“Help, I don’t want to call..”

A Qualitative Comparative Study between Dutch and South-Korean consumers

on Chatbots and Digital Humans

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Abstract

The consumer experience has become increasingly digital: chatbots have been introduced as a new touchpoint in the customer experience, making the service automated due to Artificial Intelligence. Besides the automation of the online customer service, companies attempt to humanize this interaction by attributing human-like features to the chatbot. The studies conducted on chatbots in the field of e-commerce are mainly conducted on the reception of chatbots, tested in experiment-based research and focusing on the effectiveness of a humanized aspect of the chatbot design. Therefore, a gap in the literature is apparent due to the lack of theoretical depth acquired and lack of contextual understanding of consumers motivations to use chatbots. In other words, academic research has focused on the effectiveness of humanized interaction, but what factors make consumers motivated to use chatbots in the first place? And if they are motivated, how is that preference constructed? This research focused on the digital customer experience as a whole, allowing to incorporate the perceived downsides of chatbots and other preferred touchpoints in the shopping experience. To interpret these motivations, the Uses & Gratifications theory has been utilized. The research used five gratifications of the theory to operationalize the following research question: *How do Dutch consumers perceive anthropomorphic chatbots and digital humans from e-commerce businesses in comparison to South-Korean consumers?* This question was answered through conducting twelve semi-structured interviews among six Dutch consumers and six South-Korean consumers, between 21 and 27 years old. One of the most important results was a new gratification: the preference of social distance. The gratification means that a group of interviewees prefer platonic interaction of chatbots over humanized interaction from digital humans, due to feeling socially anxious when answering according to the social norms. This opposes contemporary research on the humanization of chatbots. However, this gratification does support the theory on Computers As Social Actors (CASA), which assumes that humans will regard a technology as a social entity when assigned social-cues. The research has deepened the U&G theory on chatbots and digital humans, and has found one difference between the perception of Dutch and South-Korean users: South-Korean users have a clear overall preference for platonic interaction, whereas Dutch users acknowledge the positive influence of humanized interaction on their attitude towards the chatbot.

Keywords: conversational agents, anthropomorphism, digital customer experience, e-commerce, uses & gratifications

Preface

With pride and a smile I present my Master Thesis, which was a challenge that uncovered many new aspects of me. I have learned how to learn, and learned how to unlearn. I did not only gain academic skills and knowledge from this Thesis, I gained insights on my functioning and well-being over the past year.

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I want to thank myself, for my endless efforts to write this thesis and concluding my degree in Media & Business. I want to say thank you to the people that show true colors and their honest intentions. Supporting already talented people is easy, supporting to create talented people is grace. A special thanks to my parents, that have sent me endless support messages throughout this journey. A special thanks to my boyfriend, who made me smile every day. A special thanks to all my friends that have been closely involved in my life, I appreciate you so much.

And thank you Rotterdam, the city that gives me inspiration every day! Now it is time to move on from my academic experience and see what the world has to offer!

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1. Introduction

Daily shopping, both online and offline, has become a highly technological experience (Ayuni, 2019; Bilgihan et al., 2016; Briedis et al., 2020). The introduction of 'smart technologies' such as Augmented Reality (AR) and Artificial Intelligence (AI) allows retailers to promote consumer interaction with their products and services in an automated but immersive way (Feine et al., 2019; Foroudi et al., 2018). For example, in 2013, Ikea launched an Augmented Reality application, allowing customers to place furniture virtually in their own homes (Rese et al., 2017). Another example is from South-Korea, where customers can order Domino's pizza via a chatbot of KakaoTalk, South-Korea's most used messaging application, without searching for the nearest Domino's restaurant or finding a phone number (Ji-Young, 2017). By interacting with the automated chatbot, prospective clients have access to the necessary information to deliver the product, without human-interaction. This development has been taking place for several years but is now taking off with the growing possibilities for companies to enhance personalized experiences (Adair, 2019). For example, in 2017, more than 100,000 Facebooks chatbot messengers have been created, illustrating the popularity of the automated service (Feine et al., 2019). Especially with the impact of the COVID-19 pandemic over the last two years, the importance of creating a connection through online channels has grown for businesses (Briedis et al., 2020).

Therefore, businesses have increasingly adopted a chatbot in their digital customer experience, looking for a digital connection with the consumer (Jang et al., 2021; Rapp et al., 2021; Tsai et al., 2021). Furthermore, the chatbots are starting to adopt human features, in order to imitate human interaction (Rapp et al., 2021; van Pinxteren et al., 2020). This development has caught the attention from academic scholars, who are able to research the humanization of technology in the context of a virtual space (Guzman & Lewis, 2020; Rapp et al., 2021; van Pinxteren et al., 2020). However, the contemporary research on humanized chatbots lacks theoretical depth according to Rapp et al. (2021), due to the focus of quantitative experimental studies that measure the effectiveness of humanized interaction instead of focusing on the consumers perspective. Therefore, this study aims to create a theoretical framework for humanized chatbots in the digital customer experience.

However, the situation is more complex than implied. Disparities can be found when comparing Europe with Asia, for example. Despite economically developed countries having a relatively higher rate of smartphone ownership, the older generation has structurally less affinity with the usage of smartphones (Silver, 2019). In some parts of Asia, the adoption of new technology seems to have less resistance, where the older generation is using their

smartphone throughout their daily lives, such as paying for their groceries or texting their grandchildren (Miller et al., 2021). Furthermore, in Japan other technological innovations like service robots with a static interaction seem to be popular, due to the decreased chance of being impolite to a person (Claremon, 2018). These examples illustrate the different factors that can come into play when adopting a new technology, such as economic status and cultural background. This focus is of societal relevance, since the social aspect is often overlooked in research on technological innovations (Greenfield, 2017). For example, the impact technology has in daily life is essential for understanding the technology's function is society. However, studies have focused on the effectiveness of humanized chatbots, which could result in overlooked ethical problems. For example, ethical issues can arise when humans can be deceived to believe that they talk to a human, instead of knowing that they talk to a machine (Rapp et al., 2021). Therefore, the focus on the social aspect and impact on the societal context should be considered for humans and businesses alike.

In this research, a focus on the cultural dimension between Dutch and South-Korean consumers will be investigated. Furthermore, a relatively new technology will be introduced, the 'Digital Human'. This is a form of automated communication supported by realistic 3D visuals, simulating the experience of human interaction (Moore et al., 2022). Since this technology is not yet adopted by commercial businesses in the digital customer experience, this research is the first to investigate this technology in this context, comparing it to the chatbot.

Combining these factors, this research aims to answer the following research question: *How do Dutch consumers perceive anthropomorphic chatbots and digital humans from e-commerce businesses in comparison to South-Korean consumers?* This question will be answered with the support from three sub-questions:

SQ1: *How do chatbots add value to the digital customer experience for Dutch and South-Korean consumers?*

SQ2: *How do Dutch and South-Korean consumers perceive the added-value of the digital human compared to the chatbot?*

SQ3: *How do Dutch consumers perceive the Chatbot and Digital Human in comparison to South-Korean consumers?*

This research is structured in the following way: first, a theoretical background of the digital customer experience, chatbot and digital human will be presented. Afterwards, a focus on the user-experience is created, supported by the Uses & Gratifications theory. These factors will form a theoretical framework, presented at the end of the literature review.

Secondly, the operationalization of the study is outlined, justifying aspects such as the qualitative research design and thematic data analysis. Afterwards, the results are presented from the 12 interviews conducted, combined with comprehensive theoretical analysis. Lastly, the research question and sub-questions will be answered in the discussion and conclusion, as well as limitations and further directions in this research field.

2. Theoretical Framework

2.1 Digital customer experience

Over the past two decades, the internet has been an accelerator in the developments and increasing interest of the online customer experience, specifically facilitated by e-commerce businesses (McLean & Wilson, 2016). The internet was understood as a provider of information to the consumer, but research over the years has argued that the relationship between the consumer and their online experience is more complex (Klaus, 2013; Verhoef et al, 2009). The digital customer experience originates from research concerning the customer experience, which has been studied and defined by different scholars over the years (Grewal et al., 2009; Lemon & Verhoef, 2016; Meyer & Schwager, 2007; Schmitt, 1999; Verhoef et al., 2009). For example, the customer experience is supposedly increasing customer satisfaction, long-time loyalty and therefore higher profits (Grewal et al., 2009). Instead of understanding the interest of the consumer solely in the product, researchers emphasized the experience towards buying a product (Lemon & Verhoef, 2016). One of the first scholars to highlight the importance of the customer experience was Schmitt (1999), he took a multidimensional approach to define the customer experience, including five different experiences: 1) sensory experiences, 2) affective experiences, 3) creative cognitive experiences, 4) physical experiences and 5) social-identity experiences. In other words, Schmitt provided a new way of looking at the customer and the importance of the experience, focusing on the holistic experience when buying a product (Schmitt, 1999). In the following years, research on customer experience has expanded with several constructs such as customer loyalty, customer relationship management (CRM), customer engagement and customer centricity (Lemon & Verhoef, 2016). These examples illustrate the dynamics of the customer experience, which have created new meaning in a changing shopping environment online (Foroudi et al., 2018). Additionally, Meyer & Schwager (2007) describe the customer experience as “the internal and subjective response customers have to any direct or indirect contact with a company” (p. 2). The research focus of the customer experience is therefore

shifting to an online/digital sphere, coming along with new touchpoints driven by innovative technologies (Bilgihan et al., 2016; Foroudi et al., 2018; Homburg et al., 2017).

Homburg et al. (2017) emphasizes the development of new digital touchpoints. For example, the integration of smartphones when visiting an e-commerce website, or the availability of customer service online when the store is closed. This development has caused retailers and researchers alike to rethink the customer experience, due to the added touchpoints and possibilities (Lemon & Verhoef, 2016). Several studies focus on the importance of these innovations implemented in the customer experience (Larivière et al., 2017; Marinova et al., 2017; Rodríguez-Salvador et al., 2016). Since the innovations are of large variety, the examples relevant to the digital customer experience and e-commerce will be highlighted.

Firstly, Internet facilitating devices has grown, such as portable devices like iPads and mobile phones (Bilgihan et al., 2016). Large desktop computers have evolved into mobile phones, enabling the customer to access the Web via WIFI or 4G anywhere they desire (Bilgihan et al., 2016). Consequently, the touchpoints along the customer journey have expanded from offline shopping to different online channels such as websites, platforms, applications and social media (Cheung et al., 2015). This development of online functionalities is also called ‘Web 2.0’, meaning that people get to upload their own information or build their own platforms (Constantinides & Fountain, 2008). Therefore, both hardware and software alike have developed to form the foundations of the e-commerce sector as we know it today. A prime example of these two developments combined are companies utilizing their service in digital platforms, also known as platformization (Lehdonvirta et al., 2020). Amazon.com allows merchants from all over the world to sell their goods, by giving them a platform, while arranging the customer service and the transactions (Lehdonvirta et al., 2020). Digital platforms like Amazon showcase the renewed digital customer experience, since consumers are able to compare prices from products from different companies. Therefore, companies are experiencing the need to differentiate through digital services to engage with the customer (Nisar & Prabhakar, 2017). For example, Amazon offers personal recommendations based on the browsing data of a consumer and delivers a seamless buying process with the help of their AI powered chatbot (Cancel, 2019). Therefore, companies face an increasing challenge to satisfy customer’s needs, according to a study of Turel & Connelly (2013).

The innovations in the shopping experience, online & offline, are therefore increasingly depending on technological elements since it is a part of the customer expectation

(Rodríguez-Salvador et al., 2016). The online customer satisfaction, also referred to as e-satisfaction, can be defined as "the fulfillment of requirements, goals or desires and this can be reflected by the overall customer attitude towards e-commerce retailers, or an emotional interaction with respect of between what online customers expect and what they really obtain" (Hansemark and Albinson, 2004, p. 40).

Different reports highlight the importance of online customer experience and the development thereof. For example, Bilgihan et al. (2016) reported that up to 24 percent of yearly revenue is lost due to poor online user experiences. Furthermore, Deloitte predicts that the development of emotion-sensing software used in shopping experiences will uphold approximately 41 billion US dollars in the global market. The significance for e-commerce businesses to participate in the technological development of the customer experience is therefore important. Besides the constant innovations presented to e-commerce businesses, another prominent event accelerated this: the spread of COVID-19. The pandemic caused an increase of 10 percent in e-commerce sales, specifically in apparel, department stores and beauty products, due to the avoidance of physical contact in brick-a-mortar shops (Briedis et al., 2020).

2.2 Artificial intelligence in E-commerce

With the increased shift to online shopping due to the COVID-19 pandemic, automated customer services became of increased demand of businesses and customers alike (Nagy & Hajdú, 2021). Artificial Intelligence is defined by the European Commission (2018) as following: "Artificial intelligence (AI) refers to systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals." (P. 1). In the case of e-commerce, these goals have resulted in several implementations, such as increasing the accuracy of product recommendations and increasing the efficiency of marketing strategies (Kwong et al., 2016; Weber & Schütte, 2019). For example, artificial intelligence powers the costumer data analysis of Amazon, which recommends products to customers based on related and relevant products for their customers (Weber & Schütte, 2019). However, AI is being implemented in all different stages of the customer journey, from optimizitng the supply chain of the business to automating communication between the business and consumer (Kwong et al., 2016; Larivière et al., 2017; Yoo et al., 2010).The second part of the definition of Artificial Intelligence by the European Commission (2018) illustrates these different purposes:

AI-based systems can be purely software-based, acting in the virtual world (e.g. voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g. advanced robots, autonomous cars, drones or Internet of Things applications) (p. 1).

This research focuses on the software-based automatization of the digital customer service, increasingly utilized in the form of chatbots or voice assistants by businesses (Feine et al., 2019; Larivière et al., 2017; van Pinxteren et al., 2020). As the definition illustrates, chatbots are a software-based AI technology, most commonly deployed on the website of the e-commerce business (Feine et al., 2019). An example of Artificial Intelligence applications in the online shopping experience are voice assistants, which provide voice-automated shopping and data analytics provide the business owner with insights about the consumer while they are shopping (Puntoni et al., 2021). AI can therefore help making the consumer experience more personalized by creating deeper insights about their consumer behavior, but has not fully proven its effectiveness and functionality in the field of customer service yet (Feine et al., 2019; van Pinxteren et al., 2020). The functionality of AI in customer service focuses on the automation in customer service, which puts the technology right in front of the customer to interact with. Therefore, it is a complex area since customers are used to receive service from human interaction, which is now imitated by systems such as automated chatbots, making them function as a social actor (Roy & Naidoo, 2021) For example, Chakrabatri & Luger (2015) describe the limitations of using artificial conversations in customer service, specifically to enrich human relationships (Marinova et al., 2017). These limitations will be discussed in the following paragraph, supported by the functions of chatbots in the online customer service.

2.3 Conceptualizing Chatbots in E-commerce

The increase of technology driven customer service is fostered by the development and usage of conversational agents, which are systems that “mimic human conversation using communication channels such as speech, text but also facial expressions and gestures (van Pinxteren et al., 2020, p.24). In other words, conversational agents encompass different ways of communicating with the consumer, in the context of this research. According to Feine et al. (2019), there are three categories of conversational agents: text-based Conversational Agent (CA), voice-based CA and Embodied Conversational Agent (ECA). Firstly, the text-based CA are known as chatbots, where the communication takes place through text messages (i.e.

typing) (Feine et al., 2019; Rapp et al., 2021). Secondly, the voice-based CA are technologies such as voice assistants, for example the Google home or Amazon's Alexa (McTear & Quesada, 2017). Lastly, the ECA encompasses a relatively new communication technology, utilizing 3D avatars or graphics that are able to imitate a human-like conversation (Pelachaud, 2017). In this paragraph, a focus is put on the developments and current practices of the text-based chatbot, starting with a brief history of the chatbot. In 1966, the first chatbot was developed as a computer program called ELIZA by Joseph Weizenbaum, which enabled "natural language conversation" with a computer (Weizenbaum, 1966, p.36). It operated through the recognition of keywords from the textual input, however, it could be difficult for the user to find the correct keyword (Hasal et al., 2021). From approximately the year 2014, chatbots were able to operationalize increasingly complex tasks, developed by tech-companies such as Microsoft and IBM (Hasal et al., 2021; Grudin & Jacques, 2019). Therefore, chatbots started to gain popularity among businesses due to the higher efficiency of the technology, making its way in the online customer experience (Feine et al., 2019). Specifically, this research utilized the IBM chatbot system 'Watson', which is powered by Artificial Intelligence to reply to natural language questions (Hasal et al., 2021).

With the increased implementation of chatbots in the e-commerce sector, scholars started to re-evalute how consumers relate to such conversational technologies. According to a systematic literature review of the last ten years of chatbots by Rapp et al. (2021), chatbot research has been focused on quantitative experimental research, thus researching the effects of design aspects of chatbots on users. Afterwards, the academic field started to research the efficiency of the chatbot, specifically in the fields of customer service, health/well-being and e-commerce (Rapp et al., 2021). Studies since 2010 have focused on the acceptance of chatbots by consumers or the experience of human-like communication: aspects such as trust, satisfaction and experience were the most commonly researched (Rapp et al., 2021). For example, in a study by Kull et al (2021), 82 students interacted with a chatbot that approached them with an initial 'warm' message versus a competent message. The study focused on the relation to the brand before and after the interaction with the chatbot, which the study concluded to be dependent on the established brand affiliation by the consumer (Kull et al., 2021). The research focused on engagement and its relation to brand self-distance, which translates to the way consumers feel connected to a brand through a warm message of a chatbot.

However, a lack of theoretical development in combination with the results is apparent over the majority of studies conducted in this field (Rapp et al., 2021). Furthermore, current

research highlights the differences in whether humanizing a technology in customer service is effective or not. For example, creating a relationship with the customer through automated conversations, can lead to increasing frustration of the customer when the expectations are not met (Feine et al., 2019). This aspect of humanization is also referred to as 'anthropomorphism', which will elaborated on in the following paragraph.

2.3.1. Anthropomorphism

The humanization of technology is not a new development in the research field of Human Computer Interaction (HCI), which is a multi-disciplinary research field focusing on understanding the interaction of humans and specific technologies (Yen & Chiang, 2021). As explained in the previous section, chatbots are increasingly attributed with human-like features in order to mimic human-interaction through an automated technology, which is referred to as anthropomorphism (Guthrie, 1993; Araujo, 2018; Roy & Naidoo, 2021). Therefore, it is possible for a chatbot technology to be regarded as a social entity, which can foster a sense of personality or relationship with the user (Roy & Naidoo, 2021). This phenomenon is commonly understood through the theoretical lens of Computers Are Social Actors (CASA), which suggests that "people apply social rules and expectations when interaction with computers", such as feelings, emotions or personality (Nass et al., 1994; Rapp et al., 2021; van Pinxteren et al., 2020). For example, a study from Tzeng (2004) showed that when computers apologized for a mistake, they would be seen as increasingly sensitive and therefore less mechanical. This finding is supported by previous chatbot studies, claiming that anthropomorphism contributes to the quality of interaction, which can result in a positive attitude towards the brand that utilized the chatbot (Sundar, 2008; Bente, Rüggenberg, Krämer & Eschenburg, 2008; Kull et al., 2021; Roy & Naidoo, 2021).

For example, a study by De Cicco (2020) covered the attitude of millennials towards social cues of a chatbot. The study is based on the theory of the paradigm 'computers are social actors' (CASA), which builds upon the belief that users will perceive a technology to be social when it shows human-like tendencies(de Cicco et al., 2020). The human-like tendencies were tested through social-oriented interaction and the usage of avatars in the chatbots. The study measured whether these factors influenced the perceived enjoyment and trust, forming a consumers attitude towards the chatbot (de Cicco et al., 2020). They found that the social cues indeed led to an positive attitude towards the chatbot, but also highlighting that trust plays a crucial role in the perception of chatbots in general (de Cicco et al., 2020). Despite the embodiment of research that supports the positive customer perception of

anthropomorphism, other studies suggest that human-like features do not foster relationships with text-based chatbots (Rese et al., 2020; van Pinxteren et al., 2020) . For example, anthropomorphism can deceive the user by creating higher expectations of the interaction with the chatbot, which leads to frustration of the user (van den Broeck et al., 2019). In other words, attributing human-like features to chatbots does influence the quality of the communicative features. However, there is another conversational agent that directly imitates human-like features, utilizing verbal and visual stimuli, which is called a 'Digital Human'.

2.4 Digital Human

As mentioned previously, the third conversational agent was called a 'Embodied Conversational Agent' (ECA), which is a allows interaction, supported through a visually realistic avatar, imitating a human (Feine et al., 2019; Moore et al., 2022). This form of a conversational agent has received increased attention during COVID-19, since elderly were not able to see their family while being in a retirement home, but got offered a digital human to interact with (Deloitte, 2020). However, unlike the chatbot, the Digital Human is not (yet) widely adopted by e-commerce businesses to take part in their customer service (Moore et al., 2022). Therefore, there is no substantial research on the effects of a digital human in the context of online shopping. However, research focused on voice-based conversational agents can explain the functionality of the digital human, since voice assistants like the Amazon Alexa function similarly to a digital human, minus the visual representation (Feine et al., 2019). For example, Rzepka et al. (2020) conducted its research regarding voice-commerce, concluding that consumers had trouble understanding the added-value of a voice-assistant while shopping, due to the inconvenience it solely being verbal communication. Therefore, consumers added that a visual representation would be useful by making decisions while shopping online (Rzepka et al., 2020). Furthermore, Feine et al. (2019) concluded in their taxonomy of social cues for conversational agents, that past research does not cover a comparison between a chatbot and speech-based CA. Therefore, this research attempts to fill that gap by presenting a both a chatbot and a digital human to the participants, which will be elaborated in in the methodology. However, it is of importance to note that this research does not focus on the perception of the Digital Human. This research focuses on the perception of the chatbot, but the digital human will be used as a tool to provoke the participants by presenting a new form of humanized technology. To conclude, this research focuses on the perception chatbot in comparison to the digital human.

2.6 Uses & Gratifications theory

Now that a foundation of background research on evolving digital customer experience has been presented, a theoretical lens is necessary to interpret the perception of the users and chatbots. Since the automated chatbot technology is functioning as a communicator, therefore enabling interaction, the Uses & gratifications theory can be used to understand this interaction (Guzman & Lewis, 2020).

The Uses and Gratifications theory (UGT) is a widely studied approach in the field of Media Studies, which helps understanding people's motivations behind a certain media usage(Sundar & Limperos, 2013; Whiting & Williams, 2013). In Media Studies, the U&G theory is commonly used to interpret why people use certain social media platforms or to understand their motives for consuming certain media forms such as movies or series (Rubin, 2009). The traditional U&G research is an audience-centered approach, focusing on the user's pre-existing needs that are being fulfilled by using a certain medium, therefore being gratified afterwards (Katz et al., 1973).

The U&G theory builds upon the assumption that the audience is active. An active audience have created their own needs and desires, that can be satisfied by using certain media (Rubin, 2009). This is opposed to a passive audience, that has been a common belief at the early stages of Media Studies. For example, the hypodermic needle theory or the magic bullet theory emerged by Harold Lasswell after World War I, explaining the direct effects of mass communications on larger audiences, therefore regarding to them as 'passive' (Nwabueze & Okonkwo, 2018). The U&G theory is based on the opposite belief: the audience is active, therefore disregarding the possible effects of media on the users (Sundar & Limperos, 2013). Instead of asking what the mass communication does to people, the U&G theory originally asks what people do with mass communication and why (Lim & Ting, 2012). With the introduction of radio and other mass communication technologies, two types of gratifications were introduced: hedonic and utilitarian (Culter & Danowski, 1980; Stafford & Stafford, 2004). Firstly, hedonic gratifications refer to the experience when using media, powered by emotions and entertainment (Stafford & Stafford, 2004). For example, a hedonic gratification would be feeling entertained when listening to a comical sketch on the radio. Secondly, utilitarian gratifications refer to the "practicability and usability regarding user's task-based objectives" (De Graaf & Allouch, 2013, p. 1477). For example, one could listen to the radio solely to obtain information about the weather forecast.

Over the years, the U&G theory has received criticism on the accuracy of the theory, since it disregards the effects of media on users (Sundar & Limperos, 2013). In 1983,

Rosenfeld and Lichtenstein were the first researchers that suggested that gratifications are predicted by the characteristics of media. With the introduction of the Internet, new media has been introduced to users, specifically social media (Liu, Cheung & Lee, 2010). With the introduction of new media, new affordances come along. Therefore, new gratifications can be obtained when using this new medium. For example, with the introduction of the smartphone, mobility was a new gratification since users are able to carry their device anywhere (Wei & Lo, 2006). Another example is the social gratification of social media, which allowed users to interact with each other and gain an online network (Whiting & Williams, 2013). In other words, new affordances enable new opportunities while using a medium, resulting in new possible gratifications. Therefore, it is necessary for the U&G theory to recognize the effects a medium has on the needs and satisfaction of users (Sundar & Limperos, 2013).

Secondly, researchers claim that the gratification categories are too broad, therefore not pinpointing the exact gratification that is obtained(Sundar & Limperos, 2013). Many categories are used for decades, due to its wide application to different media. Furthermore, the categories have a lack of depth, since they are being universally applied to different media (Sundar & Limperos, 2013). Therefore, one of the research goals is to reach a deeper theoretical meaning for Uses and Gratifications in the field of chatbots.

The existing literature on Uses and Gratifications in the field of chatbots is present by a handful of studies, therefore remaining limited. Firstly, Rese et al. (2020) formed a modified model of the U&G theory in their research about chatbot acceptance, which includes the following concepts: technological gratifications, entertainment gratifications and the possible risks that would hold back the usage of such technology. The first two concepts are based on the hedonic and utilitarian gratifications, which refers to the experience of a medium and the usability of a medium (Rese et al., 2020). The third concept describes reasons to not use a chatbot, which are the possible risks when using a chatbot, such as privacy issues (Malhotra et al., 2004). The adapted model is based on past a literature review of the U&G theory applied to chatbot studies. Secondly, Cheng & Jiang (2020) have utilized the U&G theory by researching how chatbots impact the user experience. However, the gratification categories differ from Rese et al. (2020), since Cheng & Jiang have identified four gratifications instead of two. The two extra gratifications consist of Media gratifications and Social gratifications. The Media gratification refers to the appeal of the media itself, the chatbot in this case. The social gratification refers to the social presence when using a chatbot, such as a humanized chatbot with an avatar. In the study of Rese et al. (2020), the technology (utilitarian) and informative (media) gratification are combined, which is not preferred according to the study

of Sundar & Limperos (2013), since it creates unclear boundaries. Secondly, Rese et al. (2020) claim that the social gratification is not of relevance in the usage of chatbots, since they refer to a study that verbal and visual cues had no significant impact on the chatbot users (Ciechanowski et al., 2019). However, previous studies presented in this research have shown that anthropomorphic features of a chatbot do have a positive impact on the user (Kull et al, 2021; Roy & Naidoo, 2021; Van Pinxteren et al, 2020). It is acknowledged that not all studies show a significant result on human-like chatbots, however, the volume of the effects of anthropomorphic features are of significance in the current research field. For this study, the following gratifications have been utilized to create a deeper understanding of chatbot usage: Informative gratifications (utilitarian) , Technological gratifications (Media), Social gratifications (interaction) and Entertainment gratifications (hedonic). These gratifications will be explained and justified below by using existing U&G research on chatbots. However, U&G studies that include media similar to chatbots, such as conversational agents as a whole, will be included as well to reach theoretical saturation on the different aspects of the chatbots. Lastly, due to the non-existing literature of U&G on digital humans, studies from voice-assistant or smart speakers will be used due to the similarities in functionalities of voice CA's. (McLean & Osei-Frimpong, 2019; Silva & Bonetti, 2021).

2.6.1 Informativeness gratification [Utilitarian]

The informativeness gratification describes how users are motivated to use a certain technology by seeking for information and to what extent the medium is providing the users with resourceful information (Cheng & Jiang, 2020; Lim & Ting, 2012). In U&G research, this is referred to as utilitarian gratifications, which describes the goal-oriented use of a medium (de Graaf & Allouch, 2013). Therefore, the content of the medium is prioritized by the user, called 'content gratifications' (Rubin, 2009). This gratification is, together with the entertainment gratification, is regarded as one of the traditional gratifications (Sundar & Limperos, 2013). Specifically, the informativeness gratification has been proven to be significant for a positive attitude towards the medium in previous U&G studies (Lim & Ting, 2012; Rese et al., 2020). For example, accuracy and usefulness have proven to add to the 'favorable attitudes' towards the medium when shopping online (Lou, 2002; Siau & Shen, 2003). Furthermore, a positive attitude is found when the user believes that the medium provides a solution, compared to a negative attitude when the solutions are incorrect (Barkhi et al., 2008). These findings are supported by contemporary studies about chatbots. Firstly, goal-oriented chatbot usage has been the main finding of Brandtzaeg & Følstad's (2017)

study, concluding that the majority of the respondents used chatbots for productivity. In the research, 68% of the participants agreed that obtaining information quickly was the main reason of using a chatbot (Brandtzaeg & Følstad, 2017). Furthermore, Mclean & Osei-Frimpong (2019) found that in-home voice assistants are mainly used for utilitarian purposes, for example: "individuals are motivated to use in-home voice assistants to help them complete tasks, look up information, seek support and process orders" (p.35). Lastly, Cheng & Jiang (2020) found that "fulfilling information needs was important gratifications of chatbot services", which determines the user satisfaction. Chatbot functions such as recommending products or providing information during the purchase journey caused users to interpret the chatbot as useful (Cheng & Jiang, 2020). The studies above will be used to operationalize the research, using findings such as a chatbot as convenient, efficient, accurate information and recommendation of products to form the interview questions.

2.6.2 Technology gratification [Media]

The technology gratification refers to what extent the technological affordances appeal to the user and afterwards meet the user's needs (Cheng & Jiang, 2020; Liu et al., 2016; Rese et al., 2020). The concept of 'media appeal' is inherent to the technology gratification, since it describes what aspects of the medium are preferred over other mediums, such as social media platforms (Liu et al., 2016). Additionally, the concept of 'affordances' explains this certain preference over certain media. Affordances are the user possibilities of a medium, which can be enabled by the user itself (Gibson, 1977; Sundar & Limperos, 2013). For example, the chatbot allows users to interact by typing, whereas the digital human only allows verbal interaction. This difference in affordance can create a different type of media appeal to the user, based on their preference or task (Liu et al., 2016). A preferred affordance of the chatbot is the immediate answers, which saves time compared to calling to the customer service and therefore increases the customer satisfaction (Cheng & Jiang, 2020). Furthermore, Jaiswal & Singh (2020) showed in their research about the online customer satisfaction, that customers expect the customer service to be available 24/7 and accessible from anywhere, such as a mobile phone. The chatbot accommodates these needs, since the automated technology is available outside working hours and accessible through the browser on a smartphone or tablet (Kull et al., 2021; Nagy & Hajdú, 2021).

However, the studies of Rese et al. (2020) and Brandtzaeg & Følstad (2017) did not include the Technology gratification when researching the motivations to use chatbots, since it combined the Technology gratification with the Informativeness gratification. However, as

elaborated on previously, Sundar & Limperos (2013) wrote in their study about Uses & Gratifications in the 21st century, focusing on two significant points. Firstly, the uses and gratifications theory is useful for future media analysis and research, but researchers should focus on the affordances of different media (Sundar & Limperos, 2013; Rubin, 2009). This allows the U&G to be formed from the technology to the user and vice versa, instead of the traditional U&G view of an active audience that solely determines its own motivations (Rubin, 2009). Secondly, the current U&G categories are too broad, which prevents achieving theoretical depth when researching user's motivations (Sundar & Limperos, 2013; Rubin, 2009). Therefore, this category is chosen to be separated from the informativeness gratification, in order to allow participants to reflect on their usage and incorporate their answers in the final analysis.

2.6.3 Social gratification [Social presence]

The social gratification is obtained by users through interactivity with other parties through the medium (Bakar et al., 2014; Stafford et al., 2004). The social gratification has been present throughout different media in the past, such as watching TV to have social interaction with friends (Rubin, 1983). With the introduction of the Internet, Stafford et al. (2004) established the social gratification in the Internet, acknowledging the perceived benefits of social interaction when using the Internet. Therefore, with the increased adoption of anthropomorphic features in technologies in customer service, the social gratification applies to the chatbot and digital human (Roy & Naidoo, 2021; van Pinxteren et al., 2020)However, the benefits of social interaction with chatbots has not been agreed upon yet in the contemporary research field. Kull et al. (2021) found that users perceive a social presence as positive and makes customers feel closer to the brand. Additionally, De Cicco et al (2020) found that a social-oriented chatbot increased the users perception of a social presence, compared to a task-oriented chatbot. A social-oriented chatbot is designed to pursue natural interaction and establish a form of relationship with them, whereas task-oriented chatbots solely focus on accomplishing given tasks (Rapp et al., 2021). However, the users should be task-competent, meaning that they are able to use the chatbot easily and place value in the social interaction (Chattaraman et al., 2019). In the case of AI voice assistants, Mclean & Osei-Frimpong (2019) found that the social presence is "a key factor to the success of the technology", therefore being a motivating factor to use this medium (p. 35). Lastly, social and friendly interaction helps to connect with customers emotionally during the customer experience, which can result in customer loyalty in the long-term (Bilgihan et al., 2016).

However, the social gratification is not a universal result from chatbot usage, since social presence can result in a negative attitude towards the medium (Bartneck et al., 2009; van den Broeck et al., 2019). For example, Cienchanowksi et al. (2019) found that users perceive an avatar chatbot as weird, therefore experiencing aversion against the human-like chatbot. Furthermore, Araujo (2018) found that users did not find a difference in social presence between a human-like chatbot and a machine-like chatbot, meaning that users perceive the chatbot as a machine. The anthropomorphic features can also lead to negative reactions, creating aversion against the chatbot (Brandtzaeg & Følstad, 2017; Feine et al., 2019). In the case of the digital human, Moore et al. (2022) found that users felt uncomfortable after interacting with the technology. Therefore, contemporary studies disagree on the impact anthropomorphism has on the customer. By presenting the chatbot and a digital human as stimuli, an emphasis on the social presence will be created. This will allow the participants to experience the difference between a text-based chatbot and a human-like AI technology, focusing on the social presence.

2.6.4 Entertainment gratification [Hedonic]

The entertainment gratification describes how users seek fun or enjoyment by using a specific medium (Cheng & Jiang, 2020; Rese et al., 2020). In U&G research, the entertainment gratification has been associated with different media, such as the television (Rubin, 1983) or social media (Liu et al., 2016). For example, using social media has been linked to killing time or when looking for a fun activity (Liu et al., 2016). This gratification is referred to as a hedonic gratification, since it focuses on the experience the user has during the process of using a medium (Sundar & Limperos, 2013; Rubin, 2009). In other words, utilitarian gratification focuses on the content of a medium, whereas the hedonic gratification focuses on the usage process (Rese et al., 2020; Sundar & Limperos, 2013). The entertainment gratification and occurrence within chatbot usage has been researched in recent studies, pointing out that the chatbot could fulfill the users needs to kill time (i.e. boredom) or seeking fun (Brandtzaeg & Følstad, 2017). For example, users expressed their preference for a chatbot that gives funny answers, which is perceived as entertaining (Brandtzaeg & Følstad, 2017). Furthermore, Cheng & Jiang (2020) stated that gratifications as enjoyment and fun since users prefer these aspects in a chatbot. However, Cheng & Jiang (2020) found that there was a limited effect of the entertainment gratifications on the user satisfaction, while the utilitarian gratifications appeared to be significant for the user satisfaction. Lee & Cho's (2020) study explains the insignificance of the entertainment gratification, since users only

obtain this gratification when regarding the technology as “capable of emotional interaction” (p. 1163). Therefore, the entertaining gratification is able to positively influence the customers perception. For example, when focusing on the whole shopping experience, Lim & Ting (2012) found that entertaining features during online shopping determine a positive attitude from the consumer. In other words, the entertainment gratification is able to influence the customer perception, but did not have a significant effect on the customer satisfaction overall. To conclude, this gratification will be explored by introducing a relatively new innovation besides the chatbot, the digital human, to provoke the user to think about the entertaining aspect during online shopping.

2.6.5 Risks

Besides the obtained gratifications from chatbots, several factors of negatively influence chatbot usage (Rese et al., 2020). These aspects are taken into account since this study explore the motivations of chatbot usage, including negative motivations. There are a few risks to be considered when using a chatbot, starting with privacy concerns. In Europe, the General Data Protection Regulation (GDPR) protects the user’s right of privacy and protects personal data from being utilized incorrectly (Hasal et al., 2021). However, this law only prevails on businesses based in Europe or for services that process EU citizens personal data (Hasal et al., 2021). Besides these regulations, customers perceived privacy can differ based on their own believes about privacy or their affinity with technology (Cheng & Jiang, 2020). For example, Rese et al (2020) concluded that the participants had privacy concerns since the used chatbot was from Facebook Messenger, which was immediately associated with the past occurrence with Facebook and the lack of data protection. Besides privacy concerns, Rzepka et al. (2020) mentions the lack of technical maturity, which explains the influence an incorrect or inappropriate answers a chatbot can have. In the case of voice assistants, Mclean & Osei-Frimpong (2020) found that users worry about personal information being stolen or being tapped by companies, since the voice assistant is present in their own home. These factors influence the user’s sense of trust in the technology, which negatively influences the other gratifications obtained by conversational agents (Mclean & Osei-Frimpong, 2020). Lastly, Rzepka et al. (2020) found that the trade-off between the costs and benefits of using humanized voice-commerce were higher for the costs. In other words, aspects of a lack of control, lack of transparency and a lack of trust were of higher costs compared to the efficiency, convenience or enjoyment. Hence will the above mentioned risks

be incorporated in the operationalization of the research, allowing the participants to reflect on their sense of privacy and security.

These gratifications are used as a basis for interpreting and recognizing the uses & gratifications of the interviewees. As Sundar & Limperos (2013) argue, the U&G theory has the pitfall of being too broad, therefore overlooking any new gratifications or deeply established using habits. In this research, the broad categories are adopted for the interviews, allowing interviewees to elaborate on their personal experience. When necessary, interviewees were invited to think deeper about their user habits, which is analyzed and reported in the results chapter. Lastly, the digital human is used as a stimuli to highlight the humanized aspect of customer service, which puts the chatbot in a different perspective of what interviewees already knew.

2.7 Cultural Dimension (South-Korea and the Netherlands)

Lastly, this research will consider a cultural dimension when analyzing the results. This dimension is based on previous research that established the influence of cultural values on the perception of various aspects of shopping online (Ashraf et al., 2014; Choi & Geistfeld, 2004; Steers et al., 2008). The relevance of a cross-cultural dimension on chatbots has been highlighted by Tsai et al. (2021): “Given the significant influence of cultural differences on consumer behavior, studies comparing consumer responses to chatbots for brand communication in different markets across cultural orientations, economic development, and technological readiness will shed valuable cultural insights” (p. 477). A well-known framework for cultural values is created by Hofstede (2011), which includes an analysis of 76 countries for five cultural dimensions that are determining for that specific society. For example, the cultural dimension ‘long-/short-term orientation’ explains how certain societies are either living in the moment for instant gratification, or focus on the goals in the future and therefore willing to sacrifice daily comfort (de Mooij & Hofstede, 2010). Hofstede’s cultural scores show that the Netherlands have a score of 67 for the long-term orientation, whereas South-Korea scores the maximum of 100, conforming that South-Korea is a long-term society. Specifically, Lim & Ang (2018) showed their study that long-term societies highly value the utilitarian and function benefits of shopping. On the other hand, short-term societies are valuing the benefits of experiential shopping more, such as personal interaction (Shobeiri et al., 2018). Therefore, according to Lim & Ang (2018), Dutch users could perceive the digital human as more beneficial due to its personalized interaction compared to the chatbot.

Besides Hofstede's cultural dimension, South-Korea's shopping experience has been utilizing the incorporation of technologies for many years already (Joo & Sang, 2013). For example, South-Korea's online shopping experience is already highly technological with Augmented Reality, Virtual Reality and Artificial Intelligence applications (Tschumi, 2019). This can be explained by the fact that South-Korea is a 'late industrialized' country, but managed to be a technological hub catered by an internet centered economy (Steers et al., 2008). However, the Dutch online shopping experience has not proven to be technological saturated (Metselaar, 2019). In other words, Dutch consumers could have a lower affinity when using a chatbot or digital human compared to South-Korean participants. Therefore, the Dutch and South-Korean users can showcase whether such technology can result in a difference in perception when using and understanding while shopping.
Combining the aspects of the U&G theory, chatbot usage and the cultural dimension, this research will answer the following research question: *How do Dutch consumers perceive anthropomorphic chatbots and digital humans from e-commerce businesses in comparison to South-Korean consumers?*

In order to answer this question, three sub-questions will support the main research question. The first sub-question is focused on the Uses & Gratifications that are addressed in the interview: How do chatbots add value to the digital customer experience for Dutch and South-Korean consumers? The second sub-question focuses on the possible differences of perception between the chatbot and digital human, since both technologies are significantly different, but current research has not covered the possible differences in perception. Therefore forming the following question: *How do Dutch and South-Korean consumers perceive the added-value of the digital human compared to the chatbot?* The last sub-question focuses on the possible difference in perception of Dutch and South-Korean perception, therefore covering the cultural dimension added in this research. This results in the following question*: How do Dutch consumers perceive the Chatbot and Digital Human in comparison to South-Korean consumers?*

Lastly, the following theoretical framework has been formed based on the literature review:

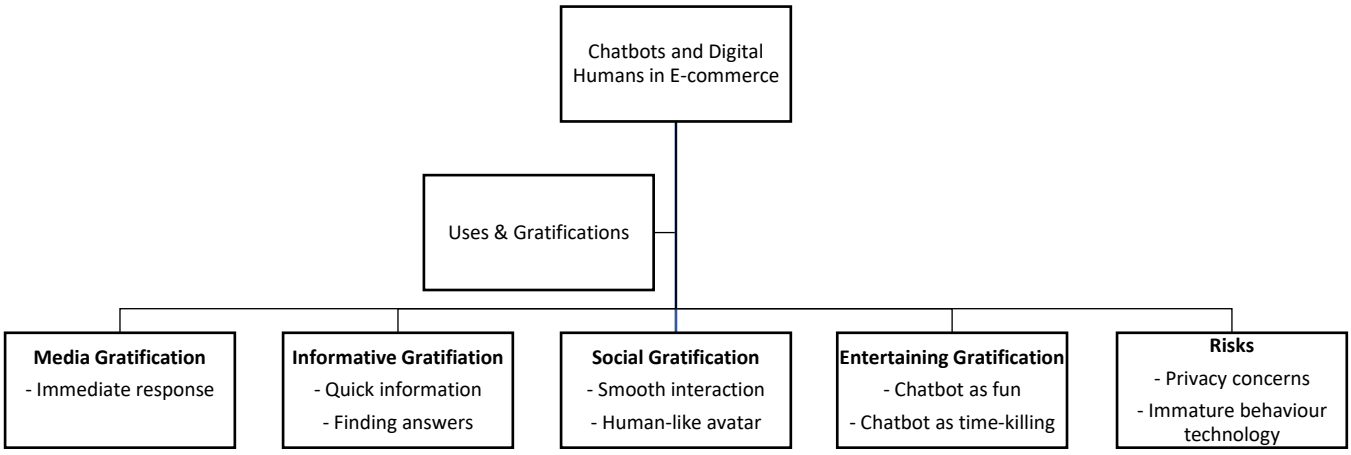

Figure 1- Conceptual Model U&G[1]

[1] The depicted framework is a schematic visualization of the theoretical concepts. This figure does not suggest direct relations or effects between the portrayed concepts.

3. Methodology

3.1 Research Method

This research will employ in-depth interviews as data collection, therefore being a qualitative research method. The qualitative research method is chosen because of the following characteristics: it provides the context necessary to deepen the Uses & Gratifications theory, since interviews allow participants to expand on their motivations to use chatbots. Qualitative research is widely used to understanding people's behavior patterns or deeper thoughts (Bryman, 2016). Bryman (2016) explains that qualitative research "usually emphasizes on words rather than quantification in the collection of data analysis" (p.374). However, since the practices, philosophies and approaches differ within this methodological approach, qualitative research cannot be easily defined. Boeije (2014) argues that qualitative research methods are strategies for systematic collection and organization. Furthermore, qualitative research allows the interpretation of textual material that is gathered through conversations or observations, with the objective to develop concepts. This helps us to understand social phenomena, with the emphasis on meaning, experiences and expressions of the participants (Boeije, 2014). This approach suits the objective of this research since it is focused on understanding people experiences with chatbots and how they perceive them, thus the focus on language being vital. When reviewing the literature on chatbots, the lack of a qualitative approach is noticeable (Sundar & Limperos, 2013). Instead, researchers have been focused on quantifying people's experiences with chatbots rather than understanding how they perceive, and construct experiences. The information is focused on chatbot developers, who get to optimize the effectiveness of its conversational agent (Rapp et al., 2021). In other words, the nature of research, qualitative experimental research, has resulted in studies focused on the design features of a chatbot, such as humanizing chatbots and its effect on customer satisfaction.

Furthermore, the importance of a qualitative study in this field can be illustrated by the thoughts of Greenfield. When studying new technologies, the underlying systems and ethical considerations should not be forgotten. For example, Greenfield has written in his book Radical Technologies that with the introduction of new technologies, the effects should be considered in society (2017). For example, ideologies can be implemented in chatbot's algorithms or chatbots can be used to mislead users by imitating a human. As mentioned before, current studies are focusing on the technical aspects of the chatbot, but the deeper layer of how users understand the chatbot should not be overlooked when implemented in society.

3.2 Research Design

This research employs in-depth interviews as the primary method of data collection. In-depth interviewing seeks to uncover a deeper layer of information and sense of understanding (Johnson, 2011) . This data collective method is chosen over focus groups, since the research is interested in how the individual shapes their motivations for chatbot usage. The word deep has several meanings in this context. First, deep understandings are held by the real-life members of or participants in some everyday activity, event, or place. The interviewer seeks to achieve the same deep level of knowledge and understanding as the members or participants. (Johnson., 2001). Specifically, the interviews were conducted in a semi-structured way. This is a flexible method of data collection compared to quantitative research, which is fully structured. Semi structured interviews allow the interviewee for personal input which is the objective of qualitative interviews (Evers, 2015). However, a main structure is suggested by the interviewer to focus on the research objective. With the flexible nature of the interview, important views of the interviewee are not overlooked and can be investigated further. (Bryman, 2016).

3.2.1 Stimuli

In qualitative interviews the interviewer can use elicitation techniques to help the interviewee think about deeper and specific judgements about the topic (Bryman, 2016; Evers, 2015). In this interview chatbot stimuli have been chosen to make the interviewee interact with a chatbot and a digital human. According to Törrönen (2002), there are three categories in the process of choosing a correct stimulus: a clue or a provoker. A stimulus as a clue means that the interviewee is invited to compare it to all possible options of meaning. With a microcosm stimulus, the interviewee is asked to relate the stimulus to their own norms and values, which forms their reality. Lastly, a provoker stimulus challenges the interviewees existing belief, providing a stimulus which can produce such a reaction (Törrönen, 2002). In this research, the first chatbot stimulus functions as a microcosm stimulus. The second stimulus, a digital human, functions as a provoking stimulus to challenge the interviewees beliefs about chatbots.

Besides the stimulus function to create a detailed reaction about the subject, stimuli need to be chosen carefully (Chrzanowska, 2011). Chrzanowska (2011) emphasizes that stimuli can result in a misunderstanding when not chosen carefully. Therefore, it is important to consider what meaning the presented stimuli present, and how they can possibly be interpreted. Furthermore, the distinction is made between rational and emotional responses,

since the stimuli can trigger different parts of the interviewees brain (Chrzanowska, 2011). Considering these factors, the following stimuli have been chosen:

3.2.2 Chatbot – Vodafone

The first stimulus is the chatbot from Telecom provider Vodafone. The chatbot is called TOBi and was developed by IBM's Watson assistant technology and the Microsoft chatbot (Kerr & Moloney, 2018). The chatbot won several awards due to its ability to serve the consumer from the beginning to the end of the customer purchase journey, meaning it can sell SIM-only plans to the consumers by itself (Davis, 2018). Furthermore, it has proven to quicken the customer experience, resulting in doubled conversion rates (Marketing Week Reporters, 2018). When the consumer starts chatting to TOBi, it sees an avatar with a happy face and wearing a Vodafone hat. Furthermore, TOBi uses emoticons in his messages, giving an informal and expressive impression. This feature was the main reason to choose TOBi as a stimulus, since it encompasses the humanized interface, while functioning as a chatbot. TOBi focuses on answering popular support questions, in combination with customer-specific questions such as phone capabilities (Kerr & Moloney, 2018). The chatbot is able to answer more than 70 percent of consumers questions, which made the stimulus a suitable option since it does not restrict the participants when using the chatbot for a few queries. (Microsoft, 2020).

Furthermore, the chatbot is available in 15 languages, which means it can be used in English for this research. During the interview, participants were given an explanation about the chatbot and its functionalities. Afterwards, they were able to interact with the chatbot for a few minutes to get an impression of TOBi. The participants were given pre-made queries to ensure a consistent interaction, without allowing them to give personal input. Chrzanowska (2011) explained that the researcher should think about the desired outcome and goal of the stimulus, which is gaining insight in the participants view on the chatbot. If participants would be able to interact by themselves with the chatbot, the reactions could possibly lead participants being stuck, which influences their impression. Therefore, suggestions were given such as : "Ask for a new phone plan". Afterwards, the participants were asked about their impressions about functionality, privacy and enjoyment. Lastly, the chatbot was used as a microcosm stimulus, since it presents the basic features of what chatbots offer, combined with the fact that participants are asked about their personal point of view.

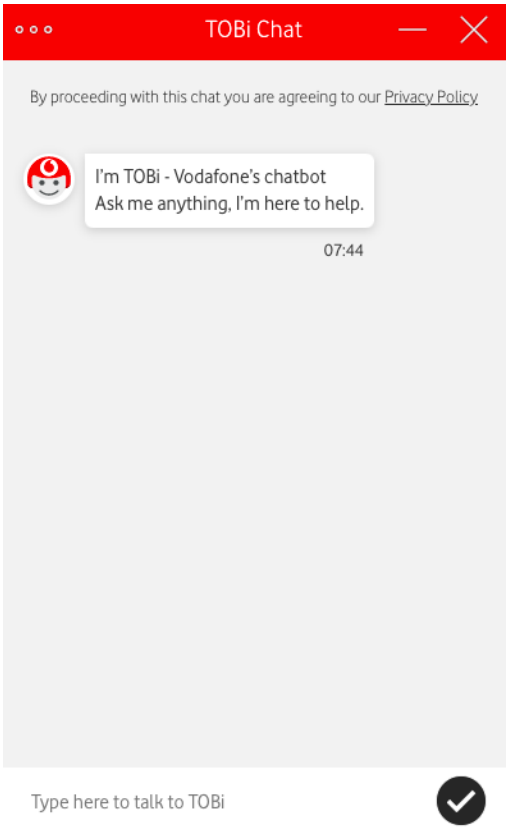

Figure 2-TOBi Chatbot Vodafone (https://www.vodafone.co.uk/contact-us/)

3.2.3 Digital Human - Soul Machines

The second stimulus is a Digital Human by the company Soul Machines. A digital human is, as the name suggests, a human-like being powered by Artificial Intelligence (Silva & Bonetti, 2021). This way of customer service is humanized interaction on an elevated level compared to a humanized chatbot, due to the usage of speech, gestures and text (Silva & Bonetti, 2021). For this stimulus, the participants were first shown a real-life example of a digital human used by Vodafone in New Zealand in-store (ITP, 2018). Since the digital human is only available in New Zealand and not available online for interaction, participants were first shown an introductory video. The Vodafone digital human helps with questions from consumers and making transactions, while maintaining a natural conversation (UneeQ, 2018). The participants were shown a 25-second video of the digital human as an Vodafone employee, which is being introduced by a developer. The video has been adjusted for the research, since it included possible positive influences towards the digital human, such as “it looks pretty awesome” (UneeQ, 2019). Therefore, only practical information has been

included to make the participant imagine how a digital human would function as a Vodafone employee.

Figure 3- Introduction Vodafone Digital Human (https://youtu.be/SePkwuxgsjY)

Afterwards, participants were asked to shortly interact with the Digital Human from Soul Machines, keeping in mind the objective of using a digital human for customer service. The digital human from Soul Machines is named Viola and answers about facts and information you might have about the world (Bellan, 2022). Example questions that users can ask are: “Who is Albert Einstein” or “Where is New-Zealand?”.

This stimulus was used as a provoker, since it is a relatively new conversational assistant. The digital human is currently not implemented by companies in Europe, while digital humans are more common in South-Korea, especially used in marketing and commercials (Lim, 2020; Lee, 2022). It is meant to challenge what the participant already knows about chatbots, provoking its technological acceptance to innovation.

These stimuli were presented during the second half of the interview, since the first half consisted of questions about the interviewees existing perceptions about chatbots. Afterwards, the stimuli were presented, to avoid influencing the responses from the start of the interview.

Figure 4- Digital Human Viola (soulmachines.com)

3.3 Sample method

The interviewees were selected by using purposive sampling. This means that the sample is not randomized, therefore finding the participants strategically (Bryman, 2016). This way, the research purposes are met with a fitting sample group. In this case, the participants need to be familiar with chatbots. Therefore, the sample criteria are that they have encountered a chatbot before while browsing on the Internet. However, they do not need to know beforehand what a digital human is, as it functions as a newly introduced element in the interview. Secondly, the sample group consists of six Dutch and six South-Korean nationalities.

The participants have been chosen by using a snowball approach, since the researcher's objective is to find six native South-Koreans, who have been born and raised in the country. Since the research is being conducted in the Netherlands and the researcher has no direct connections to the South-Korean community, a South-Korean exchange student was contacted to inform about possible participants. Since the student had access to a South-Korean network, the six participants were contacted. Afterwards, the researcher checked whether they conform the sample criteria. Furthermore, special attention was given to the participants occupation and place of birth/upbringing, since this can have an influence on the acceptance of technology (Chung, 2019; Steers et al., 2008). Therefore, a focus had been applied on participants who have grown up in Seoul and Rotterdam to generalize the sample

group and therefore allow comparisons between the two groups. The sample group is depicted in the following table:

Number	Name	Nationality	Gender	Age	Occupation
1	Nahyeong	South-Korean	Female	22	Business student
2	Da-Eun	South-Korean	Female	21	Pedagogy student
3	Nabi	South-Korean	Female	24	Media & Communication student
4	Seo-Jun	South-Korean	Male	22	Economics student
5	Jiwon	South-Korean	Female	22	English language & literature and psychology student
6	Sung-Yeong	South-Korean	Female	22	Sociology student
7	Sunne	Dutch	Female	24	Administration office worker
8	Nathan	Dutch	Male	27	Apple technical staff
9	Kenneth	Dutch	Male	27	Software engineer
10	Jasmijn	Dutch	Female	26	Graphic designer and photographer
11	Jasper	Dutch	Male	27	Business owner media and communication

12	Esther	Dutch	Female	24	Medicine student

Table 1 – List of participants. Note: the names are pseudonyms, protecting the interviewees identity.

For this research a sample group of 12 participants have been chosen for the in-depth interviews. The size of a qualitative research has been debated by many researchers, who claim different sizes for the research. However, they agree that the research should aim for theoretical saturation, meaning that the results of the coded interviews will cover all possible subject among the participants (Johnson, 2001; Dworkin, 2012). In this research, in-depth interviews have been conducted from 45-60 minutes duration, combined with stimuli to achieve the theoretical saturation. According to Hennik & Kaiser (2022), qualitative interviews achieve saturation already in a smaller sample size from 9-17 interviews.

The participants age group range from 21-27 years old, focusing on the younger part of the population. This age range fits the scope of the study, since the sample criteria requires the participants to have pre-existing knowledge about chatbot usage. Therefore, the age group should consist of self-sustaining adults who are actively partaking in the customer service experience. A younger age group can possibly still be partly responsible by their supervisors/parents, meaning they do not have a full view of the customer purchase journey. The age sample group has been based on the second generation of digital natives, referring to people born after 1990 (Helsper & Eynon, 2010). The term ‘digital natives’ stems from the idea that people born after 1980 are grown up with the presence of digital devices (Jones, 2010). However, for this research a second generation of the digital natives will be used since younger adults have a preference talking to a machine, due to its informative function (Brandtzaeg & Følstad, 2017b; van der Goot & Pilgrim, 2019). Lastly, 10 interviews have been conducted in English, meaning 2 interviews were conducted in Dutch since the participants were more comfortable with their mother tongue.

3.4 Data Analysis

The qualitative data analysis that has been used to interpret the interview data is thematic analysis. Thematic analysis is “a method for identifying, analyzing and reporting patterns (themes) within data” (Braun & Clarke, 2006, p.79). Thematic analysis has been interpreted as a tool in qualitative data analysis, without being recognized as an individual analytical method (Bryman, 2016). However, different researchers like Braun & Clarke

(2006) advocate that thematic analysis is an method in its own right. Thematic analysis fits the analysis of in-depth interviews, since it allows the researcher finding deeper meaning in the existing data, which is approximately 540 minutes of transcript (Boeije, 2010). Thematic analysis can be interpreted as summarizing the obtained data (Bryman, 2016). However, Bazaley (2013) argues that it is crucial for the researcher to show how the themes are significant and how they relate to other themes and literature, in order to create insightful meaning from the data. In order to fulfill this process structurally and transparently, Braun & Clarke (2006) have formed a 6-step framework (pp. 86-93).

Firstly, the researcher familiarizes itself with the data obtained during the interviews. Secondly, the coding process starts by using open coding, where the initial codes will emerge. It is important that no emphasis on specific themes is being considered by the researcher, since this stage allows all themes to emerge. Next, the researcher forms potential themes based on the open coding. These themes are being reviewed afterwards, checking whether they fit the initial codes obtained. Lastly, the final definitions of the themes are created by focusing on which story they tell in relation to the original data, which are written down in the results section. The writing step should be considered as an important part, since it needs to present an analysis that goes beyond the original data, supported by examples and relating it to the research question (Braun & Clarke, 2006). The final themes will be interpreted based on the Uses & Gratifications framework, since the theory focuses on motivations why people want to use a certain medium. Based on the topics in the interview, the selected information was acquired, allowing the researcher to analyze the themes based on the Uses & Gratifications model.

3.5 Reliability and Validity

Even though thematical analysis requires structural coding, it has several limitations and critiques. Firstly, thematical analysis is a flexible method, which could allow the personal interpretation of the researcher to prevail. Therefore, the reliability and validity of the study require special attention. The (external) reliability of this qualitative study refers to the which degree this study can be replicated in the same settings, which refers to the consistency of every interview in this research (Bryman, 2016, p. 383). Therefore, a topic guide was used to ensure that the main topics are generalizable over the twelve interviews. Furthermore, the interviews were recorded and transcribed afterwards, avoiding misinterpretations and allowing to relisten the interview. Lastly, notes were made during the interview whether an

issue or possible miscommunication occurs, which can be addressed during or at the end of the interview.

Another value to ensure the quality of the study is validity. The validity illustrates whether the researcher measures what is supposed to be measured (Bryman, 2016). In the interviews stimuli have been carefully selected, in order to ensure that the interviewees understand what is being asked. Specifically, the concept of digital humans are a relatively new concept, which requires extra attention in the interview in the form of stimuli. Furthermore, the researcher is aware of its role and possible influence when interviewing. When conducting the interviews, the theoretical framework is the main focus of the researcher, forming a structure. Lastly, in order to explain the justifications in every step of the formed themes, the coding tree and developed themes are presented in Appendix D.

3.5.1 Trial Interview

In order to increase the reliability and clarity of the interviews, a trial-interview was conducted. The participant for the trail-interview has not been included in the sample group of this research, thus was only involved in the trail-interview. The trail-interview caused a few changes in the Interview Guide. Firstly, the respondent showed that the research topic was not explained thoroughly enough, due to the incoherent answers that did not specifically address the research aim. Therefore, at the start of the interview, it is considered as online shopping, such as browsing and buying. This brought a clearer understanding of participants who could relate to their own shopping experience, bringing depth into the answers. Secondly, the trail interviewee expanded on its own shopping experience in general, without showing a preference for the chatbot. This highlighted the fact that a question should be included what the participants favored or most common way is to contact the customer service, without forcing a narrative on the participant about favoring the chatbot. Lastly, the Uses and Gratifications theory was used to operationalize the interview. However, this was originally used to understand the already existing motivations of chatbot usage. Nevertheless, the trail interview showed that the U&G theory is yields in more specific answers after using the chatbot and digital human stimuli. Therefore, the questions about specific gratifications were solely asked after the interaction with the stimuli. This resulted in the final interview guide, presented in Appendix B.

3.6 Ethical considerations

When conducting in-depth interviews, confidential information is obtained from the interviewees. Therefore, several considerations should be made to ensure the safety and privacy of the participants (Johnson, 2001). Firstly, participants are were informed that all answers are correct and that they are able to share all their thoughts can be shared about the topic. Secondly, the researcher is aware of the 'gender script', referring to the way the gender of the interviewee can influence the discourse of the interview (Broom et al., 2009). Furthermore, ethical judgements are of importance in this research, since this can influence the interpretation of the data between the Dutch and South-Korean nationality. The researcher has acquired affinity with South-Korea when living about in Seoul for a semester, experiencing the people and culture, combined with a long-lasting interest in South-Korean culture. Therefore, the researcher is aware of the possible cultural differences and the importance of showing mutual respect when conducting the interview. This way, the South-Korean participants should feel comfortable sharing their thoughts and feelings while taking part in a Dutch research. Lastly, the privacy and confidentiality should be ensured when requested by the interviewee. At the start of the interview, a consent form was presented for the interviewees to sign, stating that the information will be confidential and asking for their permission to record the interview [see Appendix A].

4. Results

The following results are being demonstrated through the identified themes after coding the 12 interviews in ATLAS.ti. Every theme will contain an explanation of how the theme was created from the identified codes. The five themes are structured according to the three sub-questions. The first sub-question is: How do chatbots add value to the digital customer experience for Dutch and South-Korean consumers? Therefore, every first paragraph of the theme focuses on how the participants perceived past chatbot usage and the usage of the chatbot stimuli. Furthermore, the results will demonstrate the interpreted and analyzed data by revisiting the literature presented from the theoretical framework. The second sub-question is: How do Dutch and South-Korean consumers perceive the added-value of the digital human compared to the chatbot? Subsequently, this question will focus on how the participants have perceived the digital human as first-time usage, interpreting the answers in the context of the established view of chatbots. The last sub-question is: How do Dutch consumers perceive the Chatbot and Digital Human in comparison to South-Korean consumers? In other words, the last paragraph focuses on possible differences of perception between the two nationalities of the participants, using the literature from the cultural dimension to interpret the data. The final answers to these answers will be combined in the discussion chapter, as well as the final research question.

4.1 The chatbot as a problem solver (and not more)

The first theme focuses on the importance of functionality of a chatbot, which is the most common gratification of using a chatbot according to previous research (Brandtzaeg & Følstad, 2017a; Cheng & Jiang, 2020; Rese et al., 2020) The result support the existing research, since all participants agreed that accurate answers prevails over social or fun interaction. The most common reason to use a chatbot was due to the quick and immediate answers, which was coded 32 times over all interviews, being the largest quantity of all codes. Nathan (27, Dutch male) describes this as following: “You just want it to be fast, I think that's the main reason why I use chatbots. For me it's just fast[2]”. This is in line with the research from Cheng & Jian (2020), who found that immediate answers are the preferred affordance of chatbots. Furthermore, the 24/7 availability of the chatbot was a major reason to use it, especially when the regular customer service was closed or not available. This feature is also supported by Jaiswal & Sighn’s (2020) research, highlighting that users value the continuous

[2] The original quote has been translated from Dutch to English for the sake of this research.

accessibility of the chatbot. The importance of functionality and availability was connected with the understanding that a chatbot is a machine and nothing else, according to all respondents. This is in line with Araujo's (2018) research, who claimed that users still perceive the chatbot as a machine, besides the social presence. This opposes the Computers As Social Actors (CASA) theory, which suggests that the social characteristics can foster relationships with the technology (Nass et al., 1994; Tzeng, 2004). The present study showed that even though the chosen chatbot stimuli showed human-like features, such as a name, avatar and phrases such as 'TOBi is thinking..', it had no impact on the participants perception of the chatbot. The analysis showed that the chatbot was seen as a machine, since the answers focused on its 'robotic' functioning. For example, one of the most common narratives in the interviews mentioned the chatbot as a 'simple' technology, opposed to an advanced solution of customer service. There were different reasons as why a chatbot was seen as 'simple'. Firstly, the chatbot sometimes provided inaccurate answers to the users questions during the interaction. As Jiwon (22, South-Korean female) describes: "I don't think it's complicated enough to actually solve my problems". Furthermore, all respondents agreed that it depends on the complexity of the question whether the chatbot would be sufficient or not:

> I think it depends on what my problem is, or what information, what kind of information I want, because if I get simple information or normal thing that I then.. I would like to use the automatic chatbot, but if I have some like complicated problem or I have to refund something then it like I would like to call or talk to a real person (Sun-Yeong, 22, South Korean female).

The fact that the chatbot is seen as a simple technology was highlighted when comparing the technology to human customer service. Especially when the interviewees were asked about a possible replacement of chatbots for face-to-face customer service, all respondents agreed that it would not be sufficient enough. However, the respondents also agreed that as long as the technology provides correct answers, a replacement of human customer service would be accepted in the future. Sanne (24, Dutch female) describes it as following:

> I don't think it would be desirable to replace them completely, because the chatbots just can't answer everything right now [….] the chatbots are not that far yet. So in that sense I

think it's not desirable for now to completely replace them, but I can imagine it happening in the future.[3]

A third reason that was apparent to the chatbots simple image, was the common understanding that the chatbot's software is the most accurate when it recognizes the correct keywords. Therefore, during the interaction with the chatbot, longer sentences were shortened to a few words since the longer questions were not understood. This caused the interactions to be more platonic and less humanized, as Jasper (27, Dutch male) describes: "I already sort of downscaled my interaction, which made it less human […] in order to get a correct answer". Specifically, when Da-Eun (21, South-Korean female) was interacting with the Vodafone chatbot, she proceeded to type an elaborated message about the possibility to increase her data for her phone. This message was in the style of an e-mail, including a 'hi' and full sentences of the problem. However, when TOBi was not able to understand her question, the chatbot clarified that shorter questions have higher chances of being answered. Due to this platonic interaction, the chatbot has not been able to establish a personal connection or relationship with any of the interviewees. This finding opposes the CASA theory (Nass et al., 1994) once again, revealing that adding social-cues to the chatbot does not directly result in a personal connection. Therefore, the chatbot is a robot for the users, instead of a human-like technology or assistant. However, the lack of personal interaction does not seem to bother the participants, as long as chatbot is able to provide a correct answer. In fact, the personalized approach is sometimes not even preferred, which will be elaborated on in the third theme.

4.1.1. Digital human

For all respondents it was the first time interacting with a digital human, resulting in some surprised and impressed reactions. After the first-impression, functionality still was a main priority, but the social interaction was also appreciated:

I think it's better than a chatbot because it's more personalized and it actually listens to you. [..] but it still has to like prove me if it is actually, you know, smart enough if it can actually help me with all my problems and that's something to find out[4] (Esther, 24, Dutch female).

[3] The original quote has been translated from Dutch to English for the sake of this research.
[4] Longer quotes have been cleaned for smoother reading. The meaning of the original quote remains identical, repeated words have been removed.

In other words, the digital human would be a good addition, as long as it gives accurate answers. This finding supports Mclean & Osei-Frimpong's (2019) study, which concluded that voice assistants are mainly used for utilitarian purposes. However, reactions were mixed when asked about the user's preference of a digital human and a chatbot, since some users did not value the social interaction in any way. As Nabi (24, South-Korean female) describes: "If I have some questions or difficulties with your system, so I need you to solve this right now, but it's just to get information or solving my problem, so I think it's not related with personal connections". Furthermore, just like the chatbot, the digital human would be seen as a good replacement, as long as it gives accurate answers: "If the digital human like can answer more complicated questions or personalized situations, then I think it would be a decent replacement, but not yet" (Jiwon, 22, South-Korean female). Therefore, functionality is the main priority for both chatbot and digital human, which is in line with previous studies on chatbots (Cheng & Jiang, 2020; Rese et al., 2020). However, social interaction was placed as a second priority for most interviewees, which will be explained in the next theme.

4.1.2. South-Korean/ Dutch perceptions

The analysis in ATLAS.ti allowed to gain insight in possible differences in the coding of the Dutch and South-Korean interviewees, which showed two results. Firstly, the Korean participants mostly focused their answers on the functionality of the chatbot, such as efficiency, the importance of quick answers, the priority of functionality over social interaction and the importance of easy accessibility of the chatbot. This finding supports the study of Lim & Ang (2018), who stated that long-term societies are valuing the benefits of utilitarian functions higher compared to short-term societies. The Dutch participants also found the functionality of importance, however, 5 out of 6 also mentioned the positive effect the design of a chatbot has on their satisfaction while using the chatbot. Sanne (27, Dutch female) illustrated her thoughts as following: "I'm less likely to get irritated than if you have like something cute, then you get different feelings with it, regardless of whether it's a machine or not[5]". The Korean participants also mentioned it, but only 2 out of the 6 participants found this to be important. An interesting notion is that several participants pointed out the KakaoTalk chatbot, which allegedly functions differently compared to the Dutch chatbots they have used. KakaoTalk is the biggest messenger application in Korea,

[5] The original quote has been translated from Dutch to English for the sake of this research.

which can be compared to what Whatsapp is in the Netherlands. Just like Whatsapp provides chatbots, KakaoTalk provides the same service to businesses. However, the participants pointed out that the KakaoTalk chatbot asks questions after which the user picks an option, without typing an answer. This way, the chatbot directs the customer to the correct direction of what answer they need. According to the Korean participants, this is a very useful way of getting quick and adequate answers. For example, Jiwon (22, South-Korean female) puts it this way: "I think chatbots back in Korea had more options I could choose from but TOBi, this TOBi guy, he tries to conclude things". Therefore, the aim of human interaction and open answers did not result in positive feedback from the Korean interviewees, since it allows a larger room for error, which the KakaoTalk chatbot limits by directing them to the correct answer. This finding once again confirms the fact that long-term societies such as South-Korean citizens highly value the functional outcome while shopping (Lim & Ang, 2018). To conclude, the Dutch participants have shown a larger appreciation of the social design of the chatbot compared to Korean participants. Even though the Korean participants acknowledged it, their focus remained on the functionality of the chatbot.

To conclude, this theme supported existing literature on the utilitarian U&G regarding chatbots. The analysis showed that the CASA theory is not supported, due to the perception that chatbots are machines besides the social cues.

4.2 Social comfort

Even though functionality and efficiency was the main priority for all participants in chatbot usage, the opinions differ about the preferred way of interaction in customer service. One group prefers human-like online interaction, which will be discussed in this theme. The other group prefers a platonic, non-social interaction, which will be discussed in the upcoming theme. The aspect that these groups have in common is that calling takes too much time, when being put into wait or being connected to a wrong employee. However, what distinguishes this theme, is that they have an existing burden to call the customer service. This is an interesting finding, considering that the concept of 'burden' is not included in contemporary research about the digital customer experience. This finding can be explained by the fact that contemporary studies about the digital customer experience focus on what technology or design feature is the most effective, testing this in an experimental quantitative study. However, this excludes different perception on reaching the customer service. Da-Eun (21, South Korean female) describes this feeling of a burden as following:

I use the chatbot a lot because I don't want to bother people calling and like I don't know if it's just me, but I feel like calling is more serious, I have to elaborate my situation very clearly. And if he or she does not understand, I have to go over again and I feel like I'm wasting their time.

This notion of being a burden to the person of the customer service is shared among half of the interviewees, expressing their discomfort in calling or face-to-face interaction. When using a chatbot, the automated contact takes away this personal aspect. The users know that the automated systems have no feelings or thoughts, meaning that they have unlimited time to think about their question or can talk however they want. Furthermore, aspects such as a cute avatar and a friendly sentence resulted in a comforted feeling by these specific users. Therefore, the personal aspect of a chatbot or a digital human does comfort them during their online shopping experience. In previous research about human-like features of chatbots, factors such as relationships, customer satisfaction and engagement are mentioned as results of anthropomorphism (Brandtzaeg & Følstad, 2017; Kull et al., 2021; Tsai et al., 2021). However, the feeling of comfort has not been mentioned or found in these bodies of research. Nahyeong (22, South-Korean female) illustrates this after using the chatbot TOBi:

Yeah it was so cute [TOBi] and I think it's way better than just a chatbot that doesn’t have any name or icon, yeah, I think it's easy to use. Like, when I have a problem with this company, I'm willing to use the chatbot, it makes it more comfortable.

Feeling comfortable was caused due to different aspects of the chatbot, such as a cute avatar, a friendly interaction or certain human-like features. The most common aspects were the presence of a cute avatar and the friendly interaction, which stood out to 7 of the participants. Furthermore, the participants described the chatbot using a pronoun such as he or she to describe the chatbot and/or the digital human. For example: “TOBi is, yeah, he’s cute!” (Nabi, 24, South Korean female). Furthermore, these aspects of the chatbot resulted in some participants to notice a personal connection, however, all of the participants still regarded TOBi as a machine. However, it did result in a more comforted feeling for the user when articulating their issue or seeking help. This notion of comfort can function as a moderator to lower the boundaries to use a chatbot, which increases engagement with the chatbot. Therefore, this aspect should be considered in future research of human-like chatbots.

4.2.1. Digital Human

Compared to the chatbot, the digital human Viola showed a significant amount of human-like traits since the users were able to directly speak to her and watch her facial expressions. This allowed deeper insight in the users that already expressed their distress about calling with people in real-life. Out of the 6 people that feel a burden to call, four actively felt more comfortable with the digital human. The two others felt the opposite: due to the social interaction, it created the same stress as talking to a real human. For the remaining four, the digital human felt like a tool to be more comforted, establishing more of a personal connection compared to the chatbot. Nahyeong shared her perception:

I think it's more comfortable for me to use this when it comes to this customer service. Because I am human, so if I have some problem with shopping, it can be kind of emotional problem, like I can be upset or frustrated. But if I have that feeling, and if I talk to some chatbot which doesn't have any feelings and it could be like feel uncomfortable. But if there is a digital human, which looks like real human, I can be more comfortable. 'OK this can understand me well' So yeah, that's why I prefer digital human.

The quote illustrates the importance of the human aspect in comforting the customer when shopping or asking a question, which lowers the (mental) boundary. Besides the human-like aspects causing a comfortable feeling, the digital human also enabled different gratifications, such as curiosity, fun, entertained and interested in the medium. These aspects are supported by previous U&G research on chatbots and voice-assistant (Cheng & Jiang, 2020; Rese et al., 2020). Since it was the first interaction for all participants, the reactions were mostly impressed but also entertained. These factors combined with the personal interaction, the importance of correct answers seemed to decrease: "It's fun to interact with an digital human being! Even though she didn't really get the correct answers, I think it's interesting for me to find out what she's going to answer me, I think it's interesting in general" (Jiwon, South-Korean female). These findings are relevant for businesses that have implemented chatbots, since digital humans are able to foster a fun experience, whereas the chatbot is mainly associated with the utilitarian functions. In other words, insight is created in which context which conversational agent is preferred by the consumer. The fun and entertained aspect did not prevail in the motivations of digital human usage, compared to the social interaction. However, it can be concluded that the fun and entertained aspect add to the comfortable feeling perceived by the users that generally experience distress with human interaction.

4.2.2 South Korean/ Dutch perceptions

As concluded in the first theme, South Korean users were more focused on the functionality of the chatbot compared to the Dutch users. However, when asked whether they would choose a friendly or a platonic chatbot if both chatbots give a wrong answer, three South-Koreans answered that they would choose a friendly chatbot since it would lower their frustration. Furthermore, the receptiveness of the digital human was equally distributed among Dutch and South-Korean users. The South-Korean users appreciated the new technology by expressed that they were shocked or were curious how this technology worked, whereas Dutch users more seriously analyzed whether this would be a useful addition to their shopping experience. Therefore, no significant differences in perceptions were found between the two nationalities. However, the other half of the users did not share this positive opinion, which will be discussed in the following theme.

To conclude, the avatar from the TOBi chatbot and friendly messages resulted in a comforted feeling from half of the participants. In the U&G theory regarding chatbots, this is gratification of comfort is not mentioned before. Furthermore, the social aspects were not a direct motivation to use the chatbot or digital human again. Therefore, claims from Mclean & Osei-Frimpong (2019) that the social presence is a key factor to success is not supported by this study. However, it can be a supporting factor by creating a sense of comfort for users that are looking for social confirmation.

4.3 No social etiquette

The third theme consists of a combination of the first theme and the second theme. It is a mix of the importance of efficiency of a chatbot and people who perceive stress from human interaction. The result being; a preference of no social interaction or social design. This gratification of anti-socialness has not been present in previous Uses & Gratifications studies, since (social) media focuses on connecting with the user or connecting users with each other (Sundar & Limperos, 2013). Furthermore, the majority of current academic research on chatbots consists of the importance of humanizing the digital customer experience, which this theme is opposing (Kull et al., 2021; Roy & Naidoo, 2021; van Pinxteren et al., 2020). In the previous theme, the socially anxious users were embracing the human touches of a digital human, which made them comfortable. In this theme, the socially anxious users do not prefer any form of interaction, therefore preferring the platonic

interaction with the chatbot, which Sanne (24, Dutch female) describes: “I am much less concerned with how I come across, it doesn't matter with chatbots. There [human customer service] I am overly concerned with how I come across, sometimes”. Therefore, the absence of social constructs are a relief for users such as Sanne. Moreover, the attempt of human-like technology can create frustration or aversion against the chatbot or digital human. When Nabi (24, South-Korean female) was asked about her perception on the presence of human-like technology, she replied in disbelief:

> No, no, it's not my consideration of using chatbots because, why do we need like human appearance that? I just want question and answers and that’s it but there is no need to be like human appearances show up and ‘hi I'm I'm real’ ‘I'm here to help you’ ‘What is question about our service?’ It's too much.

The perception of Nabi supports findings from Cienchanowksi et al. (2019), who claimed that users can experience aversion against a human-like chatbot. The aversion against social human-like interaction in chatbots has been similarly discussed in the first theme, which compliments the users that prefer a platonic interaction. Additionally, these type of users also interpret the chatbot as a machine and interact preferably with keywords, fitting into the functionality theme. However, the difference between these two groups is revealed in their perception about digital humans.

4.3.1. Digital human

Whereas the digital human enabled a comfortable experience for the users in the second theme, the opposite is reality for users objecting social interaction. Firstly, the digital human resembles a real-life human, making the users feel like they have to conform to social norms when interacting with the technology, resulting in a stressful reaction. Jiwon (22, South Korean female) shares this idea by saying that she feels like a burden talking to the digital human instead of the chatbot, since it feels like she’s talking to an actual person. Secondly, the presence of a human-like creature can result in a pressure to react immediately or forming correct questions. Jasmijn (26, Dutch female) experienced this after using the digital human:

> I got so nervous, it's the smile, I think she's looking at me like answer the question answer the question. I'm amazed at how good the animation looks and at the same time it made me really nervous because I felt she was like constantly listening to what I wanted to say.

Jasmijn emphasizes how the human appearance can result in stressful encounters, besides its intentions to help the customer. In other words, the participants connect social rules to the humanized animation, which supports the CASA theory (Nass et al., 1994). Therefore, due to the visual representation of a human and verbal interaction, the users perceive this technology more as human compared to the chatbot. Lastly, the digital human also caused confusion among a few users, being unsure how they should interact with the digital human due to its presence. For example, Jasper (27, Dutch male) explained how he was confused by the animation of the digital human, since it looks artificial. Therefore, the interaction became uncomfortable due to its confusion between a human and a robot, which is supported by the research of Moore et al. (2019), who found that the visualized aspect of the digital human can cause uneasiness for the users. To conclude, the digital human did not add to the customer experience of the users that do not prefer social interaction when seeking customer service. However, the users did connect the digital human to social rules, implying that they see the technology closer to a human. Besides the importance of functionality, the absence of social etiquette is of importance to this group of users.

4.3.2. South-Korean/Dutch perception

Since this theme is a combination of the first and second theme, there are no major new results between the South-Korean and Dutch users present besides the ones mentioned before. For example, South-Koreans have a higher priority for the functionality of the customer service, but they do also accept the digital human as a new technology. The notion of technology is highlighted once more after Nabi's (24, South-Korean female) interaction with the digital human. She explains how the digital human was not able to answer her question and therefore asked her for clarification, multiple times. She noted the following: "I feel uncomfortable about the repeating my questions, especially for Koreans, they really don't want to repeat and they really want to solve their problem right away, so they're so impatient". In this quote, Nabi refers to the quick daily culture present in South-Korea, where productivity plays the main role. Therefore, quick answers are a must when such a customer asks a question without much time on their hands. This could illustrate the difference between the importance of the social interaction of the chatbot between Dutch and South-Korean users.

To conclude, this theme opposes the contemporary research based on the belief that assessing human-like features to technology always results in a positive outcome, it being from increasing engagement or customer satisfaction (Araujo, 2018; de Cicco et al., 2020;

Guzman & Lewis, 2020; Rapp et al., 2021; van Pinxteren et al., 2020). Furthermore, this theme identified a new gratification: this group of users feels satisfied with social distance, preferring a platonic interaction over a humanized interaction. This gratification has not been researched before, which could be due to the focus on researching the effectiveness of humanized technology, overlooking the actual preferences of the consumer during while contacting the customer service. Furthermore, the data also shows a stressful reaction from human-like interaction with the digital human, feeling uncomfortable and pressured to answer 'correctly'. For the group with a preference for platonic interaction, the digital human is not the suitable technology for a satisfactory consumer experience.

4.4 The preferred contact

The first three themes have given an overview why people choose to use chatbots in their daily lives. However, the sample criteria included people with previous experience with chatbots, not with a preference of using chatbots. Therefore, the answers that indicated reasons to not use chatbots or digital human will be considered as well. Firstly, when the participants were asked about their privacy concerns when using chatbots, eight participants replied that they have no direct worry about sharing their information and the possible risks. Therefore, the majority of the participants have no privacy concerns, which opposes the research of Rese et al. (2020), who concluded that privacy concerns significantly influences the intended usage. However, four participants expressed that do not prefer that their data is shared with third parties, since they do not know how their data is used. When using a chatbot, the user does not have to accept a terms & conditions form in order to access the technology. When Da-Eun (21, South-Korean female) was asked whether she trusts the company behind the chatbot, she had the following answer: "Not 100%, so when it's not that urgent, or if it's not a serious question, I just use my fake email address. Just in case, yeah, so they don't sell my personal information". However, safety concerns were not the main reason of the majority of the users. The main reasons of not using a chatbot were connected with the functionality of the chatbot, due to inaccurate answers or inability to help the consumer. This finding supports the conclusion of Rese et al. (2020), since one of the major costs of chatbots is the lack of technical maturity. As explained in the first theme, it depends on the complexity of the problem: does the problem require human input? Or can it be handled automatically? A common answer that reoccurred embodied the fact that some problems do not fit the standard procedure, they need to explain their special situation, combined with the empathy of an

employee. Jasmijn (26, Dutch female) remembered a situation that took place during the pandemic:

I'm just thinking of something like I had to return a package a few months ago or last year already, but I was sick for a long time with covid so I couldn't leave the house. But I used the chatbot, but it gave me a normal answer. When I called someone they're like: 'OK, we'll loosen up the rules a little bit, you can still return it!' But that only happens if you speak to someone who can empathize with your situation, with the chatbot that will never happen, right?

Besides the option of calling and e-mailing, the chatbot was still preferred, but with a real employee answering them. Due to the combination of a chatbot and a human perception, this option was preferred when dealing with complicated situations as well.

4.4.1 Digital Human

Even though the privacy concerns were not significant for the chatbot, this was different for the digital human. When presenting the stimuli, the users were asked to give permission to camera and microphone usage. When this was highlighted afterwards, 8 users expressed their worries about this consent. All of them wondered why camera was mandatory for using the digital human, since this was not disclosed by the company. Interestingly, this aspect is not recognized by Moore's et al. (2022), despite researching the customer perception of the digital human. Nabi expressed her thoughts: "I didn't know that that I really had to turn on my camera because but the microphone is a necessity to use the digital human because I have to talk and she has to hear me, but the camera is..why?". Besides the privacy concerns, the digital human was less preferred compared to the chatbot, due to perception that the chatbot will provide a quicker answer compared to the digital human. 7 users would prefer the chatbot over the digital human, whereas the remaining 5 users would decide depending on their question and surroundings, whether they are able to verbally talk or not.

4.4.2 South-Korean/Dutch perception

As mentioned above, the usage of a chatbot or calling a real employee depends on the problem the consumer is dealing with. This analogy is being shared among the Dutch and the South-Korean users, since they all appreciate the quick features of the chatbot. However, 2 Korean users would use the digital human if it functions accurately, and 2 Dutch users would use it for fun, without guarantee for consistent use in the future.

To conclude, this research suggests that the chatbot is mostly preferred by the twelve participants, only if they have a simple question that they expect the bot to answer. However, the biggest reason of using a chatbot is time saving, meaning that they can multitask and don't have to wait. Therefore, as long as the answers are correct and time is saved, users prefer that medium. These affordances of immediate replies are supported by the chatbots, explaining the preference of chatbots. However, when encountering a complex problem, the chatbot is not a suitable solution anymore, only when a human moderator is answering the question. For both nationalities personal interaction is not the priority when reaching out to the customer service.

4.2 Hacking the system

The last theme combines the 'lost' motivations to use a chatbot, describing the reasons that are not directly associated with chatbot usage. Firstly, Jasper (27, Dutch male) and Nathan (27, Dutch male) explain that they use the chatbot to get the contact information for the customer service. Japser says that companies hide their contact information, which forces you to ask your question to the chatbot, which lowers the consumers that contact their customer service directly. However, Noah and Jasper sent multiple messages indicating their question was not answered, resulting in the a message with the direct phone number. Esther (24, Dutch female) adds to this with her experience at Apple. When she had a malfunctioning laptop, the chatbot indicated if her problem was legible for an employees attention. Jasper (27, Dutch male) also explained that he sometimes uses the chatbot to navigate through the website:

> Sometimes it's just the lazy option instead of clicking through all the menus, because a lot of websites have menus […] And if I sort of feel like I can manipulate the chatbot to get me there faster than just clicking around there, reading everything.

Lastly, chatbots were also used to overcome boredom or curiosity, especially when the design or exterior was appealing. Da-Eun (21, South-Korean female) remembered an encounter with a chatbot during the pandemic while being in South-Korea, Seoul. The chatbot was called 구삐 (Guppi), which means National Assistant in Korean. The chatbot was developed to assist South-Korean citizens after their corona infection or checking their health status after receiving the vaccination. Da-Eun remembers using the chatbot 구삐 (Guppi):

> When I got when I got my vaccine they started to text me like are you OK?

[…] Actually what the bot sounds like ‘Guppi’ that was really cute. Like, really cute way to call an assistant. And I remember I already knew what to do If I get COVID, but I just, I still looked at it because it's really cute and very informative I guess, like, full of information.

She explains that she used that chatbot, even though she had no direct need for information. This notion of curiosity is shared with 3 other participants, that have used a chatbot for the same reason. To conclude, the chatbot is being used for other goals besides acquiring information, such as navigating through the website, acquiring contact information and out of curiosity. This conclusion cannot be applied to the digital human, since the participants used this technology for the first time during the interview.

To conclude, in total five themes were identified. Firstly, the utilitarian gratification has been supported by this study, proving the need for goal-oriented chatbot usage. Secondly, the media gratification has been applied to all different themes, due to the different affordances per theme. The affordances that were the most important according to the data, were the quick and immediate answers that the automated chatbot provides. Due to the automated nature of the chatbot, users perceived the technology as a machine instead of a social actor. Therefore, when comparing the chatbot to the digital human, a preference was shown to the non-human interaction with the chatbot by half of the users. This gratification of social distance is newly identified by this research. Therefore, the social gratification is only supported by half of the interviewees. Participants still showed their appreciation for the humanized interaction, but did not prioritize it during their interaction. Half of the participants experienced comfort through the humanized interaction such as a cute avatar or the digital human, making the threshold for asking questions lower and making the interviewees feel less nervous to contact the customer service. This notion of stress and feeling like a burden to ask a question has not been identified by contemporary research before, which is an essential aspect to understand the perception of the customers since it stops them from interacting with the business. Therefore, this notion of feeling burdened to contact the customer service, should be included in the risks gratification besides the privacy concerns. Regarding the entertainment gratification, half of the users did recognize the fun factors present in the chatbot or digital human. However, it was not of significant importance during the shopping experience. Lastly, the privacy concerns were not of major significance for chatbots. However, the digital human did invade the participants privacy by using both camera and microphone, especially in a private environment. To conclude, the themes do support the identified gratifications in the theoretical framework. However, the research presented a

deeper understanding of the perception of chatbot usage and reasons why certain gratifications take place. Lastly, due to perception that chatbots are human, a new gratification of social distance was identified. Further theoretical implications will be discussed in the following chapter.

5. Discussion and Conclusion

The aim of this research was to create a theoretically supported understanding of the user perception of humanized conversational agents. As mentioned before, scholars have mainly focused on quantitative experimental research to measure the effectiveness of specific design features (Brandtzaeg & Følstad, 2018; Feine et al., 2019; Rapp et al., 2021). Therefore, this study focuses on how consumers perceive the chatbots, utilizing the Uses & Gratifications theory to structure the user's perception. This chapter will answer the final research question: *How do Dutch consumers perceive anthropomorphic chatbots and digital humans from e-commerce businesses in comparison to South-Korean consumers?* This question will be answered by the guidance of three sub-questions. Afterwards, theoretical implications will be given for the Uses & Gratifications theory, relating it to conversational agents. To conclude the research, the limitations will be addressed and final recommendations for future research directions. Lastly, a short practical advice will be given for business owners and chatbot developers.

This section aims to answer the following sub-question: *How do chatbots add value to the digital customer experience for Dutch and South-Korean consumers?* Firstly, the analysis showed that all consumers agree on the importance of utilitarian factors of a chatbot, such as the need for immediate information or seeking for a solution while shopping online. Past U&G research supports this finding, since 68% of Brandtzaeg & Følstad's (2018) respondents used the chatbot for utilitarian purposes. Therefore, the chatbot as a problem solver during online shopping is the biggest added-value according to the participants. However, according to the participants, the chatbot only adds value when providing simple tasks. Therefore, interaction is mostly platonic by using keywords, since it provides the highest chances of a correct answer. Secondly, chatbots were perceived as machines or robots instead of a social-being, besides its anthropomorphic features such as a cute avatar or friendly message. Interestingly, this was not considered to be a negative feature: all participants perceived the functionality of the chatbot to be priority. However, social and entertaining gratifications were still appreciated by half of the participants. For example, a funny or a friendly message had a positive impact on half of the users attitude towards the chatbot. For the other half of the participants, this was considered annoying and unnecessary. In other words, the chatbot mainly adds value to the customer experience by solving the consumers problems. However, the social and entertaining gratifications are considered as positive for the other half of the interviewees. Lastly, chatbots were perceived as machines, which was not considered as

negative. In other words, the anthropomorphic features were not essential for a successful interaction with the chatbot.

The second sub-question that will be answered is: *How do Dutch and South-Korean consumers perceive the added-value of the digital human compared to the chatbot?* The digital human was added to the research as a provoking stimuli, meaning to emphasize the humanized character of a conversational agent. The perception of this anthropomorphic interaction is presented in two-fold: the group of participants that perceived the humanized-interaction as enjoyable, and the group of participants that perceived the humanized-interaction as annoying. Both groups agree on the fact that they feel like a burden when contacting the customer service or feeling social anxiety. However, humanized-interaction is only seen as positive by users that feel comforted by the anthropomorphic features, lowering the barriers to ask a question. On the other hand, the digital human is seen as annoying by users that get uncomfortable by the social rules that are connected to anthropomorphic features. Therefore, due to the sense of being (un)-comfortable due to the humanized-interaction, the digital human is seen as a form of a human actor. Since the chatbot is seen as a machine, it can be concluded that the visual stimuli and verbal interaction of the digital human simulate the human interaction relatively more. Lastly, another added-value of the digital human is seen in the entertainment gratification. Due to the newness of the technology, the participants perceived the digital human as interesting, fun and sparked curiosity. The interviewees did appreciate the new technology, but these factors would not be reason to reuse the platform.

The last sub-question that will be answered is: *How do Dutch consumers perceive the Chatbot and Digital Human in comparison to South-Korean consumers?* To start off, no significant differences found between the perception of the Dutch and South-Korea consumers. For example, both nationalities agreed that the utilitarian gratifications were the most important when using a chatbot. However, there was a difference found in the perceived importance of the social gratification, since the Dutch interviewees agreed that social interaction had a positive influence on their attitude towards the chatbot. Furthermore, the Dutch users concluded that after the utilitarian gratification, the social gratification was the most important. This perception was not shared by the South-Korean participants, who still prioritized their goal-oriented usage. Furthermore, one of the participants addressed the fact that waiting for customer service is highly unfavorable since South-Korean people have no patience due to their productive centered lives. This finding is supported by the study of Lim & Ang (2018), concluding that long-term societies are valuing the benefits of utilitarian

functions higher compared to short-term societies. However, there were no significant differences found for other gratifications and perceptions between the nationalities.

5.1 Theoretical Implications

The theoretical implications will cover three theoretical claims based on the humanized chatbots. Firstly, the literature review revealed that critics of the U&G theory claim that the categories are too narrow and do not focus on the affordances of the technology that form user's needs (Sundar & Limperos, 2013). The thematic analysis has revealed one significant new gratification, which is the preference of social distance. As mentioned before, half of the users preferred a platonic interaction, excluding the humanized interaction. The need for social distance can be formed through the affordance of the text-based chatbot, since it allows users to type their question in basic keywords without applying generalized social communication. Furthermore, this gratification has not been found in the U&G studies on chatbot usage from Brandtzaeg & Følstad (2017), Cheng & Jiang (2020) and Rese et al. (2020). Furthermore, other gratifications were identified, it being of smaller significance but worth of noting. Firstly, the gratification of novelty is present for the digital human, due to the interest of users because of the new technology. Secondly, the gratification of navigation/browsing was found, since users expressed that they use a chatbot for navigating through the website or its offerings. Lastly, the gratification of dynamic control was identified, since users expressed that the chatbot allows them to multitask while working, due to the absence of human interaction. These new gratifications were found due to the qualitative nature of the research, allowing to understand analyze the deeper motivations of participants through interviews, instead of an survey or experiment. Therefore, this research adds to the U&G categories, but also demonstrates the importance of qualitative research in a research field that is focused on technical features from technologies.

The second claim embodies the lack of research on the comparison between a text-based and speech-based by Rapp et al (2021). The analysis of the chatbot and digital human highlighted that the chatbot enables platonic interaction despite its humanized features, therefore being perceived as a machine. Compared to the digital human, the participants perceived this technology as more human-like, by feeling like social rules were attached to the interaction. This finding supports the third theoretical claim of the CASA theory, that implies that technologies with social attributes will be seen as social actors (Nass et al., 1994). Additionally, the feeling of comfort and discomfort were solely identified in combination

with the digital human, further supporting the social presence when using a digital human. Lastly, both technologies cater towards users that experience social anxiety when contacting the customer service, since the consumers can choose their own preferred interaction that is powered by Artificial Intelligence. Therefore, the consumers do not have to interact with a human, which lowers the barriers to ask a question, which can increase the engagement with the brand. To conclude, this research has added theoretical insights to the Uses & Gratifications theory, the CASA theory and filled the gap in research on qualitative methods including a voice and text-based conversational agent.

5.2 Limitations

Despite the considerate choice of adopting a qualitative method for this study, the limitations of such methodology should be acknowledged for transparency of the study. The study utilized thematic analysis, which allows the researcher to structure large amounts of data from the interview. However, a limitation of thematic analysis is the possibility of the personal bias or beliefs to influence the analysis and ultimately the results (Bryman et al., 2016). This aspect was considered by the researcher, utilizing the U&G theoretical framework to analyze the interviews. Furthermore, there was no presence of an intercoder-reliability test due to the scope of the research. Additionally, the sample size consisted of 12 participants, which is a relatively small sample size, which decreases the generalizability of the results. Lastly, stimuli were presented during the study to support the participants view on chatbots and digital humans. However, Evers (2015) emphasized that the stimuli must be chosen carefully, since it can point the research in a specific direction. Therefore, a brand as Vodafone was chosen to represent the chatbot stimuli, since a telecom provider is not considered as a ‘trendy’ product, limiting the occurrence of a brand preference that influences the perception of the chatbot. Furthermore, it should be noted that the research unintentionally focuses on the post-purchase shopping experience, due to the fact that chatbots were perceived according to goal-driven usage. Lastly, as mentioned before, the U&G theory framework has received critique over the years for being a broad theory and lacking a theoretical construct (Sundar & Limperos, 2013). However, these limitations were recognized during the study and attempted to find theoretical depth by reflecting on the newly identified gratifications.

5.3 Future research & Practical implications

As mentioned above, the research has mostly focused on the post-purchase experience of the customer experience, since the chatbots were used to solve problems such as

complaints. However, it would be interesting to see future research on chatbots with different functions in the shopping experience. For example, in the pre-purchase stage customers are orienting on products and looking for information. The chatbot or digital human could take a function of creating a fun online customer experience, instead of solely functioning to solve customers' problems. Therefore, it would be interesting to apply the U&G theory to a chatbot that focuses more on the hedonic process instead of the goal-oriented usage.

Lastly, this research has practical implications for businesses and chatbot developers alike. Firstly, this research has demonstrated the importance of considering the perception a consumer has on the conversational agent and their motivations for using it. It highlighted that humanized interaction is not always the preferred way of interaction with the customer service. Therefore, it is advised that businesses that have adopted any form of a conversational agent to consider whether the affordances of the technology apply to the context it is used in. If these aspects do not align, chances are high that users experience irritation and frustration which can results in a negative online shopping experience. For example, this study highlighted the goal-oriented usage of the chatbot, due to its text-based characteristics. Therefore, implementing unnecessary social cues without proper consideration can lead to incorrect application of the technology in the digital customer experience. This advice also applies to chatbot developers, to apply this holistic view of the digital customer experience while developing a chatbot for a specific brand or business. The chatbot is not a single tool, it is a puzzle piece in a larger process.

Conclusion

The last part of this research will summarize the answer to the main research question, which is the following: *How do Dutch consumers perceive anthropomorphic chatbots and digital humans from e-commerce businesses in comparison to South-Korean consumers?* This study provided an in-depth analysis of the contextual usage of chatbots, expanding the established theory on U&G on chatbots. The research supported previous U&G research on the importance of the utilitarian gratification in chatbots. Furthermore, consumers perceive anthropomorphic chatbots in twofold. The first group experienced social comfort due to the humanized interaction. The second group experienced social discomfort due to the humanized interaction, which was highlighted through the interaction with the digital human. In other words, humanizing technology can be of positive effects, depending on the context it is utilized for. Technology does not have to imitate humans in order to be efficient. Overall, the

perception of utilitarian functions is viewed as the main benefit of the technology during the online customer experience.

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Appendix A. Consent Form

CONSENT REQUEST FOR PARTICIPATING IN RESEARCH

FOR QUESTIONS ABOUT THE STUDY, CONTACT:

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DESCRIPTION

You are invited to participate in a research about chatbots and digital humans. The purpose of the study is to understand how you perceive chatbots in daily usage; i.e. online shopping. Your acceptance to participate in this study means that you accept to be interviewed. In general terms, the questions of the interview will be related to your motivations of using a chatbot. Unless you prefer that no recordings are made, I will use a recorder on my phone to record the interview. You are always free not to answer any particular question, and/or stop participating at any point.

RISKS AND BENEFITS

As far as I can tell, there are no risks associated with participating in this research. Yet, you are free to decide whether I should use your name or other identifying information such as occupation or not in the study. If you prefer, I will make sure that you cannot be identified, by using a pseudonym (a fake name) or general identification by only mentioning age and gender. I will use the material from the interviews and my observation exclusively for academic work, such as further research, academic meetings and publications.

TIME INVOLVEMENT

Your participation in this study will take one hour. You may interrupt your participation at any time.

PAYMENTS

There will be no monetary compensation for your participation. A coffee or tea will be offered for your comfort.

PARTICIPANTS' RIGHTS

If you have decided to accept to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty. You have the right to refuse to answer particular questions. If you prefer, your identity will be made known in all written data resulting from the study. Otherwise, your individual privacy will be maintained in all published and written data resulting from the study.

CONTACTS AND QUESTIONS

If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact –anonymously, if you wish the thesis supervisor Jorge Pereira Campos: pereiracampos@eshcc.eur.nl.

SIGNING THE CONSENT FORM

If you sign this consent form, your signature will be the only documentation of your identity. Thus, you DO NOT NEED to sign this form. In order to minimize risks and protect your identity, you may prefer to consent orally. Your oral consent is sufficient.

I give consent to be audiotaped during this study:

Name Signature Date

I prefer my identity to be revealed in all written data resulting from this study :

Name Signature Date

This copy of the consent form is for you to keep.

Appendix B. Interview Guide

Introduction	Hello, welcome to my research about chatbots for my master thesis at Erasmus University Rotterdam. Thank you very much for your time in advance. 1. First, I would like to have clarify that I have your permission about recording and transcribing. Is that correct? 2. I would like to emphasize that no answer is wrong in this interview. You are free to share your thoughts on this subject as you wish. It is not a quiz, which means your thoughts are always correct. If a question is not clear, feel free to interrupt my at any point and ask for a clarification. We are just having a conversation, so I it is my job to make you feel comfortable in this situation. Do you feel like you are ready for the interview? 3. The interview will involve questions about your chatbot usage and your motivations to use chatbots. During the second half of the interview, I will ask you to use a chosen chatbot. Afterwards, you get to interact with a different form of a chatbot, which will remain a secret for now.
Background participant	4. Now, let's start with the interview. Can you start by telling me a bit about yourself: Age, gender, nationality, occupation, hobbies, affinity with technology in general, checking the sample requirements
Online shopping	5. Where do you online shop on a regular basis? 6. Do you often shop online?
Chatbot usage online shopping **Consumer Needs**	1. Have you ever used a chatbot before? 2. Can you give an indication how often you have used a chatbot? 3. Do you often choose a chatbot? 4. What sort of chatbot have you used during online shopping? How was that experience? 5. Now imagine, you are online shopping and you have a complaint or you need contact with the customer service in general. What is your **preffered / favorite way** to contact the

	customer service of that company? For example, calling, going to the store or a chat online? 6. What is your most **common** way of contact with the customer service? 7. What reasons do you have to use a chatbot? Do you think its efficient, fun or to make a personal connection? 8. What makes a chatbot add value to your shopping experience? Why? 9. If you would make a chatbot, what would be your main priority when making it? Informative aspect, social aspect of a fun aspect? 10. How do you view a chatbot? As a machine or a more personal assistant?
Chatbot Stimulus [TobI]	**Now I'm going to show you an example chatbot from Vodafone, which functions as an online assistant for customer inquiries. You are free to ask any questions you want. I'll give you a few minutes to just use the chatbot. I'll sit next to you, but don't feel rushed otherwise, all interactions are good and nothing is wrong. I'll give you a paper with suggestions if you can't figure it out.** 10 First impression: What feeling pops up after using this chatbot? Frustrating, interested, curious, impressed, entertained, angry, satisfied 11. What did the chatbot look like? Can you describe its features for me? 12. Does this chatbot align with your expectations before the using the chatbot? 13. What did you like about using the chatbot? 14. What did you dislike about using the chatbot? **Technological Gratifications** 15. What do you think about the efficiency or convenience of chatbot? **Hedonic Gratifications**

	16. Do you feel like it was fun to use the chatbot? Why? **Social Gratifications** 17. To what extend did the chatbot make a personal connection with you? 18. Do you feel more comfortable using a chatbot instead of in-person interaction? Why? [other reasons; awkward] What do you think about chatbots as a replacement for human to human customer service? **Perceived Risks** 19. Do you trust chatbots when using them? Are you thinking of the company behind the chatbot who is storing your information? (product interests, personal thoughts). **https://www.vodafone.co.uk/contact-us/**
Digital Human Stimulus [Video]	Have you ever heard about a digital human? It is an avatar created by artificial intelligence. It looks like a human and behaves like a human, but it is only powered by artificial intelligence. It is therefore an automated technology just like chatbots. However, in this case the digital human allows you to interact just like a 'real human'. You can talk to the digital human and it will answer your question. Now, we will look at an example of a digital human as a Vodafone Employee. You will get a view how a digital human functions and how it operates in a Vodafone store. https://www.youtube.com/watch?v=SePkwuxgsjY 20. What is your first impression of this digital human? 21. How do you feel about this way of customer service compared to the chatbot?

Digital Human Stimulus [Viola]	**Explanation Viola** Before using, it is important to keep in mind the Vodafone example, since this interaction is to simulate that experience. However, we do not have access to the digital human of Vodafone, therefore you are going to use another digital human. The name of this digital human is Viola, you can ask her questions about the world in general, a sort of Wikipedia page but interactive. If you can't think of any more questions, I will provide you with example questions, but first I am interested in your interaction with the digital human by yourself. 22. First impression: What feeling pops up after using this chatbot? Frustrating, interested, curious, impressed, entertained, angry, satisfied 23. What did the digital human look like? Can you describe its features for me? 24. Does this digital human align with your expectations before the using the digital human? 25. What did you like about using the digital human? 26. What did you dislike about using the digital human? **Technological Gratifications** 27. What do you think about the efficiency or convenience of digital human? **Hedonic Gratifications** 28. Do you feel like it was fun to use the digital human? Why? **Social Gratifications** 29. To what extend did the digital human make a personal connection with you? Do you value it? 30. Do you feel more comfortable using a digital human instead of in-person interaction? Why? What do you think about the digital human as a replacement for human to human customer service? **Perceived Risks**

	31. Do you trust the digital human when using them? Are you thinking of the company behind the digital human who is storing your information? (product interests, personal thoughts). **https://www.soulmachines.com**
Final comments	**32.** Did your perception change about chatbots after the interaction with the digital human? If you remember your perception about chatbots from the beginning from the interview, did this perception change after interacting with the digital human? If you can compare your experience between the chatbot and the digital human, did your perception that you had about in the beginning of the interview about chatbots change in any way? **Note: the digital human is not considered as a chatbot** 33. Would you prefer a chatbot or a digital human when online shopping? Why? 34. Do you think that the implementation of a chatbot or digital human influences in your opinion about the brand you're choosing in online shopping? 35. Which form of communication would motivate you in future online shopping? [Informative, social or entertaining communication] 36. Do you have any additional motivations of using Artificial Intelligent customer support? **37.** Do you have any last thoughts to add at the end of the interview? **That was the last question, thank you very much for attending this interview and for your time! I will stop recording now.**

Appendix C. Operationalization

	Concept	Focus within phenomenon	Example question
Uses & gratifications chatbots	**Technological/ Informative gratifications**	Convenience	Do you consider a chatbot as an added value? In what way?
		Efficiency	Was the usage efficient in your shopping experience?
	Hedonic gratifications	Enjoyment	Have you ever considered it fun to use a chatbot?
		Passing time	Have you ever used a chatbot to pass time in your free time?
	Social gratifications	Authenticity of conversation	Is a human-like chatbot added value to you? Did you feel like you were talking to a human?
		Connection	Have you ever felt personally connected with a chatbot?
	Perceived risks	Privacy concerns	Have you ever had the impression that your answers were not being disclosed safely by the chatbot?
		Data sharing	Do you trust chatbots when using them? Are you thinking of the company behind the chatbot who is storing your information?
		Immature technology	Have you ever had an unpleasant interaction with a chatbot? Why?

Appendix D. Coding Tree

Uses & Gratifications chatbot and digital human [6]	Entertainment	Boredom
		Curiousity
		Entertaining
		Fun
		Impressed
		Shocking
	Interaction	Exciting interaction
		Negative interaction
		Questions in keywords
	Korea	Quick & Specific
		Kakaotalk chatbot
	Media	Quick/ immediate answer
		Simple questions
		Allows multitasking
		Always available
		Chatbot as machine
		Difficulty keywords
		No social rules
		Easy accessable
	Preference	Chatbot efficient
		Face to face interaction
		Digital human if efficient
	Risk	Ethical worries
		Selling data
		Safety concerns
		Full trust
	Social	Cute avatar
		Friendly interaction
		Name the chatbot
		Second priority
		Human-like features
		Feeling comfortable
		Feeling uncomfortable
	Technical	Accurate answers
		Aquiring information
		Time efficient

[6] Note: the codes are significantly more exstensive as used in ATLAS.TI, having 253 codes in total. However, the most frequent codes have been portayed for the sake of overview.

		Frustrating interaction
		Smart