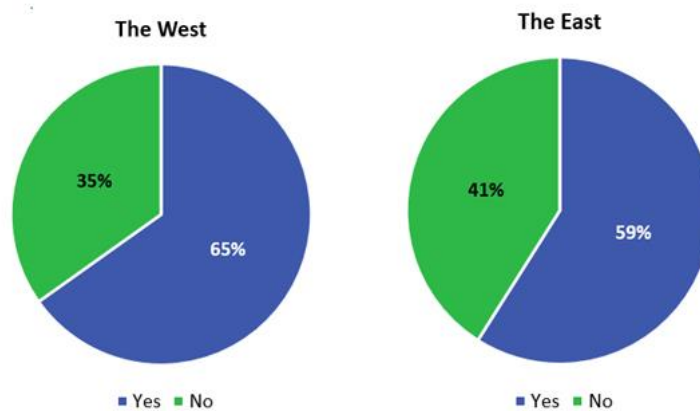
Figure 13 "Yes" and "No" in the East and West

4.3.6 Virtual celebrities liked by respondent

In the survey, we listed several virtual celebrities from the literature review to get an overview of the popularity of the virtual celebrities. Among all the virtual celebrities: Shudu, Gorillaz, Hatsune Miku, Lil Miquela, Kizuna A.I., Hatsune Miku are the most popular ones amongst the respondents who answered "Yes" to the question "Do you know, or have you ever been a fan of a virtual celebrity?". 114 respondents, which is 61%, answered that they know Hatsune or are a fan of hers, while 52 respondents (35%) are a fan or they know Gorillaz. Furthermore, Figure 14 shows that in the East, the most known virtual celebrity is Hatsune Miku, 107 (84%) and Eastern respondents have chosen her, while in the West, Gorillaz is the most popular amongst the respondents, with 47 (81%) respondents choosing Gorillaz. This proves that virtual celebrities are more domestic, and no virtual celebrity is popular world-wide yet and respondents from the East and the West have their own preferred virtual celebrities.
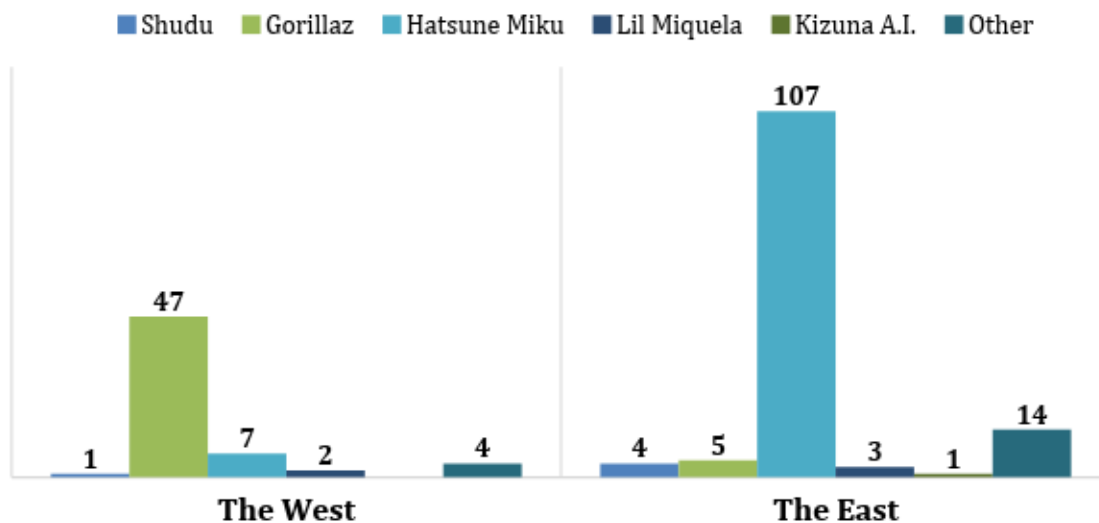
Figure 14 Virtual Characters Liked by Respondents

4.4 Reliability - Cronbach's Alpha Coefficient

The following is a universally accepted rule used for defining the internal consistency using Cronbach's alpha:

$0.9 \leq \alpha$ is Excellent, $0.8 \leq \alpha < 0.9$ is Good, $0.7 \leq \alpha < 0.8$ is Acceptable, $0.6 \leq \alpha < 0.7$ is Questionable, $0.5 \leq \alpha < 0.6$ is Poor, $\alpha < 0.5$ is unacceptable, to conclude, the higher the better (Cortina, 1993).

The reliability test was run on the entirety of the data collected via 28 questions, with the Cronbach's Alpha coefficient at 0.822. This value is more than 0.8, hence a reliability coefficient of more than .08 is considered to be good for a majority of social science researches.

Case Processing Summary

		N	%
Cases	Valid	306	100.0
	Excluded[a]	0	.0
	Total	306	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.822	28

Figure 15 Results of Cronbach's Alpha

The Cronbach's Alpha Coefficient has also been tested for factors generated from factor analysis that will be presented after factor analysis.

4.5 Factor Analysis

The instability of the observed and correlated variable with regard to a possibly lower number of latent variables called factors is described using factor analysis. We have designed 28 questions corresponding to five hypotheses and five expected "factors", namely opinion, misbehavior, appearance, talent, and interaction. Prior to running the factor analysis, we expect the result to show that 28 questions will belong to the factors that we have designed. Nevertheless, in case of varying result, we will look into the

reason, abandon hypotheses which cannot be tested, and adjust our t-test questions accordingly.

The factor analysis was run via SPSS, as mentioned before, and in order to evaluate the factor structure of each scale, in this study, we will first conduct several exploratory value scales (with principle component analysis). Here we use a VARIMAX method to allow for the possibility that the emerging factors might themselves be corrected.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.727
Bartlett's Test of Sphericity	Approx. Chi-Square	7658.034
	df	378
	Sig.	.000

Figure 16 Results of KMO and Bartlett's Test

The KMO test aims to measure the sampling adequacy for analysis. The Kaiser-Mayer-Oklin (KMO) Value in Figure 16 is 0.727, which is greater than 0.6, thus satisfying the requirement of factor analysis, which means that the data can be used for factor analysis. The data was then tested by Bartlett Sphericity, the significance value of 0.000 (P<0.05) indicates that the study data was suitable for factor analysis as well.

The 28 survey questions have been divided into seven components through factor analysis and the extent to which the variance can be explained by each component is presented in Appendix 3. Figure 17 is a part of the Total Variance Explained table and shows that the cumulative variance explained rate value is 75.141% (>50%), wherein the degree of explanation is high. The seven principal components that explain 19.004%, 14.554%, 13.735%, 11.678%, 7.517%, 4.418%, and 4.237% of the variance respectively. These seven factors (components) are generated from the factor analysis, we will present the results of Rotated Component Matrix[a], indicating which questions are included in which factor.

Components	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5.321	19.004	19.004	5.321	19.004	19.004	4.325
2	4.075	14.554	33.558	4.075	14.554	33.558	4.071
3	3.846	13.735	47.292	3.846	13.735	47.292	3.450
4	3.270	11.678	58.970	3.270	11.678	58.970	2.950
5	2.105	7.517	66.487	2.105	7.517	66.487	2.417
6	1.237	4.418	70.905	1.237	4.418	70.905	2.143
7	1.186	4.237	75.141	1.186	4.237	75.141	1.685
8	.818	2.920	78.061				
…	…	…	…				
28	.026	.093	100.000				

Figure 17 Total Variance Explained

4.5.1 Factor 1

Survey Questions	Factor						
	1	2	3	4	5	6	7
03- It would be super cool if I could make the virtual celebrity do something (for example sing a song I composed, wear a T-Shirt I designed, etc.)	.903						
07- I would love to participate in deciding how the virtual celebrity looks.	.788						
12- It is important to me that the virtual celebrity reacts to my comments on its social media posts.	.763						
14- A virtual celebrity should have a social media presence so I can follow it.	.858						
18- I only think virtual celebrities are interesting, if I can participate in creating them	.832						
22- I would purchase products endorsed by a virtual celebrity that I like.	.865						

Figure 18 Rotated Component Matrix[a] for factor 1

Figure 18 is the rotated component Matrix of factor 1, which also presents the questions were expected to fall into this factor. Each question is above 0.4 and does not cross other

factors. Hence, it can be concluded that Question 3, 7, 12, 14,18, 22 belong to factor 1. As per the previous chapters that present our questionnaire design, it is not hard to see that these six questions are all designed under the theme of "interaction" to test *hypothesis 5: Eastern consumers want to influence virtual celebrities, while Western consumers want to be influenced.* These six questions include different ways of interaction with virtual celebrities and can be applied to Independent Samples t-Test. Therefore, factor 1 has proven the validity of our survey design and will continue to be used for the later t-test for hypothesis 5.

4.5.2 Factor 2

Survey Questions	Factor						
	1	2	3	4	5	6	7
05- I would not mind virtual celebrities talking about politics.		.736					
09-I would be keen on hearing about a virtual celebrity's opinion on the latest fashion trends.		.914					
13- I would be curious about virtual celebrities who take a clear stance on controversial topics such as LGBTQ, feminism, racism, climate change, etc.		.652					
17- Even for virtual celebrities, racism is a no-go, in my opinion.		.894					
24-I would prefer to follow virtual celebrities who are pioneers and go their own way		.836					
27- Virtual celebrities who share their personal issues on social media would be more interesting to me.		.822					

Figure 19 Rotated Component Matrix[a] for factor 2

Figure 19 is the rotated component Matrix of factor 2, which also presents the questions for this factor. Each question is above 0.4 and does not cross other factors. Hence, it can be concluded that Question 5, 9, 13, 17, 24,27 belong to factor 2. According to the previous chapter that discusses our questionnaire design, it is not hard to see that question 5, 9, 13, 24, 27 are all designed under the theme "opinions" to test *hypothesis 1: Eastern consumers do not want virtual characters to have a deep level of opinion.*

Question 17 was designed under the theme "misbehavior", because racism is illegal and considered to be a misbehavior in most Western and Eastern countries. However, racism itself can also be considered as an "opinion", especially on the way it is asked; therefore, it is understandable that the respondents are more concerned about opinion than misbehavior. Nevertheless, as mentioned before, racism is an opinion, therefore, this question helps the analysis of the opinion.

To conclude, we can say that these six questions include different levels or types of opinions with virtual celebrities and will be valid to be applied for Independent Samples t-Test. Therefore, factor 2 has proven the validity of our survey design and will continue to be used for the t-test of hypothesis 1 at a later stage.

4.5.3 Factor 3

Survey Questions	Factor						
	1	2	3	4	5	6	7
02- I would like to follow virtual celebrities who challenge rules within society.			.851				
06- Weed-consuming virtual celebrities would be funny.			.761				
10- I want to see virtual celebrities who can also talk back and have an attitude.			.889				
19- Virtual celebrities who always act nice and friendly are boring to me.			.840				
25- I would stop following virtual celebrities who use swear words.			.762				

Figure 20 Rotated Component Matrix^a for factor 3

Figure 20 is the rotated component Matrix of factor 3, which also represents the questions related to this factor. Each question is above 0.4 and does not cross other factors; therefore, we could conclude that Question 2, 6, 19, 25, 24,27 belong to factor 3. According to the previous chapter which presents our questionnaire design, it is not hard to see that question 2, 6, 19, 25, 24,27 are all designed under the theme "misbehavior" to test *hypothesis 2: Misbehavior is less accepted by Eastern consumers than Western*

ones. These five questions include different levels or types of misbehavior and can be applied to Independent Samples t-Test. Therefore, this factor 3 has proven the validity of our survey design and this factor will continue to be used for t-test of hypothesis 2 at a later stage.

4.5.4 Factor 4

Survey Questions	Factor						
	1	2	3	4	5	6	7
1- A virtual celebrity who is not good at anything, is not worth following, in my opinion.				.927			
4- As long as the virtual celebrity looks beautiful, I can overlook its lack of skills.				.689		.539	
16- An exceptionally smart virtual celebrity or one who is really good at something would fascinate me.				.913			
23- The outfit of the virtual celebrity is very important to me.				.691		.514	

Figure 21 Rotated Component Matrix[a] for factor 4

Figure 21 is the rotated component Matrix of factor 4, which also represents the questions related to this factor. Question 1 and 16 are above 0.4 and do not cross other factors; therefore, we can conclude that Question 1 and 16 belong to factor 4. According to the previous chapter which discusses our questionnaire design, it is not hard to see that question 1, 4, 16, 23 are all designed under the theme "appearance" to test *hypothesis 4: Eastern consumers prefer appearance over talent.*

However, question 4 and 23 cross-loaded onto the fourth and sixth component (with factors loading above 0.4). Hence, they will be excluded from the factor (Cattell,1983). Question 4 and 23 were designed under the theme "appearance", to test the preference of respondents between talent and appearance. However, the question is not testable if there are two variables in one question, because one question cannot test two different things (Cattell,1983). Question 4 talks about both appearance and skill, which denotes

that this question cross-loaded into two factors. Question 23 only mentions outfit, which is one figure of appearance; however, we neglected that in the fashion industry, or in general celebrity industry, outfit selection is considered as one of the most important skills, therefore, we could not be sure that when respondents were answering, were they considering outfit as appearance or as skill.

Furthermore, from the hypothesis, it is evident that it tries to test two different things: appearance and talent; therefore, it is not possible to have it tested. The questions from 1 and 16 are purely about skills – and not at all about appearance. So, they could be used to test how important it is for the virtual celebrity to be good at something – but not whether it is important to look cute. Therefore, hypothesis 4 cannot be tested in our research.

We could have modified our hypothesis to: in the East, people do not want virtual celebrities to be good at something; however, there were only two questions remained, and we did not have any literature to back up such a claim, therefore, question 1, 4, 16, 24 will be abandoned together with hypothesis 4.

4.5.5 Factor 5

Survey Questions	Factor						
	1	2	3	4	5	6	7
26- I would like to follow a virtual celebrity who can inspire me in my choice of clothes, music, movies, attitudes, etc.					.914		
28- I would kill for getting the chance to attend a virtual celebrity's concert where I can meet it in real life.					.909		

Figure 22 Rotated Component Matrix[a] for factor 5

Figure 22 is the rotated component Matrix of factor 5, which also represents the questions that fall into this factor. Each question is above 0.4 and does not cross other factors; therefore, we could conclude Question 26 and 28 as belonging to factor 5. As per the

previous chapter, that presents our questionnaire design, it is not hard to see that these two questions are designed under the theme "interaction" to test *hypothesis 5: Eastern consumers want to influence virtual celebrities, while Western consumers want to be influenced*. These two questions are very different from other 6 questions, the interaction level shown by these two questions are very high and these two questions are considered to behave like "celebrity fanatics". These two questions also reflect the highest level of influence exerted by a celebrity.

Therefore, this factor can still be considered to be within the theme "interaction" and can be applied to Independent Samples t-Test, assisting the test of hypothesis 5.

4.5.6 Factor 6

Survey Questions	Factor						
	1	2	3	4	5	6	7
08- I would love virtual celebrities that look cute and have big eyes.						.813	
11- I think it's fantastic that virtual celebrities won't get old and wrinkly.						.794	
20- I would not prefer a virtual celebrity who dresses more mature.						.818	

Figure 23 Rotated Component Matrixa for factor 6

Figure 23 is the rotated component Matrix of factor 6, which also presents the questions that fall into this factor. Question 8, 11, 20 are more than 0.4 and do not cross other factors. Therefore, we can say that Question 8, 11, 20 belong to factor 6. According to the previous chapter that presents our questionnaire design, it is not hard to see that question 8, 11, 20 are all designed under the theme "appearance" to test *hypothesis 4: Eastern consumers prefer virtual celebrities who look young*.

4.5.7 Factor 7

Survey Questions	Factor						
	1	2	3	4	5	6	7
15- I think it could be interesting hearing a virtual celebrity criticise/praise TV show.							.874
21- A virtual celebrity can be interesting to me even if they only talk about the weather and similar topics suitable for pleasant small talk.							.874

Figure 24 Rotated Component Matrix^a for factor 7

Figure 24 is the rotated component Matrix of factor 7, which also represents the questions falling into this factor. Question 15 and 21 are more than 0.4 and do not cross other factors, therefore, we can conclude that Question 15 and 21 belong to factor 7. According to the previous chapter that presents our questionnaire design, it is not hard to see that question 15 and 21 are all designed under the theme "opinion" to test *hypothesis 1: Eastern consumers do not want virtual characters to have a deep level of opinion.*

These two questions are unlike other questions in factor 2, the opinion level shown by these two questions is also very low, therefore, these two questions can be summarized as "low level of opinions", which also belong to the "opinion" theme. Therefore, this factor can still be considered within theme "opinion" and can be applied for Independent Samples t-Test to assist the test of hypothesis 2.

4.5.8 Reliability test of all factors

As mentioned in the previous paragraphs, we have run another Cronbach's Alpha coefficient test. The means of each factor is calculated using questions belonging to that specific factor through SPSS, followed by the Cronbach's Alpha coefficient test. All 7 factors were used to run the reliability test and the Cronbach's Alpha coefficient is listed in Figure 24.

Factor	Number of Questions	Cronbach's alpha
1	6	0.916
2	6	0.895
3	5	0.878
4	2	0.963
5	2	0.974
6	3	0.765
7	2	0.792

Figure 25 Results of Cronbach's Alpha Coefficient

From this chart, it is clear that factor 1,4,5 are above 0.9, which is "excellent", and factor 2,3 are above 0.8, which is "good" for research, while factor 6 and 7 are the lowest, but they are all above 0.7, which is also in the "acceptable" range for further research. Therefore, all factors have passed the reliability test, but as discussed before, factor 4 has to be abandoned, which leaves us with 6 factors for the Independent Samples t-Test.

4.6 Independent Samples t-Test

The Independent Samples t-Test is an inferential statistical test that determines whether there is a statistically significant difference between the means in two unrelated group and was chosen to test our hypotheses. As mentioned before, the respondents have been grouped into two unrelated groups: The East and the West. Once the Independent Samples t-Test has been run on each 6 factors, the results will be presented as follows:

4.6.1 Factor 1 & 5: Interaction

Interaction is the theme used to test hypothesis 5: Eastern consumers want to influence virtual celebrities, while Western consumers want to be influenced, and factor 1 and 5 are the two facets to test this hypothesis. Therefore, two Independent samples t-Tests of factor 1 and 5 were conducted.

T-Test

Group Statistics

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
Factor1	The East	217	2.9793	.84890	.05763
	The West	89	3.2659	.89567	.09494

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Factor1	Equal variances assumed	1.702	.193	-2.640	304	.009	-.28665	.10859
	Equal variances not assumed			-2.581	156.153	.011	-.28665	.11106

Figure 26 t-Test Result for Factor 1

From the Figure 26, we can see that the Sig. Value is greater than .05 and the result should be read from the top row (Mankiewicz, 2004). As we can see from the top row, for factor 1, t = 2.640, p (Sig. 2-tailed) = 0.009. When p value is lower than or equal to .05, it means that there is a statistically significant difference between two conditions, therefore the null hypothesis can be rejected (Mankiewicz, 2004). Hence, Figure 26 indicates that there is a significant difference between the East and the West in Factor 1.

After confirming the difference, means of two groups have to be valued to fully test our hypothesis. From Figure 26, the mean value of "The East" is 2.98, while the mean value of "The West" is 3.27. in other words, for factor 1, the West is significantly higher than the

T-Test

Group Statistics

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
Factor5	The East	217	3.9263	.95336	.06472
	The West	89	3.6910	.98715	.10464

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Factor5	Equal variances assumed	1.321	.251	1.940	304	.053	.23526	.12125
	Equal variances not assumed			1.912	158.741	.058	.23526	.12303

Figure 27 t-Test Result for Factor 5

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East, which means that Eastern consumers tend to have a higher interaction level with virtual celebrities than Western consumers.

However, in the Figure 27, it shows that Sig. Value is greater than .05, then the result should be read from the top row (Mankiewicz, 2004). As we can see from the top row, for factor 5, t = 1.940, p (Sig. 2-tailed) = 0.053, which is higher than .05, therefore, it can be said that that there is no statistically significant difference between two conditions. The means of these two groups are 3.93 for the East and 3.69 for the West, which means that both Eastern consumers and Western consumers do not agree with being influenced by a virtual celebrity to a "fanatic" level.

As a result, factor 1 and factor 5 indicate that the Eastern consumers are more interested in influencing virtual celebrities than Western consumers, however, none of them want to be influenced to a fanatic degree. Therefore, as the result, the hypothesis 5: *Eastern consumers want to influence virtual celebrities, while Western consumers want to be influenced* has been tested to be partly true.

4.6.2 Factor 2 & 7: Opinion

Opinion is the theme that we used to test hypothesis 1: *Eastern consumers do not want virtual celebrities to have a deep level of opinion*, and factor 2 and factor 7 were used to

T-Test

Group Statistics

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
Factor2	The East	217	3.9493	.70674	.04798
	The West	89	3.5112	.79923	.08472

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Factor2	Equal variances assumed	3.159	.076	4.737	304	.000	.43807	.09248
	Equal variances not assumed			4.500	147.322	.000	.43807	.09736

Figure 28 t-Test Result for Factor 2

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test this hypothesis. Therefore, two Independent samples t-Tests of factor 2 and factor 7 were conducted.

In Figure 28, the Sig. Value is greater than .05, then the result should be read from the top row. As we can see from the top row, for factor 2, t = 4.737, p (Sig. 2-tailed) = 0.000, the p value is lower than.05, which means that there is a statistically significant difference between two conditions. Therefore, figure X indicates that there is a significant difference between the East and the West in Factor 2.

After confirming the difference, it means that two groups have to be valued to fully test our hypothesis. From Figure 28, we can see that the mean value of "The East" is 3.95, while the mean value of "The West" is 3.51. That is to say, for factor 2, the East is significantly higher than the West, which means that Eastern consumers do not want virtual celebrities to have strong opinions.

T-Test

Group Statistics

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
Factor7	The East	217	3.0829	.87137	.05915
	The West	89	3.1517	.86407	.09159

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Factor7	Equal variances assumed	.857	.355	-.628	304	.530	-.06874	.10942
	Equal variances not assumed			-.630	165.023	.529	-.06874	.10903

Figure 29 t-Test Result for Factor 7

Similarly, t-Test has been conducted for Factor 7 as well. In the Figure 29, it shows that Sig. Value is greater than .05, then the result should be read from the top row. As we can see from the top row, for factor 7, t = -.628, p (Sig. 2-tailed) = 0.530, this value is higher than .05, therefore, we can conclude that that there is no statistically significant difference between two conditions. The means that these two groups are 3.08 for the East and 3.15 for the West, which means that both Eastern consumers and Western consumers neither

strongly disagree nor agree with opinion towards virtual celebrities having low level of opinions.

As result of factor 2 and factor 7 indicated, both Eastern consumers and Western consumers are fine with virtual celebrities having low level of opinions, however, when it comes to high level of opinions, both Eastern and Western consumers do not want virtual celebrities to have them and Eastern consumers expressed a stronger disagreement with virtual celebrities with a high level of opinions.

To conclude, the hypothesis 1: *Eastern consumers do not want virtual celebrities to have a deep level of opinion* has been tested to be true, and Eastern consumers are more averse to strong opinions that western consumers.

4.6.3 Factor 3: Misbehavior

Misbehavior is the theme used to test hypothesis 2: *Misbehavior is less accepted by Eastern consumers than Western ones*, and factor 3 is the factor to test this hypothesis. Therefore, one Independent samples t-Tests of factor 3 was conducted.

T-Test

Group Statistics

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
Factor3	The East	217	4.0959	.74562	.05062
	The West	89	3.6067	.76779	.08139

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Factor3	Equal variances assumed	.139	.710	5.166	304	.000	.48911	.09467
	Equal variances not assumed			5.103	159.520	.000	.48911	.09584

Figure 30 t-Test Result for Factor 3

From the Figure 30, the Sig. Value is greater than .05, then the result should be read from the top row. As we can see from the top row, for factor 3, t = 5.166, p (Sig. 2-tailed) =

0.000, the p value is lower than.05, which means that there is a statistically significant difference between two conditions. Therefore, figure X indicates that there is a significant difference between the East and the West in Factor 3.

After confirming the difference, means of both the groups have to be valued to fully test our hypothesis. From Figure 30, the mean value of "The East" is 4.11, while the mean value of "The West" is 3.61. That is to say, for factor 3, the East is significantly higher than the West, which means that Eastern consumers tend to disagree more with the fact that virtual celebrities can behave wrongly. This indicates that none of the Eastern or Western consumers want virtual celebrities to behave wrongly; however, Eastern consumers do show a lower tolerance level than Western consumers.

Therefore, hypothesis 2: *Misbehavior is less accepted by Eastern consumers than Western ones* has been tested to be true.

4.6.4 Factor 6: Appearance

Appearance is the theme that we used to test hypothesis 3: *Eastern consumers prefer virtual celebrities who look young*, and factor 6 is the factor to test this hypothesis. Therefore, one Independent sample t-Tests of factor 6 was conducted.

T-Test

Group Statistics

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
Factor6	The East	217	3.0430	.80966	.05496
	The West	89	3.2622	.74276	.07873

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Factor6	Equal variances assumed	2.889	.090	-2.202	304	.028	-.21916	.09955
	Equal variances not assumed			-2.282	177.498	.024	-.21916	.09602

Figure 31 t-Test Result for Factor 6

In Figure 31, the Sig. Value is greater than .05, then the result should be read from the top row. As we can see from the top row, for factor 6, t = -2.202, p (Sig. 2-tailed) = 0.028, the p value is lower than .05, which means that there is a statistically significant difference between the two conditions. Therefore, figure X indicates that there is a significant difference between the East and the West in Factor 5.

Confirming the difference, means of two groups have to be valued to fully test our hypothesis. From Figure 31, the mean value of "The East" is 3.04, while the mean that value of "The West" is 3.26. This is to say, for factor 6, the West is significantly higher than the East, which means that Eastern consumers tend to agree more that virtual celebrities should look young.

Therefore, hypothesis 2: hypothesis 3: *Eastern consumers prefer virtual celebrities who look young* has been tested to be true.

4.7 Conclusion of Results

After the data analysis, we could conclude the results of our survey as follow:

Hypothesis 1: *Eastern consumers do not want virtual celebrities to have a deep level of opinion*, this hypothesis has been tested true, moreover, Eastern consumers are more averse to strong opinions that western consumers.

Hypothesis 2: *Misbehavior is less accepted by Eastern consumers than Western ones*, has been tested true.

Hypothesis 3: *Eastern consumers prefer virtual celebrities who look young*, has been tested true.

Hypothesis 4: *Eastern consumers prefer appearance over talent*, has been abandoned because our survey cannot test it.

Hypothesis 5: *Eastern consumers want to influence virtual celebrities, while Western consumers want to be influenced*, has been tested partly true, Eastern consumers are more interested in influencing virtual celebrities than Western consumers, however, none of them want to be influenced to a fanatic degree.

Group Statistics

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
Hypothesis 1 (Factor 2)	The East	217	3.9493	.70674	.04798
	The West	89	3.5112	.79923	.08472
Hypothesis 2 (Factor 3)	The East	217	4.0959	.74562	.05062
	The West	89	3.6067	.76779	.08139
Hypothesis 3 (Factor 6)	The East	217	3.0430	.80966	.05496
	The West	89	3.2622	.74276	.07873
Hypothesis 5 (Factor 1)	The East	217	2.9793	.84890	.05763
	The West	89	3.2659	.89567	.09494

Figure 32 Means of Proven Hypotheses

Figure 32 shows the means of the proven hypotheses, and we have calculated the difference in means for each proven hypothesis. For the hypotheses which have two factors under them, we have chosen to use the mean of the major factor supporting the hypothesis. The difference in means for hypothesis 1 is 0.44, for hypothesis 2 is 0.49, for

hypothesis 3 is 0.22, for hypothesis 5 is 0.29. Therefore, comparing to hypothesis 3 and 5, hypothesis 1 and 2 have greater differences in means.

4.8 Extra analysis

When the survey was designed, we have set one question asking about the current residency country. During the data analysis process, we noticed that if we run an Independent Samples t-Test on participants who are born in the East, but now living in the West, and participants who are born in the East, now still living in the East. The results are very interesting. However, we are aware that this is against research principles, and we cannot use the results to claim or conclude anything.

We have grouped respondents into two groups: 1. Born and Reside in the East 2. Born in the East but Reside in the West. After running t-Test on all 6 factors, we realize that only factor 3 has a significant difference, results as follow:

Group Statistics

	Nationality and Residency	N	Mean	Std. Deviation	Std. Error Mean
factor3	Born and Reside in the East	186	3.9263	.76789	.05457
	Born in the East but Reside in the West	31	4.2258	.76897	.13811

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
factor3	Equal variances assumed	.271	.603	-2.019	227	.045	-.29954	.14835
	Equal variances not assumed			-2.017	39.951	.050	-.29954	.14850

Figure 33 t-Test Results for factor 3

From the Figure 33, the Sig. Value is greater than .05, then the result should be read from the top row. As we can see from the top row, for factor 3, t = -2.019, p (Sig. 2-tailed) = 0.045, the p value is lower than.05, which means that there is a statistically significant

difference between two conditions. Therefore, figure X indicates that there is a significant difference between these two groups in Factor 3.

From Figure 33, the mean value of "Born and Reside in the East" is 3.93, while the mean value of "Born in the East but Reside in the West" is 4.22. That is to say, after living in the West, Eastern consumers tend to have a lower tolerance level.

5. DISCUSSION

Having observed a rising number of virtual characters in the media who captivate millions of consumers, we examined how these virtual celebrities are consumed in the East and the West. In the discussion we will exclude hypothesis four since there were only two questions left after the factor analysis, which we find is not enough to base our discussion on and draw relevant implications from it. Therefore, the discussion will only address hypotheses 1 (interaction), 2 (level of opinion), 3 (misbehavior) and 5 (appearance). As our results indicate, there are some significant differences in how Eastern and Western people consume virtual celebrities. In the following, we will discuss the findings and suggest implications for marketing as well as point out areas for future research.

5.1 Interaction

H1: Eastern consumers want to influence virtual celebrities, while Western consumers want to be influenced.

Our findings reveal a significant difference in how Eastern and Western consumers interact with the virtual celebrity. While Eastern consumers tend to take more pleasure in engaging with virtual celebrities, Western consumers seem more reserved. This resonates with our assumptions drawn from literature that Eastern consumers are especially susceptible to co-creational activities (Hamasaki & Takeda, 2008; Galbraith & Karlin, 2012), while Western consumers prefer to be more passive and enjoy being inspired by opinion leaders or trendsetters (Black, 2012).

5.1.1 Eastern Consumers

Taking a look at Hatsune Miku, illustrates our findings for Eastern consumers. Crypton Future Media, the company behind Hatsune Miku, well understood Eastern consumers' desire to deeply interact with their virtual celebrity and made it possible for Hatsune Miku

fans to join in its development. The virtual celebrity was intentionally designed without an associated back story, which offers consumers the possibility to create their own narrative of the character with their imagination (Russell, 2016). With no dominant work that defines the Vocaloid and her output (Jenkins et al., 2013), every consumer can have their very own and unique idea of what the virtual celebrity represents for them. This contributes to the emotional and close relationship between fans and Hatsune Miku.

Furthermore, Hatsune Miku's producers developed MikuMikuDance 3D, a software for 3D models, where producers of virtual characters can upload the 3D model for fans to create movies with their virtual celebrity (Learnmmd, 2019). This software enables fans to alter everything ranging from their appearance, accessories, voice, movement to the setting of the movie including background, lighting or music. This allows fans to create their very own interpretation of the virtual celebrity which provides a unique fan experience. These videos can be then uploaded to NicoNico or YouTube to share with the fan community. In this manner, not only professional producers and composers can compose and share Hatsune Miku music videos but also fans, which is acknowledged by the company. Besides Hatsune Miku, many other virtual characters have been uploaded to the program for consumers to play with, among others the virtual YouTuber Kizuna AI. With development in technology, these models have been made compatible with virtual reality as well, offering an even more realistic experience with the virtual celebrity (MoguraVR, 2019).

This is quite interesting as it challenges established dynamics of consumption and production, blending the line between consumers and producers (Sousa, 2016). The collaborative ecosystem is entirely different from fandoms that are focused on the work of individuals or corporations, which are more distinctly separated from the fans. In this digital context, it appears that the Internet fan and the creator have merged, and the co-creation continues to evolve and develop. This co-creation community seems to be an integral part of how Eastern consumers engage with the virtual celebrity. In the age of the attention economy, such collaborative systems may deem advantageous for companies as it allows the company to observe trends and adapt accordingly. As Jørgensen et al.

(2017) state, channeling this 'affective fan-labor' can turn into substantial monetary gains for the company.

It can be speculated that such co-creation communities in Asia may be easier to execute because laws around intellectual property are not claimed by Eastern companies, such as Crypton Future Media, as strong as by Western companies. Having Eastern consumers produce their own versions of virtual celebrities, such as Hatsune Miku and Kizuna AI, via the free accessible software MikuMikuDance, does not seem to bother their respective companies. It seems virtual celebrities are a more public commodity than a private brand, which could be the case in Western society.

5.1.2 Western Consumers

Our findings suggest that Western consumers tend to be the opposite, i.e. they do not engage with the virtual celebrity as much as Eastern consumers.

Lil Miquela's social media presence is purely established on Spotify and Instagram so far, which are both platforms with limited interaction possibilities for consumers. Commonly, these social media platforms mainly enable commenting, liking, listening, and/or viewing. Even the 'question' function on Instagram, where fans can ask questions and she will reply to some of them presents a lower level of engagement between virtual celebrity and follower. Compared to Kizuna AI's live streaming and playing rock, paper, scissors with the fans (Otakumode, 2019), the extent to which Lil Miquela fans can engage with her seem secondary - let alone the co-creation community in East Asia. Her new online shop club404 could be a promising platform for future social interaction between the virtual celebrity and the fans. So far, it is only an online shop with a limited selection of clothes designed by the virtual celebrity and her friends.

This applies to the latest KFC colonel as well, who is now embodied by a virtual character instead of a real person. Apart from showing the virtual celebrity on the company's Instagram page, KFC does not provide a platform for consumers to engage with the virtual celebrity more actively. In an even more hampered manner, some of The Diigitals'

supermodels are not linked to any social media platform. It seems they have been exclusively created for marketing campaigns. The only channel we have come across so far for engaging with a virtual celebrity in a more personal manner, seems to be when Gorillaz' virtual bassist Murdoc Niccals was in prison and fans could chat with him live within a set time frame ("Gorillaz - Free Murdoc", 2019; KIK, 2019).

Considering these examples, it can be argued that the lack of social interaction opportunities on social media platforms causes the consumer to pertain a more reserved attitude when it comes to engaging with virtual celebrities. Whether Western consumers would show a higher level of engagement towards a virtual celebrity if there were respective platforms which would support it, is up for future research to investigate further. Furthermore, the profession of the virtual celebrity may be a potential reason for differences in levels of interaction. It seems that in the East, virtual YouTubers and virtual singers are predominant, who are naturally all entertainers. Compared to this, in the West there seems to be a higher number of virtual models, whose primary purpose may not be to actively entertain but more to be potentially used in marketing campaigns.

Looking at the results for how virtual celebrities are interacted with, it can be concluded that Eastern consumers tend to have a more engaged relationship with the virtual celebrity, while there is a less intimate level between Western consumers and the virtual celebrity. This can be brought into line with the spatial structures in interaction between two individuals depending on their intimacy level (Hall et al., 1968). These levels range from intimate, personal, social to public. Following this theory, Eastern consumers interact on a personal while Western consumers interact on a social level with the virtual celebrity. This reflects the intimate close fan-idol relationship in Asia described by Galbraith & Karlin (2012).

5.1.3 Extreme Fan Behavior

While we found differences in interaction preferences of Eastern and Western consumers with the virtual celebrity, they both 'somewhat disagree' with more extreme fan behavior.

This could be interpreted that even though Eastern consumers enjoy an active and close relationship with the virtual celebrity, they would rather not make their world revolve around the virtual celebrity, completely forgetting about the real life. Similarly, Western consumers appreciate a more passive and inspiring relationship, but would not want to be completely influenced by a virtual celebrities' opinion. They are looking for inspiration and guidance for making their own choices, but would not go to the extreme as to let the virtual celebrity dictate them what to wear, where to go, what to eat, etc. Yet, such behavior towards non-virtual celebrities seem to be quite common:

"That people should stop "obsessing" on celebrities and focus on the "real people" in their lives is a common and repeating theme in the psychological literature (e.g. Maltby et al. 2006; McCarley and Escoto 2003; McCutcheon et al. 2003). Fan relationships are perceived as obsessive and dysfunctional and are seen as poor substitutes for a real relationship with a person who is accessible. And yet the reality is that many people continue to allow themselves to "fall in love" with people they may never meet. They carry on love relationships at a distance and some people find that experience to be satisfying."

(Stever, 2011, p.4)

Illustrating Stever's point further, examples from Asian idol groups, especially AKB48, suggest that the idol economy lives and thrives because of such fan hysteria. Fans are allowed to buy several albums to gain more votes which they can use to support their celebrities. They are willing to spend large monetary sums just to see their celebrity perform and receive special PR packages. A similar tendency for fan hysteria can be observed with the emerging "wanghong economy" in China (Tsoi, 2006). Literally meaning "internet celebrity economy", this economy model lives from so-called internet celebrities who use live streaming to engage with the audience in short comedy videos, sing for them, or entertain them in a different way. Since all content is being live streamed, consumers can engage live with their celebrity through comments, e.g. requesting specific songs, giving feedback on performance, asking questions, etc. On streaming platforms such as douyu.com consumers can pay money to these internet celebrities for

them to fulfill their requests. The higher the bid, the more likely the internet celebrity will grant their wishes. In a BBC documentary, it was revealed that one of the internet celebrity Lele Tao's most loyal fan has even spent more than 15,000 USD on her (BBC, 2019). Likewise, 100 Mini Coopers and 80 bags from the luxury fashion house Givenchy were sold in less than fifteen minutes, just because popular internet celebrities endorsed it (The Economist, 2018).

The DIY celebrity Kim Kardashian also realized the potential to monetize on consumer obsessions with celebrities and teamed up with Glu Mobile to develop a game. In *Kim Kardashian Hollywood*, consumers can become celebrities themselves, striving to become like her - a goal, however, that can never be reached in the game (Banks, Mejia & Adams, 2017; Harvey, 2018). Nevertheless, the game offers fans an almost real experience with Kim Kardashian and other members of the Kardashian clan, giving them advice on how to become like them. From a marketing perspective, the game developers used the image and reputation of Kim Kardashian to boost their own profits as well. Before they teamed up with Kim Kardashian and made the game evolve around her, a similar game they have created did not receive as much attention.

The fact that consumers only show very little fan hysteria towards virtual celebrities, can be interpreted that they are still not considered as real as their actual counterparts. What the true reasons for this dissonance between vivid fanatical behavior towards celebrities and very little towards virtual celebrities are, need to be researched further.

5.2 Level of opinion

H2: Eastern consumers do not want virtual celebrities to have a deep level of opinion.

Our study found that when it comes to deeper levels of opinion, i.e. controversial topics such as politics, social movements, societal problems, etc., neither Eastern nor Western consumers feel much pleased or entertained. However, when it comes to lower levels of

opinion, such as comments on the latest blockbuster movie, statements about the weather or other types of pleasant small talk, there is no difference between Eastern and Western consumers. Consumers seem to enjoy engaging in more superficial conversations with the virtual celebrity than committing to controversial topics. What they seem to care more about is to have a good time with the virtual celebrity without any heated discussions.

5.2.1 Eastern Consumers

Matching our predictions, Eastern consumers are averse towards virtual celebrities engaging in discussions that involve deeper levels of opinion. This is very applicable to the vocaloid Hatsune Miku as she does not have any kind of opinion and is merely a character whose purpose is to entertain the audience. Her Eastern fans are very much intrigued by her performance as an artist and her pleasing appearance. They do not seem to care much about what Hatsune Miku has to offer apart from those qualities. This echoes notions of the celebrity as an entertainer (Black, 2012; Guga, 2005, Boorstin, 1962) and seems to apply to other virtual celebrities with a strong presence in the East, as well. As mentioned above, Kizuna AI's producers uploaded her 3D model onto MikuMikuDance, so that consumers are able to engage with her more individually. However, it is prohibited to use her in a political or religious context (Kizunaai, n.d.), which emphasizes the aversion to involvement in such controversial issues.

Considering the position of virtual celebrities as entertainers, it appears that their designers aim to reinforce that image by forming corresponding personality traits. This contributes to a casual and joyful atmosphere surrounding the virtual celebrity. Kaguya Luna, another Japanese virtual YouTuber, is known for her dream to 'become the YouTuber that gives everyone smiles'. Even though she is also described as more vulgar than her fellow virtual YouTube colleagues, her insults are always meant in a funny way, which makes it lighthearted again. ("Kaguya Luna", 2018). Kizuna AI is also described as a 'very funny' personality who likes to dance and talk about random topics ("Kizuna Ai",

2018). Likewise, the Japanese virtual YouTuber Mirai Akari is known for talking about gaming and humorous subjects ("Mirai Akari", 2018).

It seems that the East Asian preferences for a fun personality type in celebrity (Chan, Ng & Luk, 2013) also finds itself again in virtual celebrities. Using humorous personalities could be interpreted as a diversion from more pressing issues. This argument would fall into Couldry & Markham's (2007) interpretation of celebrities as a weapon against mass distraction. Their survey found that "people who are most interested in celebrity are the least engaged in politics, and the least likely to vote"(Couldry & Markham 2017, p.21). On top of that, "those who follow celebrity gossip most, are three times less likely than people interested in other forms of news to be involved in local organizations, and half as likely to volunteer"(Couldry & Markham 2017, p.20). These results could explain why the participants in our study do not want virtual celebrities to have deeper levels of opinions - because they apparently do not have a deep level of opinion either, which is why they are simply not interested in what virtual celebrities have to say about it.

5.2.2 Western Consumers

Western consumers are not as averse to deeper levels of opinion as Eastern consumers, but also somewhat disagree with virtual celebrities engaging in controversial discussion.

Lil Miquela's virtual celebrity friends Bermuda and Blawko do not show any affiliation with social movements. Bermuda does not talk much about anything else than herself and how she wants to be rich. Her latest crushes: herself and Elon Musk (Bermuda, 2019). Similarly, Blawko's Instagram profile seems also superficial considering his 'Young Robot Sex Symbol' bio description and meme filled Instagram feed. Just recently he gave an interview for the magazine DAZED DIGITAL in their beauty feature about how it is to be a robot sex symbol (Dazed, 2019).

An example from the real world of how such involvements in more controversial topics can turn out wrongly, illustrates Pepsi's recent campaign starring the reality TV star and supermodel Kendall Jenner (The Independent, 2017). The advertisement clip portrays

Jenner with a can of Pepsi in the middle of an ongoing riot. Before the situation escalates, she offers policemen the can of Pepsi, which turns the angry attitude of both policemen and protestors in a joyful Pepsi experience. Critiques have expressed the ad's naivety and ignorance towards the brutality of police officers, especially in America towards the black population. Their argument is that a peace offering with a can of Pepsi simply cannot stop the severe issues in society.

Then, there are numerous celebrities who are actively participating in more pressing issues. Leonardo DiCaprio may be one of Hollywood's strongest environmental activists, addressing the necessity for human race to take action for a more positive impact on the environment (Leonardodicaprio, 2015; The Leonardo DiCaprio Foundation, n.d.). Other outspoken celebrities taking clear stances in society are Amandla Stenberg with her clarification on cultural appropriation, Angelina Jolie's humanitarian efforts with UNICEF, or Emma Watson's backing of feminism (ELLE, 2018).

Some virtual celebrities are also picking up on more serious issues in society. Lil Miquela shows affiliation with social movements such as *Black Lives Matter*, *The Innocence Project*, the LGBTQ community and *Justice For Youth*. This is clearly stated in her Instagram bio description and suggests a strong sense for justice and equality. Even though Lil Miquela does not talk much about her involvement in and support for these social movements, the fact that she includes it in her Instagram bio description, may make her seem more relatable than her virtual celebrity friends. Also, Barbie Roberts, the doll character turned virtual YouTuber in 2015, talks on her channel about anything from lighter topics, such as personal style recommendations, to more cultural issues, such as feminism (Lufkin, 2018). In regards of the virtual band Gorillaz, consumers could link them with more pressing topics through their lyrics, e.g. in their song Plastic Beach (Metrolyrics, 2010), where they address concerns for the environment. One of their most popular songs, Feel Good, can also be interpreted as a critique on corporations, materialism and society which calls for a revolution. It is, however, questionable to what extent the content of lyrics is actually received by the fans and whether or not they pay attention to it - and not only the music or the virtual musicians.

The range of topics from more superficial to more pressing issues addressed by celebrities in the West could be interpreted that they do not solely see themselves as entertainers. With the amount of attention, they receive from the public, it could be that they also feel responsible to speak about pressing issues for making the world a better place. In that sense, they are not merely entertainers but also become opinion leaders. In context of virtual celebrities, it can be interpreted that having a deeper level of opinion shows more personality of the virtual celebrity. This might make them more relatable and real to consumers. Whether this is true can be explored in a future study. Furthermore, it could also be that virtual celebrities engage in various topics, ranging from more superficial to more serious issues, may be inspired by how characters are formed on music and talent shows in the West (Bell, 2010). By forming distinct personalities for contestants that speak to different consumers, producers of such talent shows ensure to reach every consumer. Lil Miquela may be specifically designed to appeal to fashion enthusiasts with a strong sense for human rights, while Bermuda is created to appeal to girls who may not take life too seriously and value wealth and beauty.

5.3 Misbehavior

H3: Misbehavior is less accepted by Eastern consumers than Western consumers.

As expected, Eastern consumers have a lower tolerance level than Western consumers towards virtual celebrities who misbehave. This slight dissimilarity between Eastern and Western consumers' tolerance towards misbehavior of virtual celebrities may be visible in the nicknaming of the virtual YouTuber Kaguya Luna (Virtual YouTuber Wiki, 2019). Due to her rough voice, Eastern consumers lovingly call her 'Neck Choked Hamtaro'. Even though this still seems to be an absurd and violence provoking nickname, it is associated with the cute hamster Hamtaro from the eponymous anime series. Kaguya Luna's Western fans, however, are nicknaming her 'Cocaine-chan' instead. Could it be a referral to 'Cocaine-Kate' (Hanukov, 2015)? The fact that there are two different nicknames coming from different regions, could mean that Eastern consumers do not want to associate their virtual celebrity with illegal substances. While in the West, fans

seem to enjoy adding an edgier side to her, which still fits her image. This subtle yet crucial difference speaks for the different attitude Eastern and Western consumers have towards misbehavior and underlines our findings.

5.3.1 Eastern Consumers

Eastern consumers seem to value a strict observance of rules and breaking them would face harsh criticism as the example of AKB48 idol group members show. After Minami Minegishi was caught leaving a guys' house, she broke the group's self-imposed no-dating-rule and faced denunciation. Fans felt much betrayed by the idol as their image of her was shaken - if not severely damaged. In order to reinstate her fans' trust she uploaded a video begging for mercy and shaved her head as an act of punishment (Hongo, 2013). Minegishi was not the first to be condemned in such a manner. Previous member of AKB48, such as Yuka Masuda and Rina Sashihara were forced out of the group (Martin, 2013) because of similar reasons. Here, human rights are placed after the fulfillment of consumer fantasies. As idols it is impossible to have a life outside of the structured environment the producers have set up. Having virtual celebrities take the position of idols, would solve this controversial issue.

Even more than romantic relationships, Eastern consumers seem to be very hateful towards sexual topics. Kizuna AI's channel was taken down after she revealed that she is 'naked' underneath her clothes (Gamersky, 2017). Even though this makes sense from an outside perspective, her fans were outraged. The fact that their beloved virtual celebrity, with whom they usually associate a cute and innocent image, would make such sexualizing statements was unbearable for the fan community. The virtual celebrity even had to upload an apologizing video after her account reopened. There are similar reactions towards celebrities by Eastern consumers. A study by Ding, Wang and Ma (2005) found that Chinese consumers in particular have an aversion towards celebrities who take obscene pictures. This loss in 'morality reputation' may lead to less trustworthiness of the celebrity in endorsement campaigns.

In comparison, nudity and obscenity have been a fundamental part of a marketers' repertoire in the West for capturing attention of consumers - even to the extent that consumers are already becoming tired of it (Byrne & Fleming, 2018). Interestingly, designers of virtual celebrities in the East may still make use of it to attract attention. Even though sexual connotations in what virtual celebrities talk about are being avoided, the appearance seems to be an exception. Kizuna AI and other virtual YouTubers are still portrayed with fetishized outfits and large bosoms, with which the consumers do not seem to have a problem with. So apparently, as long as virtual celebrities do not talk about anything sexual, they may dress and look as promiscuous as they - or fans - want.

Besides, drug abuse seems to be another unforgivable category of misbehavior (Koreatimes, 2019). Park Bom from the girl group 2NE1 was accused of smuggling amphetamine into the country and was signed off from the entertainment company YG. As another consequence, the girl group she has been a member of was disbanded the same year. This year, the company faced another scandal. Seungri from BIGBANG was accused of drug abuse - in particular the use of the 'rape drug' - and sexual allegations. In the aftermath of this scandal he resigned from the company and a restaurant he is strongly affiliated with was boycotted by upset and disappointed fans (Koreatimes, 2019). His former fans also demanded that all fan posters that were hung up in the bar Seungri owns, were to taken down immediately. They did not want to be associated with someone who is involved in illegal substances and prostitution.

5.3.2 Western Consumers

The more lax attitude of Western consumers towards misbehavior is further illustrated by a scandal involving the supermodel Kate Moss and her abuse of cocaine - which some may argue is more severe than the smuggle of amphetamine. Instead of facing the end of her career and long-term prison time, it fueled the models' career (Hanukov, 2015). The scandal made her even more popular and earned her more campaigns and contracts than before which doubled her salary just within a year. Contrasting to Eastern

consumers, who would probably denounce her for such behaviors, Western consumers were fascinated by her 'heroin chic' that elevated her celebrity status.

Hanukov (2015) also pointed out the media's role in laying the tone for communicating such news to the public. While in the West it may seem that those stories are used to drive sales of the publishing house, it could be that in the East the media takes a more condemning tone in news transmission to maintain a culture of well-behavior. This could affect the public's, especially the fans', attitude towards such scandals. Our findings do not suggest any valid claims in this matter. It is up to future research to address this issue and find out to which extent the media has an influence on how tolerant consumers react to such scandals. As virtual celebrities are not programmed for scandals, Hanukov's exploration of 'Cocaine-Kate' could be something designers of virtual celebrities could consider experimenting with in order to boost the virtual celebrities' popularity and attract more attention.

Yet, when brands are involved in a celebrity scandal, research suggests the opposite to our findings. An explanation for this might be that our study focused on virtual celebrities in general and did not relate them to any brand. Even though Eastern consumers do not appreciate when celebrities show types of misbehavior, they can be more forgiving than Western consumers towards global brands who are involved in a celebrity endorser scandal (Steenkamp et al., 2003; Dowling, 2006). The quality and exquisite associations Eastern consumers have with global brands, such as Nike, and their products dominate even during celebrity endorser scandals. The legacy of the brand and its products are valued much more and placed above a 'little' scandal caused by a celebrity endorser. In that sense, Eastern consumers distinguish more between the culprit and the victim of such scandals (Lehman, Chiu & Schaller, 2004; Chiu, 1972; Choi, Lee & Kim, 2005), which leaves the brand's market return unaffected in the short-run (Zhang & Huang, 2018). In contrast, Western consumers make a connection between brand values and the celebrity endorser during a scandal, which is why brands suffer much more economic loss in such cases (Bartz et al., 2013). These studies about celebrity endorser scandals and their effects to the corresponding brand, add a more nuanced perspective to our findings of consumer attitudes towards misbehavior.

Lastly, we would like to draw attention to an unexpected finding - which is not a valid part of this study as it is not in line with our methodology, but still worth mentioning for future investigations. The tolerance towards virtual celebrity misbehavior decreased for Eastern consumers who now live in a Western society. We speculate that it might be due to the 'extreme' exposure of what Eastern consumers perceive as scandalous behavior that their bias against it even strengthens. We do not want to claim any valid statements here and leave this matter for future research to explore why Eastern consumers are averse to misbehavior to a higher extent when living in a Western society.

5.4 Appearance

H5: Eastern consumers prefer virtual celebrities who look young.

5.4.1 Eastern Consumers

The way Hatsune Miku is visually designed mirrors our findings that Eastern consumers prefer virtual celebrities who look young. Essential to the success of her high-pitched and childlike voice. Furthermore, her moé style reminds of 'little sister' cuteness that has been fashionable in the entertainment industry in Japan since the 2000s (Galbraith & Karlin 2012, p. 154–156). Besides, her school uniforms, big eyes, and innocent and animated look support this image of her and serves to consumers' desires of a young and fresh spirit. A fair skin tone is often associated with a youthful look in Asia (Xie & Zhang, 2013) and it seems that all virtual celebrities in

Picture 6 Virtual Celebrities in the East

the East are created under the influence of such beauty standard. The use of color may

also contribute to a younger appearance. In East Asia, the outfits for virtual celebrities seem very bright and it appears that mostly pastel colors are used (see Figure 34). It is hardly seen that a virtual celebrity is dressed in only earthy and darker tones. Among Western consumers, there seems to be more acceptance towards different ages of virtual celebrities. Unlike in the East, they do not follow a certain 'young look' standard as seen in Figure 34.

In the East this fair skin tone could also be interpreted as an indicator for celebrity, as it is understood as a sign for social status in Asian countries (Leong, 2006). Having a fair skin color sets the 'class' apart from the 'mass'. This distinction of an individual from the crowd plays into Boorstin's notion of what makes a celebrity. In a place where a darker skin color may dominate, a lighter skin tone does set the person in question apart from everyone else, making them truly 'extraordinary'. This surely increases their chances of having the media perceive them as 'noteworthy' and spread news about them. This may explain the fair complexion observed among all virtual celebrities in the East.

Perhaps in an attempt to match their Eastern customers' preference of youthful looks and keeping up with the rising virtual celebrities, KFC has reinvented the company's signature figure colonel Sanders. In its latest version, the company has diverted from its traditional old grandpa image of the colonel and portrays him now as a younger looking virtual celebrity. Yet in China, the colonel is being accused of embodying a too "gay and slutty" image (Xu, 2019). The new colonel with his sleek hair showing off his abs with a smirk seems too much for Eastern consumers. In combination with the brand's famous slogan 'It's finger lickin' good', they feel they are looking at a sexual advertisement rather than one for fried chicken.

5.4.2 Western Consumers

Among Western consumers, there seems to be more acceptance towards different ages of virtual celebrities. Unlike in the East, they do not follow a certain 'young look' standard
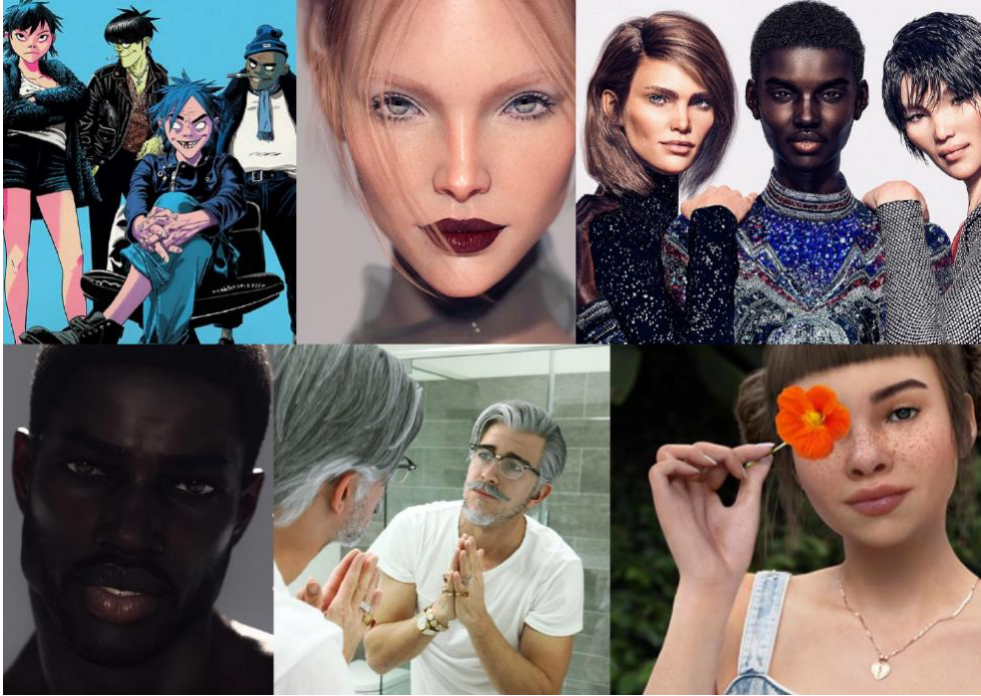
Picture 7 Virtual Celebrities in the West

as seen in Picture 7. Though Lil Miquela is only three years older than Hatsune Miku, she acts and looks to a greater extent mature and even her voice is not as high-pitched as Hatsune Miku's. Sometimes she also dresses in all dark color outfits and adapts more to fashion trends than being constantly portrayed in one signature outfit inspired by school uniforms. Besides, her mixed-race features give her a slightly tanned appearance, which could be interpreted as a positive reflection of today's increasingly diverse society. In that sense, it can be argued that Lil Miquela could have been designed to encourage new beauty standards and set fashion trends (Picture 8). This would resonate with Black's (2012) notion of Western celebrities as trendsetters.
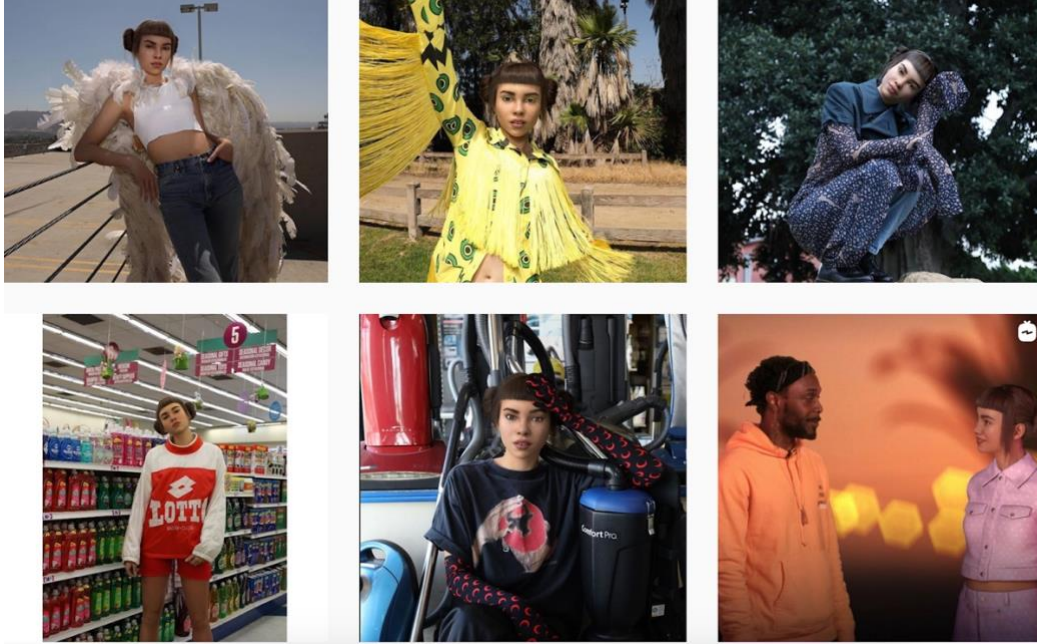
Picture 8 Diverse looks of Lil Miquela (Lil Miquela, 2019)

5.5. Categorization of Virtual Celebrities

Having discussed different factors in context of how virtual celebrities are consumed in the East and West, help to the understanding of their nature. Yet, trying to categorize virtual celebrities and virtual idols into one of the three celebrity categories, i.e. *attributed*, *achieved*, *ascribed* (Rojek, 2001), seems to be a difficult task. Instead, it seems that virtual celebrities challenge this rigid categorization, indicating a more flexible and dynamic understanding of it. The most obvious seems to categorize virtual celebrities within the *attributed* category, i.e. they are elevated to celebrity status because the media deems them exceptional. And indeed, virtual celebrities who seem to live among us and can even have a hyper-realistic appearance seem noteworthy. From there, it may depend on the profession of the virtual celebrity whether it stays an attributed virtual celebrity or transgresses into another category. The virtual model Shudu and her fellow colleagues from The Diigitals may be categorized as merely attributed since they are most known for their hyper-realistic look and aesthetic, but not associated with anything else. Then, there are Lil Miquela and the Japanese virtual YouTubers who seem to fall more into the DIY-

celebrity category, which is partly *attributed* and partly *achieved*. Lastly, Hatsune Miku and Gorillaz could be categorized into achieved, since they are mostly known for their musicality. It could be argued that some virtual celebrities could also fall within the *ascribed* category. For instance, Bermuda could be such an ascribed virtual celebrity as she is another brainchild of Lil Miquela's creators.

5.6 Conclusion of Discussion

Our study illustrated that virtual celebrities are consumed similar to their non-virtual counterparts. In that sense, we concluded that virtual celebrities in the East are consumed like idols, making them virtual idols. Just as idols, virtual idols tend to gravitate more towards being an entertainer. This may be why they typically have a fun and cheerful personality that lightens up the audience. As their function is to provide joyful moments, they stay away from more controversial topics that may polarize their audience or entangle themselves in a scandal. In the West, there does not seem to be one dominant profession for celebrities, which is also reflected in the diversity of profession taken by virtual celebrities. For both virtual celebrities and non-virtual celebrities in the West, whether being a singer, model or something else does not seem to make a difference in respect to their popularity.

For Eastern consumers we conclude that a high level of engagement, a low level of misbehavior, a low level of deep opinion and a young appearance may be important to the success of a virtual celebrity. In contrast, our results for Western consumers only partly reflect the virtual and non-virtual world. Therefore, one specific success model for virtual celebrities in the West cannot be claimed.

Similar to Eastern consumers, Western consumers disagree with virtual celebrities misbehaving. Yet, seeing how some virtual idols can still misbehave, e.g. Kizuna AI, we now wonder whether virtual celebrities in general are as controllable and flawless as we assumed. They are still dependent on humans who create the content for them.

Apart from this, whether or not the virtual celebrity expresses deep levels of opinion, has a young appearance or shows strong interaction with the consumer, do not seem to be as important to Western consumers as it seems to be for Eastern consumers. In terms of appearance we see a variety of looks that convey different ages, which speaks for Western consumers acceptance of virtual celebrities from a wide age range. Regarding interaction with and deeper levels of opinion of virtual celebrities, Western consumers tend to take a more neutral stance. They like to show some kind of interaction with the virtual celebrity through liking, commenting, viewing or listening, but more active engagement does not seem to be observed to a great extent among virtual celebrities in the West and their fans.

One of the latest additions to the virtual celebrity world, seems to combine both Western and Eastern preferences. The Japanese virtual model Imma portrays both a young and cute look, which particularly appeals to the Eastern consumers, and a more edgy clothing style, abandoning the typical school uniforms observed so far (Miley, 2019). This may make it more appealing to Western consumers as well. Furthermore, it does not appear that she has been designed with the explicit purpose of being an entertainer in the way that Hatsune Miku or the Japanese virtual YouTubers have been. This could be interpreted that the creators wanted to appeal to the Western consumers as well.
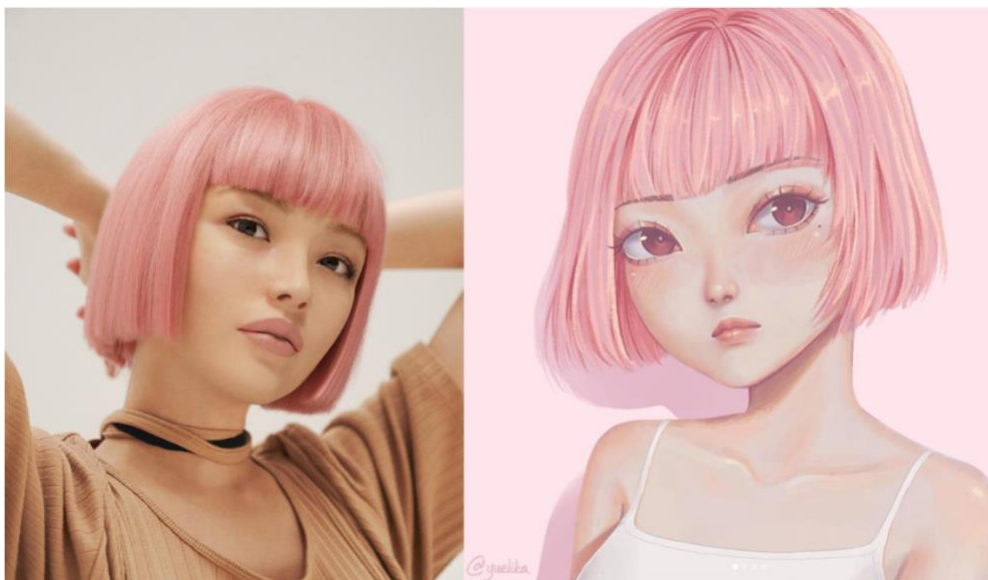
Picture 9 Imma gram

5.7 Practical Implications

Our study has shown that relationships between virtual celebrities and consumers differ between the East and West. We also observe that how virtual celebrities are being consumed may resemble the predisposition of consuming famous figures in each area. Summarizing our results and discussion, we developed a model that offers a possible explanation of how virtual celebrities are consumed in the East and West (Figure 37). Following this model and the insights from our discussion we suggest relevant implications for marketers in the East and West.
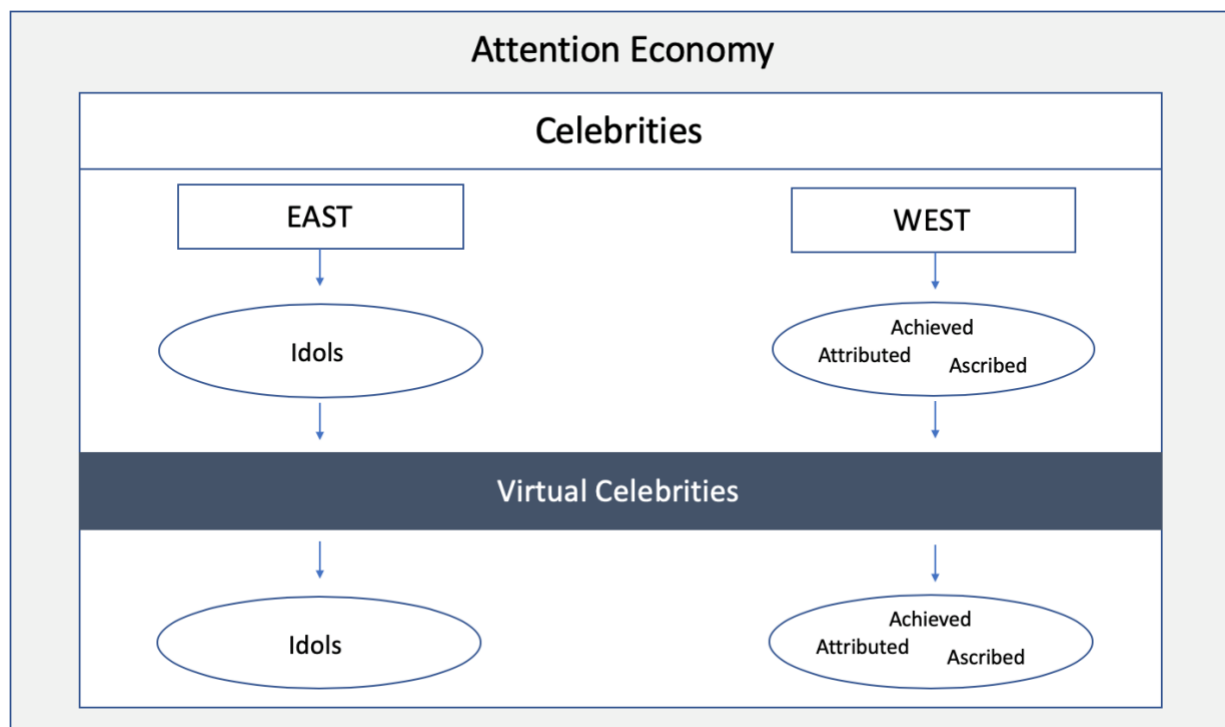
Figure 34 How virtual celebrities are consumed in the East and the West

Generally, as virtual celebrities are still not common within consumers' minds - 39% did not know virtual celebrities in our survey - marketers may want to consider integrating them in their marketing strategies as soon as possible. This will enable them to position themselves as pioneers and leverage virtual celebrities' novelty to attract consumer

attention. Below we will outline how marketers can use virtual celebrities for marketing purposes based on how these virtual celebrities are consumed.

5.7.1 Eastern Consumers

As consumers in the East are so used to being exposed to idols, developers might have been inspired by the success of the idol economy and created virtual characters that would pick up many features of the idols. Furthermore, considering that our findings for Eastern consumers largely resonate with real celebrities, it can be interpreted that whatever works for non-virtual celebrities also works for virtual celebrities. Both non-virtual and virtual celebrities are not supposed to misbehave, have deep levels of opinions and offer high interaction possibilities as well as have a young appearance. *Future endeavors of developers creating virtual celebrities should adhere to this model and create characters that resemble the ideal of an idol. In this context, a high level of engagement, a low level of misbehavior, a low level of deep opinion and a young appearance need to be incorporated to maximize chances of the virtual celebrities' success. In case marketers from the West intend to reach out to their Asian customers, it is recommended that they follow this model as well.*

5.7.2 Western Consumers

In contrast, our results for Western consumers only partly reflect the virtual and non-virtual world. Thus, how virtual celebrities in the West are consumed cannot be simplified in one singular success model. There seems to be a much greater variety of different celebrity types consumers can engage with. Western consumers do not seem to look for that specific 'model' but for something that corresponds with their identity as Boon & Lomore (2001) and Kanai (2015) have pointed out. *Therefore, marketers need to know exactly their target group's preferences and interests in order to find an adequate virtual celebrity that resonates with their customer base and is representative of the brand. Businesses can also think about creating their very own virtual celebrity, following the example of*

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KFC. This way, the company can decide explicitly how they want the virtual character to look and act to support communicating the brand to consumers.

Based on the four factors we analyzed, we will suggest specific implications.

Appearance

In terms of appearance we see a variety of looks that convey different ages, which speaks for Western consumers' acceptance of virtual celebrities from a wide age range. *This implies that marketers can neglect the age of the virtual celebrity in question and focus on more relevant attributes instead. Acknowledging an aging population, developers could also consider generating more older virtual celebrities that marketers could work with that may be more appealing to older generations. In any case, it should be cohesive with the brand and match the target group to avoid a faux-pas such as KFC in China.*

Interaction

Regarding interaction with virtual celebrities, Western consumers tend to take a more neutral stance. They like to show some kind of interaction with the virtual celebrity through liking, commenting, viewing or listening, but engaging more actively with the virtual celebrity does not seem to be very common. As we argued in our discussion this may be due to lacking platforms offering a more engaging experience. *For this reason, we recommended to introduce such platforms to Western consumers. As this does not seem to be current in Western society yet, having such platforms could stir consumer excitement and have the brand being perceived innovative.*

Even though establishing co-creation communities, as seen with Hatsune Miku, may be more difficult in the West due to possible infringements of intellectual property laws, there are still other options to engage fans in a more co-creational conversation. *On Lil Miquela's online shop, a virtual co-creation space can be introduced, where fans can participate in collaborating with the virtual celebrity for some parts of the collection. One way is to set it up as a competition where fans can submit designs, among which Lil Miquela can choose the ones that would match her brand the most. Another way of*

boosting a closer engagement with virtual celebrities could be to follow Kim Kardashian's example and create a game involving different virtual celebrities.

Level of Opinion

Western consumers are more neutral towards virtual celebrities expressing deeper levels of opinions. Lil Miquela and examples from very popular celebrities have illustrated that an involvement in societal and environmental issues may add to the likability of the (virtual) celebrity. *Therefore, developers of future virtual celebrities may want to consider adding this characteristic feature to enhance consumer acceptance. However, it is not advisable to let the character engage too much in polarizing topics.*

Misbehavior

Regarding misbehavior, our results and examples imply that *even though virtual celebrities are fictional, they should not exhibit scandalous behavior.* As virtual celebrities naturally do not cause drama by themselves, marketers can leverage this to avoid potential financial and reputational risks. This will further cut cost for the business in the sense that developing a response plan in case of a celebrity endorser scandal would be unnecessary.

Yet, as mentioned in the discussion, the cocaine scandal involving Kate Moss shows that in some cases, having scandalous celebrities could lead to more press exposure, which in her case, lifted her career. Similar incidents are observed among virtual celebrities. When Lil Miquela was new to Instagram, many questions were raised about her authenticity or identity as a virtual character. At that point she, herself, was unaware of her origins until a carefully constructed narrative involving fellow virtual celebrity Bermuda revealed her true identity as a virtual character. Lil Miquela's backstory was exposed, portraying her as a victim of trafficking from which she was saved. One could say that this drama evoked compassion among her fans and contributed to the popularity of Lil Miquela. The British band Gorillaz also constructed a drama involving the band's bassist Murdoc Niccals. The virtual celebrity was wrongly convicted last year and imprisoned, which stirred conversations within the fan community. As fans were offered to chat with

the imprisoned Niccals within a given time frame, it seems that the fan-virtual-celebrity relationship has been strengthened. Having virtual celebrities that are being strongly supported by fans is essential for virtual celebrity endorsement campaigns since these are considered potential buyers. *Creators of virtual celebrities could consider orchestrating such publicity stunts to boost the popularity of the virtual celebrity. However, it needs to be extremely thought through to avoid an opposite effect.*

5.7.3 Differences between Factors

Besides, our results show differences in means, i.e. differences in Eastern and Western consumer preferences, between the four above mentioned factors. Eastern and Western consumers seem to disagree more in regards of misbehavior and level of opinion. Meanwhile they seem to almost have the same opinion in matters of appearance and interaction. *Thus, marketers might not even need to focus too much on how the virtual character looks like or what kind of engagement possibilities it offers.*

5.8 Future Research

By analyzing how virtual celebrities are consumed in the East and West, our study has brought marketing research one essential step forward towards alternative ways of how to capture consumers' attention. Yet, the field of virtual celebrities is still under researched, where future studies need to be done to support or complement our results. Throughout the discussion we have already pointed out some areas and will suggest more in this section.

Our study assumed that virtual celebrities naturally attract attention just because humans are still unfamiliar with them, which may spark particular attention and interest. Having said this, our study did not test whether these virtual celebrity in fact attract more attention than real celebrities or to what extent they do. Future research needs to explore this topic in more detail.

Drawing from Schimmelpfenning's (2018) suggestion that there are differences in how countries use celebrity endorsers depending on the product category, it would be interesting to see whether it is applicable to virtual celebrities as well.

As the virtual celebrities we have used for illustration purposes differ in regards of their regional context, we interpreted that differences in consumer behavior was based on consumers' cultural background. However, since the virtual celebrities also differ between industries - e.g. Lil Miquela being more fashion related while Hatsune Miku has a stronger presence in the music industry - future studies need to investigate whether there are differences between industries in how virtual celebrities are consumed. This will be necessary to better inform interventions.

Besides, we observed a higher amount of female virtual celebrities, which poses the question of why there is a bias towards female virtual celebrities and, again, are there differences between product categories or industries?

6. LIMITATION

According to James (2004), limitations to study design can denote systematic researcher bias, either controlled or uncontrolled, which can improperly influence results. Those writers who fail to reference enough limitations in the research may cause subsequent researchers to accord this work with more credit than it is due (James, 2004). Since all research acts as a potential basis for future academic investigation, it is crucial that academics openly concede the limits of their own work.

This section follows the reflexive framework suggested by Alvesson and Sköldberg (2009) in regards of reviewing limitations within research. Their four-step limitation review involves "contact with the empirical material, awareness of the interpretive act, clarification of political-ideological contexts, and the handling of the question of representation and authority" (Alvesson & Sköldberg, as cited in Springborg, 2014, p. 183). The following analysis adheres to this schema.

6.1 Contact with the empirical material

Empirical material refers to scenarios in which researchers conduct observations, talk to respondents, construct images of empirical phenomena and carry out related tasks. As stated by Alvesson and Sköldberg (2009), such raw material is subject to abstract interpretation. In another words, contact with the empirical material addresses how the "raw" data is collected and handled. In this thesis, the limitations of "contact with the empirical material" relate to the sample.

6.1.1 Sample selection

When non-probability sampling is employed as a means of selecting samples errors can occur. This is because samples do not always reflect the whole population or even the pertinent population. There might also exist limitations whereby researchers cannot access the correct category of respondent, for instance due to geographical restrictions. Such boundaries are referred to as *sample bias* (Saunders et al., 2015).

The current research employs a snowball sampling method for higher response rate in a limited time frame. Therefore, we only managed to gather respondents from fourteen different Europeans countries. This is hardly representative of the whole "West". Similarly, we only managed to gain access to Eastern participants from China and Singapore, which are insufficiently representative of "the East". In addition, Singapore is considered more "Western-minded" (Aoyagi, 2005) and, therefore, might not be the right geographic choice.

Besides, snowball sampling method is limited by "selection bias" (Saunders et al., 2015). When surveys are distributed, researchers normally send the survey to those people regarded as suitable for filling out the survey. In the current case, one of us has been a fan of virtual characters and has been following Hatsune Miku for more than ten years. So, respondents chosen by this researcher might potentially know more virtual celebrities than what represents most members of the public. In this case, it is arguable whether such a group of participants is representative of the East.

Moreover, from our respondents' results, Gorillaz is the most known virtual celebrity in the West, and Hatsune Miku is the most known virtual celebrity in the East. Therefore, our results might be measuring Gorillaz fans versus Hatsune Miku fans rather than the West versus East. However, there were only 47 (53%) respondents knowing Gorillaz, and 107 (49%) respondents knowing Hatsune Miku. Therefore, our results most likely were not testing Gorillaz fans versus Hatsune Miku fans.

6.1.2 Sample quality

The current research involves participants from different countries and the vast majority are non-native English speakers. Since the survey was not translated into other languages, which might create problems in that respondents may not have understood the questions as was originally intended. Particularly, Chinese participants, whose native tongue differs greatly from English, may have had difficulties filling out the questionnaire.

Thus, some subjects are limited in their ability to read and interpret English surveys and it might have been better to have the survey translated prior to data collection.

6.1.3 Limitation of the Likert scale

Question answer options could lead to unclear data because certain answer options may be interpreted differently by respondents (Saunders et al., 2009). Questionnaires cannot fully determine the respondents' emotions without cooperating face to face conversations that can assist to know the facial expressions. Furthermore, some questions may have been difficult to answer due to their content nature. This may have made it difficult for respondents to give proper feedbacks, which in turn affects the survey. The response options provided can lead to the creation of unrepresentative data and may have even been interpreted differently by multiple respondents. Moreover, written questionnaires cannot comprehensively evaluate subjects' responses to the extent that face-to-face interviews can. Thus, *strongly agree* as a response on a scale may be difficult to consistently gauge. Similarly, the response option *somewhat agree* is open to very widespread interpretation by subjects and is capable of denoting very different things to each individual participant.

6.2 Awareness of the interpretive act

The second stage concerns the interpretive process through which more profound meaning is drawn from data. For this purpose, this section will reflect on the data analysis process.

Factor Analysis and Independent Samples t-Test are employed in this research as are, alternative approaches to analyze the data. For example, instead of Independent Samples t-Test, we might also employ Regression Analysis. Regression analysis comprises a robust statistical approach wherein relationships between two or more

variables can be examined. This method permits researchers to identify the most pertinent factors, the least relevant ones and then to ascertain how the factors interact.

If we use regression analysis, it becomes possible to gauge which factor, such as misbehavior, opinions, and appearance, matters most to Eastern and Western consumers. T-Testing can only reveal whether there is a significant difference between them. However, it is impossible to measure which factors matter more than other factors regarding what makes consumers consume virtual celebrities. For example, if regression analysis is used, it might be possible to discover that, for Eastern consumers, value matters more than opinion. A regression analysis could be performed on both groups, and their priorities of different factors then compared, which could also indicate which virtual celebrities are preferred in the East and the West.

Awareness of such results could have enabled the current research to better explain the differences between consumer behavior, rather than simply confirming the existence of behavioral differences.

6.3 Ideology

The third reflection level concerns the critical assessment of the extent to which created data and researcher interpretation of underlying explanations are the result of existing ideological beliefs, power relations and social reproduction. Thus, "to thoroughly scrutinize the less obvious consequences of a particular societal institution – rather than accept it at face value and reproduce it in research as something natural and given – is an important ingredient in a critical interpretation" (Alvesson & Sköldberg, as cited in Springborg, 2014, p. 193)

Metanarrative, otherwise referred to as grand narrative, comprises an all-encompassing narrative that provides background, significance and drive to all of life. This has informed the entire process of the current research. Thus, a metanarrative constitutes the wider picture or theme which binds all lesser themes and narratives.

In our research, we assumed that virtual celebrities experience success from the outset, since there is evidence in the literature that support this claim. Nevertheless, the current research has failed to question the veracity of this stance. If we did not use such ideology, our questions might be different from those which were ultimately included in the survey. For example, we assumed that everyone wants virtual celebrities, the only differences pertaining to the type preferred. However, if we did not take this for granted from the beginning, we could have added questions in the survey such as "Do you want to see the virtual celebrities?" or "Do you think it is necessary to have virtual celebrities?". Such questions also reflect individual preferences towards virtual celebrities since some might not even want to view them at all. Therefore, our research is limited as regards opinions concerning how virtual celebrities constitute an effective marketing tool.

6.4 Representation and authority

The fourth level of reflection relates to the deconstruction of the researcher's own text to highlight ambiguity, incoherence, and problems of authority and representation.

In this thesis, the selected data collection approach is the survey method, which means that there were limited opportunities for respondents to express unique opinions. Their responses need to be quantified to create numerical data, and the survey did not permit the researchers to learn precisely what subjects were thinking when they choose certain items. If open-ended questions had been used, the research might have been able to acquire deeper insights into why Eastern and Western people consume virtual celebrities differently. For instance, for everyone who did not know or were never a fan of a virtual celebrity, we could have added the question asking about the reasons.

Moreover, as has already been discussed, it is difficult to guarantee that respondents interpret questions in the manner in which the researcher intended them to be understood which impacts the quality of data which responses inform. Consequently, it is impossible to guarantee that the voice of respondents is accurately reflected.

7. CONCLUSION

The aim of our study was to research how virtual celebrities are consumed in the East and West, and to draw relevant implications for marketing. Overall, our study implies that virtual celebrities are similarly consumed to their non-virtual counterparts, both in the East and West. In that sense, as Shakespeare has put it in his famous poem *As You Like It* (1623):

> "*All the world's a stage, and all the men and women merely players.*"

No matter whether virtual or not, celebrities can be understood as a part of a greater play that is fueled by the media and judged by the public. They are playing into our desires and wishes, no matter where they are and where we are.

Yet, there are significant differences in how it is done by Eastern and Western consumers. Being aware of these variances is essential to everyone who intends to work with virtual celebrities. Integrating them into marketing campaigns or other marketing efforts can be beneficial for the business, especially in these days when virtual celebrities are not commonly present in consumers' minds yet.

7.1 Eastern Consumers

We can conclude that virtual and non-virtual celebrities are generally consumed the same in the East, i.e. they both follow the idol phenomenon. In this respect, virtual celebrities in the East can be referred to as virtual idols. Both idols and virtual idols are portrayed primarily as entertainers who are intensely fabricated in order to be filled with consumers' imagination. Everything is meticulously planned and staged, which resonates with Boorstin's notion of celebrity as the human pseudo-event:

> "*He has been fabricated on purpose to satisfy our exaggerated expectations of human greatness. He is morally neutral. (...) He is made by all of us who willingly read about him, who like to see him on television, who buy recordings of his voice,*

and talk about him to our friends. His relation to morality and even to reality is highly ambiguous" (Boorstin, 1962, p.69-71).

Consumers in East Asia seem to prefer high levels of interaction with their (virtual) idols and appear to be averse towards displays of scandalous behavior. They further seem to disapprove of virtual celebrities who share deeper levels of opinions, e.g. politics, social movements, religion, etc. We interpreted this in context of (virtual) idols as entertainers, who should not draw attention to pressing issues and instead provide joyful experiences. Lastly, a young appearance of (virtual) idols seems to be preferred.

7.2 Western Consumers

The way virtual celebrities are consumed in the West, resonates with how non-virtual celebrities in the West are consumed. Contrary to the East, there seems to be a broader understanding of virtual celebrities without one dominant celebrity profession. In this manner, virtual celebrities also embody different types of non-virtual celebrities. Therefore, how virtual celebrities are consumed in the West may depend more on what type of celebrity it is. There is no singular model that can be followed. More importantly, it should be aligned with the purpose of the user.

Our results suggested that Western consumers are almost as strongly averse to a display of misbehavior as Eastern consumers. This can be interpreted together with a tendency to disapprove deeper levels of opinions since engagement in more controversial topics, e.g. politics or social movements, may polarize and cause scandals. In contrast, a young appearance and high level of interaction does not seem to be of much relevance to Western consumers.

By studying the manner in which virtual celebrities are consumed in the East and West, we have contributed to both theory and practice. In an ever more connected world where people are exposed to a multifold of products and services, it becomes more complicated to gain the attention of consumers. In this competitive world, marketers need to find new

solutions of attracting customers' attention to their products and services. Being in the center of public attention, celebrities have been an effective tool in marketing campaigns so far. Yet, their downsides, e.g. unpredictable behavior and ageing problem, keep posing challenges for companies. In this context have focused on virtual celebrities with whom businesses may be able to respond to such challenges.

Indeed, virtual celebrities are even more fabricated than their non-virtual counterparts. Everything that is tied to their existence is carefully thought-through and produced. Hence, the virtual celebrity could be an innovative solution to the age-related problems and unpredictable behavior that may lead to scandals. But even though they are fabricated and controlled to a great extent, we illustrated how even virtual idols can still misbehave, e.g. Kizuna AI, which questions whether virtual celebrities in general are as controllable and flawless as we assumed. Based on our results and discussion, we have outlined how these virtual celebrities can be included in marketing or advertising strategies to attract attention. As we have pointed out how virtual celebrities are consumed in the East and West, market practitioners need to take these subtle differences into account when planning on using virtual celebrities in their marketing strategies.

7.3 Perspectives

For now, virtual celebrities are still directed by humans. The next step could be to infuse virtual celebrities with artificial intelligence and let them become their own personality through machine learning. Besides, with advances in technology, it could be possible to have virtual celebrities materialized in the real world or visualize through holograms more actively.

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Appendix 1: Survey

Virtual Celebrity

Q1 **Oh hey there!**

 Thanks for taking 6 minutes of your precious time to answer our survey!   You may (or may not) wonder what the heck we mean by virtual celebrity. So first, a short introduction to the topic: Today virtual characters have become increasingly popular on various social media platforms even to the degree that one can talk about virtual celebrities.

   In our study we will focus only on virtual celebrities who 'seem to live in reality', meaning they are created as if they were people living in the real world, using the same social media everybody else uses, playing live concerts in the real world, etc. Examples of such characters are: the Japanese pop-star Hatsune Miku, the British band Gorillaz, the African model Shudu, or the Brazilian-American influencer Lil Miquela.   This questionnaire is for a Master research project about how people are related to (or could imagine relating to) these virtual celebrities. Your answers will be anonymous and confidential.

  NOTE: Please keep in mind that movie characters such as Superman, Shrek, Alita, Barbie, etc. are not considered as virtual celebrities here, since they have been created as part of a story and are not celebrities who seem to live in the real world among us.

Have fun!

Page Break ───────────────────────────────────────

Q2 Do you know or have you ever been a fan of a virtual character?

○ Yes (1)

○ No (2)

Q3 Which of these virtual celebrities do you know or are a fan of?

☐ Shudu (1)

☐ Gorillaz (2)

☐ Hatsune Miku (初音未来) (3)

☐ Lil Miquela (4)

☐ Kizuna A.I. (5)

☐ Other (6)

Display This Question:

If Which of these virtual celebrities do you know or are a fan of? = Other

Q13 Since you chose 'other' in the question before - which other virtual celebrity(ies) do you know or are a fan of?

_____

Page Break

Q4 How much do you agree/disagree with the following statements?

If you know or are a fan of (a) virtual celebrity(ies), please answer with that/those one(s) in mind. If not, please try to imagine what would be important to you.

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
A virtual celebrity who is not good at anything, is not worth following, in my opinion. (1)	○	○	○	○	○
I would like to follow virtual celebrities who challenge rules within society. (2)	○	○	○	○	○
It would be super cool if I could make the virtual celebrity do something (for example sing a song I composed, wear a T-Shirt I designed, etc.) (3)	○	○	○	○	○
As long as the virtual celebrity looks beautiful, I can overlook its lack of skills. (4)	○	○	○	○	○

I would mind virtual celebrity talking about politics. (5)	○	○	○	○	○
Weed-consuming virtual celebrities would be funny. (6)	○	○	○	○	○
It would be great if I was able to decide the virtual celebrity's looks, e.g. outfit, hairstyle, accessories, etc. (7)	○	○	○	○	○
I would love virtual celebrities that look cute and have big eyes. (8)	○	○	○	○	○
I would be keen on hearing about a virtual celebrity's opinion on the latest fashion trends. (9)	○	○	○	○	○
I want to see virtual celebrities who can also talk back and have an attitude (10)	○	○	○	○	○
I think it is fantastic that	○	○	○	○	○

I think it is fantastic that virtual celebrities will not get old and wrinkly. (11)	○	○	○	○	○
It is important to me that the virtual celebrity reacts to my comments on its social media posts. (12)	○	○	○	○	○
I would be curious about virtual celebrities who take a clear stance on controversial topics such as LGBTQ, feminism, racism, climate change, etc. (13)	○	○	○	○	○
A virtual celebrity should have a social media presence so I can follow it. (14)	○	○	○	○	○

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Q5 Almost there!

Same as before: How much do you agree/disagree with the following statements?

If you know or are a fan of (a) virtual celebrity(ies), please answer with that/those one(s) in mind. If not, please try to imagine what would be important to you.

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
I think it could be interesting hearing a virtual celebrity criticise/praise TV shows. (1)	○	○	○	○	○
An exceptionally smart virtual celebrity or one who is really good at something would fascinate me. (2)	○	○	○	○	○
Even for virtual celebrities, racism is a no-go, in my opinion. (3)	○	○	○	○	○
I only think virtual celebrities are interesting, if I can participate in creating them. (4)	○	○	○	○	○

Virtual celebrities who always act nice and friendly are boring to me. (5)	○	○	○	○	○
I would not prefer a virtual celebrity who dresses more mature. (6)	○	○	○	○	○
A virtual celebrity can be interesting to me even if they only talk about the weather and similar topics suitable for pleasant small talk. (7)	○	○	○	○	○
I would purchase products endorsed by a virtual celebrity that I like. (8)	○	○	○	○	○
The outfit of the virtual celebrity is very important to me. (9)	○	○	○	○	○
I would prefer to follow virtual celebrities who are pioneers and go their own way . (10)	○	○	○	○	○

I would stop following virtual celebrities who use swear words. (11)	○	○	○	○	○
I would like to follow a virtual celebrity who can inspire me in my choice of clothes, music, movies, attitudes, etc. (12)	○	○	○	○	○
Virtual celebrities who share their personal issues on social media would be more interesting to me. (13)	○	○	○	○	○
I would kill for getting the chance to meet the virtual celebrity in real life, e.g. at its concert, a fan meeting, marketing events, etc. (14)	○	○	○	○	○

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Q6 What is your nationality?

_____

Q7 Where do you reside now?

_____

Q8 How old are you?

○ Under 18 (1)

○ 18 - 24 (2)

○ 25 - 34 (3)

○ 35 - 44 (4)

○ 45 - 54 (5)

○ 55 - 64 (6)

○ 65 - 74 (7)

○ 75 - 84 (8)

○ 85 or older (9)

Q9 What is your gender?

○ Male (1)

○ Female (2)

○ Other (3)

Appendix 2: Independt Samples t-Test between Male and Female

T-Test

Group Statistics

	What is your gender?	N	Mean	Std. Deviation	Std. Error Mean
Factor1	Male	141	3.0804	.88676	.07468
	Female	165	3.0475	.85990	.06694
Factor2	Male	141	3.8038	.76384	.06433
	Female	165	3.8374	.75886	.05908
Factor3	Male	141	3.8865	.83231	.07009
	Female	165	4.0109	.73626	.05732
Factor4	Male	141	3.8582	1.03910	.08751
	Female	165	3.9152	.97472	.07588
Factor5	Male	141	3.8475	.99093	.08345
	Female	165	3.8667	.95018	.07397
Factor6	Male	141	3.1773	.76174	.06415
	Female	165	3.0465	.82138	.06394
Factor7	Male	141	3.0567	.86208	.07260
	Female	165	3.1424	.87444	.06808

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Factor1	Equal variances assumed	.118	.732	.329	304	.742	.03290	.10005
	Equal variances not assumed			.328	293.574	.743	.03290	.10029
Factor2	Equal variances assumed	.000	.986	-.385	304	.701	-.03359	.08729
	Equal variances not assumed			-.385	296.001	.701	-.03359	.08734
Factor3	Equal variances assumed	3.899	.049	-1.387	304	.166	-.12438	.08968
	Equal variances not assumed			-1.374	282.138	.171	-.12438	.09054
Factor4	Equal variances assumed	2.529	.113	-.495	304	.621	-.05700	.11525
	Equal variances not assumed			-.492	289.815	.623	-.05700	.11583
Factor5	Equal variances assumed	.248	.619	-.172	304	.863	-.01915	.11115
	Equal variances not assumed			-.172	292.356	.864	-.01915	.11152
Factor6	Equal variances assumed	.627	.429	1.436	304	.152	.13084	.09111
	Equal variances not assumed			1.445	301.949	.150	.13084	.09058
Factor7	Equal variances assumed	.529	.468	-.860	304	.390	-.08569	.09964
	Equal variances not assumed			-.861	297.853	.390	-.08569	.09952

Appendix 3: Total Variance Explained for 28 Questions

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5.321	19.004	19.004	5.321	19.004	19.004	4.325
2	4.075	14.554	33.558	4.075	14.554	33.558	4.071
3	3.846	13.735	47.292	3.846	13.735	47.292	3.450
4	3.270	11.678	58.970	3.270	11.678	58.970	2.950
5	2.105	7.517	66.487	2.105	7.517	66.487	2.417
6	1.237	4.418	70.905	1.237	4.418	70.905	2.143
7	1.186	4.237	75.141	1.186	4.237	75.141	1.685
8	.818	2.920	78.061				
9	.752	2.686	80.747				
10	.648	2.313	83.060				
11	.635	2.268	85.329				
12	.596	2.128	87.456				
13	.492	1.757	89.214				
14	.430	1.536	90.749				
15	.384	1.371	92.121				

16	.348	1.243	93.364				
17	.336	1.200	94.564				
18	.282	1.007	95.571				
19	.256	.913	96.483				
20	.216	.772	97.256				
21	.187	.666	97.922				
22	.151	.540	98.462				
23	.124	.444	98.906				
24	.113	.403	99.308				
25	.078	.277	99.585				
26	.053	.188	99.773				
27	.038	.134	99.907				
28	.026	.093	100.000				