

“Oh my god, it moves!”

A qualitative analysis of how millennials experience conversational agents of financial institutions.

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ABSTRACT

In the recent years, conversational agents have increasingly been gaining fame for providing assistance in multiple domains, one of which is customer support. With each passing day, more and more industries are implementing this technology to help with menial tasks, and save resources such as money and time. By the same token, financial institutions too have been quick to adopt this technology. While ample attention has been paid to the adoption of conversational agents, not much light has been thrown on its adaptation in these realms based on the needs of the consumer. By using the elements of social psychology and breaking online consumer experience into four elements of namely informativeness, entertainment, sensory appeal, and social presence, this study applies the same to the perception of chatbots and answers the following question: how do millennials experience banking chatbots? To do so, ten in-depth interviews of millennials who had previously interacted with a banking chatbot were carried out and thematically analysed. The results of the study show that how informative and socially present a banking chatbot is, matters most to the consumers, while the entertaining and sensorially appealing elements do not take much precedence in their experience of a bank's chatbot. Just like their bank manager, as long as the chatbot helps with their issues, smiles at them, and keep their money safe, the millennials seem to be satisfied with the experience.

KEYWORDS: *Chatbots, Anthropomorphism, Conversational Agents, Online Consumer Experience, Banks.*

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1. Introduction

“Nevertheless, I believe that at the end of the century...one will be able to speak about machines thinking without expecting to be contradicted” (Turing, 1950, p.435).

At the time, Turing’s (1950) answer upon being asked if machines could think for themselves was considered quite far-fetched. In the digital era of today however, Turing’s (1950) prophecy has proven right in the way that people today *can* speak of machines thinking. Nonetheless, while scholars agree that no machine will ever manage to pass the imitation game¹, they believe his idea of a machine never really being able to think for itself is quite inconceivable (Dennett, 2014). With the colossal digital advancements, and the use of artificial intelligence and robots in both our work and daily lives, we have now reached what Brynjolfsson and McAfee (2014) call the “second machine age”. Amidst this second machine age, Helbing (2019) highlights the importance of deep learning, super intelligence, and machine learning today by comparing it to the value of oil. Owing to this superior technology, it is now feasible to process data that are rather sizable for a human to analyze and interpret (Brynjolfsson & McAfee, 2014).

Artificial intelligence is responsible for transforming all industries, from manufacturing, to health care, and finance. While automation continues to be a key element of the financial sector (Jung et al., 2018), this study will specifically focus on banks. Achieving satisfied consumers is the primary purpose of banks offering new services on their digital platforms. Although human-powered in the past, the banking sector has managed to adapt to the digital era, and is always a pace-setter when it comes to adopting new technologies (Eren, 2021). Under the umbrella term of Fintech, innovative technologies are deployed in multiple regards to meet customer demands and needs in banks (Belanche et al., 2019). Through the deployment of chatbots, banks have managed to reach a much wider customer base by being able to perform customer service activities more conveniently (Doherty & Curran, 2019). Fueled by advances in artificial intelligence, softwares are constantly replacing humans in several areas of banking services, one of which is that of customer service. As chatting increasingly becomes the preferred way of interacting with the consumer (Adam et al., 2020), chatbots have recently regained their fame for being able to simulate human-like interactions (Pfeuffer et al., 2019). Shawar and Atwell (2007) define a chatbot as “a software system, which can chat or interact with a human user in a natural language” (p.29). Customers use this technology to acquire information, and to receive assistance from their banks (Trivedi, 2019). Over hundreds thousand chatbots have been implemented on Facebook Messenger itself, with their goal of administering menial tasks such as providing flight information, to more complex ones like giving financial and health advice to consumers (Araujo, 2018).

¹ Now called the Turing test (Dennett, 2014)

As artificial intelligence increasingly becomes an imperative element of most business functions, most consumers are now interacting with automated functions, one way or another (Eren, 2021). This is particularly accurate for the younger generation, more specifically, millennials². With technology being a significant part of their daily lives (Moore, 2012), millennials are often expected to be the most crucial customers for any business. Making them the front runners when it comes to supporting and accepting new technological advancements (Dorothy & Curran, 2019). Furthermore, having been the first to encounter the smartphone and internet era, millennials expect a customized service with the least possible delay (Cicco et al., 2020). Their everyday use of smartphones, also results in them having a preference for texting over other forms of communication (Vincze, 2017). The same stands true in the case of customer support, where millennials have similar requirements of informal responses, real time nature, and being available at all times to provide help (Mero, 2018) from the other party. Resulting in chatbots becoming millennials' preferred choice for obtaining client service by fulfilling their need for efficiency and customization (Chung et al., 2018). By this regard, chatbots may end up serving as a competent alternative, if not outright replacement, for traditional methods of customer support.

The research is based on the idea that to be able to create socially adroit technologies, appropriate theories may not only be adopted, but adapted to fit the new context. In the academic and scientific regard, by drawing upon the theories of social psychology (Gergen, 2012), this research assumes the four elements of cognition, affection, senses, and social and applies it to the online consumer experience. By adopting a polysmic account of online user experience (Bleier et al., 2019) and applying it to banking chatbots in order to analyse the perceptions users attach to the same, this study contributes to expanding the line of research that is arguing for the inclusion of consumer perspective when trying to implement chatbots into a business (Trivedi, 2019). In this sense, it refuses to reduce a chatbot as a part of the whole banking experience of a consumer, but focuses the consumer experience on the whole chatbot journey instead. Additionally, several scholars have debated the equivalence of human to human reactions to reactions of human to artificial beings (Nass & Lee, 2001; Rickenberg & Reeves, 2000). The study expands on the human to bot interaction by understanding in-depth the reactions of the user, along with their expectations from the chatbot. Drawing upon the existing studies based on the role of a robot advisory used by banks (Cooper et al., 2019; Hodge et al., 2020), and determinants of customer satisfaction in the use of a chatbot (Eren, 2020), the study explores how the consumers feel about these elements, and whether they have an affinity or aversion towards advice and assistance delivered to them through a virtual assistant. The present study complements Sanny et al. 's (2020) recognition of the effect that a chatbot has on an individual's acceptance of a bank and the application of chatbots for business purposes (Araujo, 2018). It is based on the premise of a social relationship perspective (Brandtzaeg and Følstad, 2017)

² The generation born between 1981 and 1996 (Cicco et al., 2020)

that chatbots can be seen beyond a productive tool as a source of interaction that bears social value. In doing so, the study expands on whether the employment of a chatbot technology influences the consumer experience positively, or whether the consumers prefer a human customer agent instead.

Furthermore, societal and social relevance is provided by the objective of the study. As chatbots advance faster than ever (Cicco et al., 2020), they convey several emotional, and psychological outcomes for the user (Ho et al., 2018), therefore needing critical inspection. Since the attribution of mental states is common and partially rooted in human behaviour (Goodson, 2005) in order to allow interspecific understanding (Beetz et al., 2012), this study aims to understand whether the same beliefs extend to automated beings. In the sense that it focuses on what expectations people have from chatbots, and whether certain anthropomorphic features are arbitrary for a chatbot. The results of this study aim at helping improve the consumer experience by finding out the essentials that do influence the experience for the user by drawing further the findings of Adam et al. (2020). The stimuli used in this study help investigate how the different features of a chatbot influence a millennial's attitude and overall perception of the technology. Expanding on that, the study helps to provide an extensive overview of the new forms of contact between a consumer and a bank by emphasizing on the contemporary feature³ at the core of the banking industry's digital transformation.

Considering all of the above, the concept of consumer experience has been subdivided into specific fragments that are known to be elements of consumer experience as a whole. The first sub-concept encompasses the informativeness of a banking chatbot. As discussed in the following chapter, informativeness can help enhance the consumer experience in a multitude of manners (Bleier et al., 2019; Chen et al; 2002; Hsieh et al., 2014; Lim & Ting, 2012; Verhoef et al., 2009). For that purpose, the first sub-question to be formulated is: *How do consumers perceive the informativeness of a banking chatbot?*

Secondly, scholars argue the significance of entertainment of a chatbot in relation to the online consumer experience (Babin et al., 1994; Bleier et al., 2019; Hsieh et al., 2014; Mazaheri et al., 2012). To understand how entertainment influences consumer experience, the second sub-question devised is: *How do consumers perceive the entertainment of a banking chatbot?*

Additionally, the relevance of sensory appeal as an aspect of consumer experience has been discussed in existing academic literature (Bleier et al., 2019; Gentile et al., 2007; Hulten, 2011). Therefore the third sub-question conceived is: *How do consumers perceive the sensory appeal of a banking chatbot?*

Lastly, social presence has been discussed extensively as an influence on a consumer's experience online (Bleier et al., 2019; Gefen & Straub, 2003; Heerink et al., 2010; Van Doorn et al., 2017). Thus, the fourth sub-questions aims at answering: *How do consumers perceive the social presence of a banking chatbot?*

³ Chatbots and virtual assistants

The current research draws upon these sub-questions and embarks to qualitatively thematize the problem, expanding on previous consumer experience social studies specifically in the case of chatbots used by banks. Therefore, the following research question has been developed: *how do millennials experience banking chatbots?* Specifically, the current study focuses on banking chatbots along with the concept of anthropomorphism, as the main purpose of a chatbot is to use natural language processing⁴(Ischen et al., 2020), which is essentially a simulation of human conversation, that ultimately is a human feature. In order to answer the research question, ten online in-depth interviews of millennials that have previously interacted with a banking chatbot were conducted.

This study is divided in the following chapter structure. First, a review of the literature is introduced to outline the theoretical analytical framework that assisted in the data analysis and the interpretation of the results thereafter. Accordingly, social theories of online consumer experience are reviewed along with social studies of anthropomorphisation. Secondly, a detailed account of the methodology is presented, outlining the methodological execution of the online in-depth interviews conducted in order to answer the research question of the study. Followed by the reflections on the epistemological dimension of the data analysis of the corpus of transcriptions. Following which, the results of the study are discussed in detail and illustrated through individual excerpts of the interviews. Lastly, the conclusion aims to ground the results of the study comprehensively within existing academic debates surrounding social studies of anthropomorphised chatbots and online consumer experience. Additionally, this section also presents the limitations of the study along with suggestions for future research.

⁴ “Natural Language Processing (NLP) is an area of research and application that explores how computers can be used to understand and manipulate natural language text or speech to do useful things” (Chowdhury, 2003, p.51).

2. Theoretical framework

The second chapter provides an overview of existing literature, including the most relevant concepts and theories vital in answering the research question. By reviewing present literature, this chapter draws a conceptual framework that was developed to serve as a measurement tool for the empirical part of this research.

2.1. *Chatbots in banking*

Past studies have often termed information systems that allow human users to interact with them using natural language as conversational agents (Maedche et al., 2019; Morana et al., 2020; Nuamaker & Briggs, 2011; Shawar & Atwell, 2005). Griol et al.(2013) define Conversational agents as “a software that accepts natural language as input and generates natural language as output, engaging in a conversation with the user” (p. 706). This ecosystem of information systems includes text- based (Araujo, 2018; Dale, 2016), voice-based, embodied conversational agents (Cassell et al., 2000). For the purpose of this study, I will be focusing on text-based conversational agents, also called chatbots.

As conceptualized by Tintarev et al. (2016), chatbots are automated advice providers that can help expedite the decision making process through interaction via a chat interface (Shawar & Atwell, 2007; Schlicht, 2015). Composing the terms ‘chat’ and ‘robot’, chatbots are a technology that, with the help of Natural Language Processing softwares, simulate human language (Sanny et al., 2020) and interpret it when it is in auditory or textual format (Shawar & Atwell, 2007). By learning from its own communication experiences and improving its communicative competencies, a chatbot is able to provide answers and help users with their issues while also understanding their intentions (Kaczorowska-Spychalska, 2019). The first mention of a chatbot appeared in Turing’s (1950) study in which he proposed a method called the Turing test to measure whether an interaction is with a bot, or a human. Following which, Weizenbaum (1966), a computer scientist at MIT, designed and published a study on the first chatbot ELIZA that could simulate a human conversation based on pattern matching algorithms, and the rest is history. ELIZA’s programming was rather simple, “consisting mainly of general methods for analyzing sentences and sentence fragments, locating so-called key works in texts, assembling sentences from fragments, and so on” (Weizenbaum, 1976, p.188). Subsequently, since ELIZA’s debut, extensive research has been conducted in order to advance these natural language processing algorithms (Araujo, 2018; Morana et al., 2020), resulting in chatbot architectures with improved, and increasingly accurate conversational capabilities (Shah et al., 2016; Shawar & Atwell, 2007) being wielded in countless domains (Seeger et al., 2017). One of which is customer service in banks.

Service quality and service efficiency in terms of time, costs, and customer experience are the key challenges for customer service providers in all domains (Huang & Rust, 2017; Meuter et al., 2005). While self-service technologies are not a new concept in banking, these technologies lack the

social prowess to engage customers, and the capacity to develop lasting relationships with the consumers (van Doorn et al., 2017). Increase in customer service and improvement in delivery of services are vital for modern financial services to be able to gain a competitive edge over their adversaries, which is why they have a great focus on expanding and advancing their technologies (Doherty & Curran, 2019). Chatbots as stated by Roznovsky (n.d.), can help increase the productivity of bank personnel, provide a more personalized experience for the clients, enhance the communication by making it more convenient and fast-paced, and provide round-the-clock support. Machine learning allows chatbots to tend to requests better, resulting in exceptionally high customer expectations from chatbots in the case of customer service (Xu et al., 2017). Furthermore, consumers prefer brands that offer chatbots, provided they get the right experience (Price, 2018). The initial success of chatbots, according to Trivedi (2019), is apparent from the enormous repetitive clientele of the technology. As chatbots become the preferred option due to their ability to enhance customer encounters, improve service quality, and offer cost-saving opportunities (Gnewuch et al., 2017; Scherer et al., 2015), Shevlin (2021) refers to banks that do not deploy a chatbot in their digital transformation strategy as delusional.

By the same token, Reddy (2017) reveals that chatbots are expected to help businesses save more than 8 Billion USD by the year 2022 by dealing with routine questions, decreasing response time, and freeing up time for agents. Additionally, from the users perspective, Hill et al. 's (2015) study found that users were extremely comfortable interacting with chatbots, sending them twice as many messages as opposed to a human agent. In addition to having a more intuitive and comfortable interaction with their banks through a chatbot (Jones, 2020), over 70 percent users also prefer to speak with a chatbot in the case of simple queries (Shevlin, 2021). Adding to which, Gockley et al. 's (2005) study demonstrated how people build relationships with a robot serving as a receptionist. Frequent visitors often stayed and listened to what the robot had to say, regardless of the fact that it was a robot. As it had a face on the screen, people's knowledge of it being a robot had little impact on their interest in its stories. Although demand for these conversational agents are on the rise, there is still skepticism when it comes to these technological artifacts, and their acceptance (Go & Sundar, 2019).

Furthermore, studies in the past have claimed that the conversational ability of a chatbot makes the technology inherently similar to humans (Shah et al., 2016). Although they are intrinsically alike to humans in some ways, of the innumerable advancements constantly being made to the chatbots in terms of the algorithms and presentation, making them more 'human' seems to be accelerating. The existing closeness, and the advancements may soon require people to "remind themselves that they are interacting with machines not people (Candello et al., 2017, p. 3476). The apparent presence of human features in a chatbot results in the need to understand how consumers perceive and accept a chatbot considering it is not a human (Westerman et al., 2019). For that reason, this paper will also focus on the concept of humanization, also known as anthropomorphism.

2.2. *Anthropomorphism*

Epley et al. (2007) define anthropomorphism as “the attribution of humanlike properties, characteristics, or mental states to real or imagined non-human agents and objects” (p. 865). While the definition itself is quite broad and ambiguous, it is apparent that the idea of “human” is quite central to the notion of anthropomorphism (Root-Bernstein, 2013). For that purpose, it is important to define what these human-like characteristics that sets them apart from non-humans are (Root-Bernstein, 2013).

Ruijten et al. (2019) after examining existing studies, proposed a general categorization of human-like characteristics namely appearances, emotions, and thoughts. First of all, appearance refers to physical and behavioral human characteristics. These refer to how a human looks, moves and behaves. A measurement scale developed by Bartneck et al. (2009) measures appearance by asking people to rate the extent to which the stimuli looks like a human and shows human-like movements. The items on the scale focus on characteristics of the human body, the manner in which a human moves, and the human facial structure. Additionally, emotions include attributes that display subjective conscious experiences (Ruijten et al., 2019). Shaver et al. (1987) organized a hierarchical overview of 125 different emotion words listing them in primary and secondary order. The study sorted these emotional experiences into five main emotions namely fear, anger, love, sadness, and joy (Shaver et al., 1987). Eyssel et al., (2010) applied these primary and secondary emotions to measure anthropomorphism in their study. The same will be used to operationalize emotions in the current study. Lastly, thoughts refer to cognitive process and states (Epley et al., 2008) including intentions, desires, free will, and consciousness (Waytz et al., 2010). These mental states exclusive to humans were termed by Hume (1757/1957) as “thought, reason, and passion” (p.xix), while Gray et al. (2007) refer to them as an individual’s experiences and agency. An imagined or real non- human agent according to Epley et al. (2008), is anything that is believed to act, or does act with perceptible independence. Thus, cognitive abilities cannot be inferred from one’s physical being, but their behavior instead (Ruijten et al., 2019). Refining the Godspeed scale created by Bartneck et al., (2009), Carpinella et al. (2017) developed the robotics social attribute scale developed (RoSAS). The RoSAS that will be used for the operationalization divides social cognition into warmth (feeling, organic, compassionate, and social), competence (knowledgeable, interactive, responsive, capable, competent, and reliable), and discomfort (aggressive, awful, scary, awkward, dangerous, and strange).

It is also good to note that anthropomorphism is anything but a new concept. Since time immemorial, people of all cultures have attributed different types of human characteristics to non-human agents not only in religion (Guthrie, 1993), but also in philosophy (Feuerbach, 1873/2004), science (Darwin, 1872/2002; Freud, 1930/ 1989), art, and their daily lives (Guthrie, 2008). The first known account of anthropomorphism is Xenophanes’ (6th century B.C., as cited in Leshner, 1992) mention of it, where he criticized the human propensity of making religious agents similar to themselves. Realizing the rationale behind the human tendency of anthropomorphizing non-human

agents helps understand this phenomenon better (Pfeuffer et al., 2019). For this purpose, Epley et al. (2007) proposed a model with three psychological factors affecting people's need to anthropomorphize. First, effective motivation involves an individual's need to effectively and competently interact with their environment (Epley et al., 2007). The likelihood of anthropomorphizing increases when people are motivated to understand the behavior of the non-human, have a desire to control and predict their environment, and carry on until they have less uncertainty with the agent and an explanation for the agent's actions (Epley et al., 2008). Secondly, social motivation covers people's need for companionship and relationships (Aggarwal & McGill, 2007). Individuals who are lonely or have a higher need for social connections and relationships in their life often try to fill this void, and compensate for it by treating non-human agents as human (Epley et al., 2007). Thirdly, elicited agent knowledge covers how using the knowledge they have of themselves, people tend to ascribe human-like characteristics to make sense of the world that they know less about (Aggarwal & McGill, 2007). It is guided by the basic properties of acquiring knowledge, activating it, and finally applying it (Waytz et al., 2010). As knowledge about self is more readily available to them at the time of judgment, they use it until they have made a more appropriate mental model for reasoning of the agent (Epley et al., 2007).

Furthermore, anthropomorphism has a great influence on how humans behave, choose, and act lawfully (Zlotowski et al., 2015). Building on this common tendency, the use of anthropomorphic form ranges from amplifying religious beliefs to effectively selling products (Aggarwal & McGill, 2007). Ample research supports the idea that anthropomorphism has positive effects on consumer behavior and evaluations (Adam et al., 2020; Araujo, 2018; Cassell & Bickmore, 2000; Go & Sundar, 2019; Nunamaker et al., 2011; Sheehan et al., 2020; Van Doorn et al., 2017). This is where the anthropomorphism of chatbots makes way for itself. Due to a bot's high anthropomorphic ability, how it can be used to increase the effectiveness and efficiency of the bot is a theme extensively addressed in the field of human-robot interaction (HRI) (Zlotowski et al., 2015). However, as natural language stems from human communication, it is natural for chatbots to have an extent of human likeness (Kiesler et al., 2008; Seeger et al. 2017). Due to which marketers often encourage brands to anthropomorphize as much of their interactions with consumers as possible (Aggarwal & McGill, 2007). Humanized interactions with the brand are believed to foster relationships and impact the brand's perceived credibility (Sheena, 2012). Meanwhile, there are others that advocate the alternative.

Ho and MacDorman (2017) imply the non-linearity between the humanness of a machine and positive user perception, while others highlight the tendency of humans to trust automated systems more than other humans through automation bias literature (Dzindolet et al., 2003; Moiser et al., 1996; Skitka et al., 1999). Human-like social cues have also been known to reduce user cooperation (Kiesler et al., 1996), and social anxiety (Sproull et al., 1996). Mori et al. (2012) proposed that a robot with a paramount resemblance to human beings may instigate negative feelings in the user in the form

of eeriness, dislike, unpleasantness, and unease towards the entity. They argued that a user's affinity towards a bot increases with its likeness to a human until a certain point, after which there is a shift and the humanlike characteristics make the experience eerie and unpleasant (Mori et al., 2012). Mori et al., (2012) termed this abrupt switch as "the uncanny valley". Extending the metaphor, Skjuve et al. (2019) state, "that an entity that is almost, but not quite, humanlike runs the risk of being pushed into the uncanny valley, that is, to induce uncanny feelings in the user" (p.32). Thus, situations where the true entity of an agent is unknown may influence how a conversational agent is perceived.

Additionally, anthropomorphic cues of a chatbot may influence the online consumer experience of the chatbot in terms of how entertaining it is (Hsieh et al., 2014), its sensory appeal (Dodamgoda & Amarasinghe, 2019), and its social presence (Van Doorn et al., 2017). In order to better understand how consumers experience chatbots, it is important to conceptualize what consumer experience is in the first place. This will be done in the following section.

2.3. *Online consumer experience*

Most studies surrounding customer interactions, and satisfaction have been based on the idea that it begins with personal exchange between two or more people (Van Doorn et al., 2017) where the agent is expected to understand user beliefs and expectations (Seeger et al., 2017), and provide information or assistance (Mero, 2018). As Mero (2018) suggests, chatbots are becoming an integral part of customer experience in today's e-commerce world. According to literature based on the Computers Are Social Actors paradigm, in a human- computer interaction, humans tend to react socially to machines, just like they would to other humans (Nass et al. 1996; Reeves & Nass, 1996). Resulting in chatbots having an impact on customer intentions, and satisfaction (Mero, 2018; Adam et al., 2020). The online consumer experience at the core of this research consists of a consumer's subjective, multidimensional psychological response to a conversational agent, specifically a chatbot's presentation online.

Stemming from the four basic systems of sociology and psychology- cognition, affect, sensations, and relationships, to understand the multidimensional impact on the consumer, scholars in the past have extensively studied the cognitive (Hoffman & Novak, 2009; Novak et al., 2000), affective (Novak et al., 2000; Rose et al., 2012), sensory (Jiang & Benbasat, 2007), and social (Bolton et al., 2018; Wang et al., 2007) determinants of the consumer online experience. This study will focus on Bleier et al.'s, (2019) summarization and definition of these determinants expelling any expectations for a one on one relation among an experience dimension and any specific design element. While the dimensions proposed by Bleier et al. (2019) study the experience on a webpage, this study will apply the theory to the experience when using a chatbot.

Informativeness, according to Bleier et al., (2019) is the chief cognitive dimension. Lim and Ting (2012) define it as "the extent to which something provides consumers with resourceful and helpful information" (p.51). In this study, it refers to a chatbot's ability to make information available

(Hoffman & Novak, 1996). This fact-based and outcome oriented dimension pertains to the information that captures the functional, and mental aspects of a consumer, and is responsible for customer purchase decisions (Hsieh et al., 2014; Lim & Ting, 2012; Verhoef et al., 2009). It captures the chatbot's contribution by making the consumer think, consciously process information, and help in solving their problems (Gentile et al., 2007). According to Lim and Ting (2012), technology that provides functions, which help consumers make better decisions, is perceived as informative. For the operationalization of informativeness, this study will use Chen et al. 's (2002) scale for websites and apply that to chatbots. According to the scale, informativeness includes the chatbot's potential to be informative, secure, knowledgeable, competent, helpful, credible, resourceful, reliable, useful, confidential, intelligent, and trustworthy (Chen & Wells, 1999; Chen et al., 2002). Informativeness is in congruence with perceived usefulness from Davis et al. 's (1989) TAM model, where useful/informative technology is one that is expected to improve the performance of a user activity or provide a solution to a user problem.

Secondly, the affective dimension that is also key in the customer experience is termed as Entertainment (Bleier et al., 2019). It consists of the instantaneous enjoyment the experience presents, regardless of its ability to evoke a functional response (Babin et al., 1994; Hsieh et al., 2014). Highlighting the importance of this dimension, Rapport (1982) claimed "people react to environments globally and affectively before they analyze them and evaluate them in more specific terms" (p.14). Entertainment according to Mazaheri et al. (2012) can meet the consumer's need for emotional release, diversion, and escapism. It also can influence consumer involvement and attitudes (Mazaheri et al., 2012). The scale developed by Chen et al. (2002) operationalizes entertainment as anything that is fun, exciting, flashy, entertaining, imaginative, and cool (Mazaheri et al., 2012). The consumer in the marketing context positively evaluates a brand that is considered entertaining (Richard, 2005). According to Wang et al. (2007), entertainment is also responsible for arousal and pleasure amongst customers in the online world. For that purpose, we will also use Mehrabian and Russell's (1974) pleasure, arousal, and dominance (PAD) model to capture the affective dimension. The still valid PAD model (Bakker et al., 2014) exhibits the crucial association between consumer behavior and entertaining cues (Hsieh et al., 2014). This study like others in the past (Wu et al., 2008; Ha & Lennon; 2010; Lin, 2010) will also take into account Russel and Pratt's (1980) suggestion to focus on the arousal and pleasure dimensions eliminating dominance when studying consumers' affective state. Building on the PAD model, Russell and Lanius (1984) operationalized entertaining activities as exciting, alive, pleasant, nice, active, exhilarating, interesting, arousing, sensational, stimulating, pleasing, beautiful, and pretty. Consequently, non-entertaining activities were operationalized as slow, drowsy, inactive, lazy, monotonous, dull, boring, unstimulating, displeasing, dissatisfying, unpleasant, repulsive, uncomfortable, tense, forceful, panicky, frenzied, hectic, intense, and rushed (Russell & Lanius, 1984).

Thirdly, sensory appeal is a sensory dimension that includes features that stimulate sight, touch, smell and taste (Gentile et al., 2007; Bleier et al., 2019). In an online domain it refers to “the representational richness of a mediated environment as defined by its formal features” (Steuer 1992, p.81). Although limited, these sensations can be induced using pictures, videos, and other imagery (Elder et al., 2017). The sensory dimension captures sensory and aesthetic features that are appealing to an individual’s senses, and is evoked mainly through auditory, visual, olfactory, tactile, and gustatory stimuli (Nysveen et al., 2013). Sensory appeal has the potential to form distinctive and strong impressions in the users’ intellect (Hulten, 2011). To operationalize sensory appeal, the study uses the elements of senses, sensations, and sensory expressions of a brand as pointed out by Dodamgoda and Amarasinghe (2019) and applies them to chatbots. Sight being the most effective of all senses in making a sensory impression on the consumers (Lindstorm, 2005), according to Dodamgoda and Amarasinghe (2019) is a visual sensation derived from design, style, architecture, lighting, cleanliness, colors, exteriors, graphics, layout design, and presentation. The first impression is always made by sight (Ebster, 2011). Smell on the other hand, due to its connection with breathing directly impacts memory (Jang & Lee, 2019). Dodamgoda and Amarasinghe (2019) term smell as an atmospheric sensation that includes product congruence, advertency, signature scent, theme scent, and ambient smell. Additionally, sound is an auditory sensation urged through voice and music atmosphere, jingle, sound brand, attentiveness, and theme signature sound. Extensive amounts of data are absorbed through sound (Hulten et al., 2006). Taste being the gastronomic sensation is prompted by environment knowledge, lifestyle, delight, and interplay. It helps an individual to differentiate between bitter, sour, salty, umami, and sweet flavors (Ikeda, 2002). Furthermore, touch is termed a tactile sensation stimulated by steadiness, surface temperature, texture, material, and weight form. Touch is responsible for building rapport between the agent and consumer, impacting the communication between the two and the user's emotions thereafter (Hulten, 2006). According to Hulten et al. (2006), while each sense on its own leads to an experience, all of the senses together fabricate a whole one of a kind sensory experience. Sensory appeal as proposed by Krishna (2012), not only affects users senses, but also their judgment, perceptions, and behavior. However, as this research is predominantly assessing digital technologies, it will be focusing mostly on sight and sound as online environments are often limited to those two senses (Barlow et al., 2004).

Lastly, the social dimension termed as social presence (Wang et al., 2007) includes the feeling of human contact, sociability, and the sense of being with another derived from the experience (Gefen & Straub, 2003). “Social presence has to do with the ‘realness’ of the other person in the communication” (Kreijns et al., 2014, p.10). By the same token, Van Doorn et al. (2017) highlight the advancement of automation for being able to engage with customers socially. In their study, they conceptualize the ability of technology to make meaningful social encounters, and lasting relationships with customers through being warm, competent, receptive, attractive, and manipulative as Automation Social Presence (Van Doorn et al., 2017). Heerink et al. (2010) refers to it as the

degree to which a machine can influence a consumer's perception of being in the presence of another social entity. Social presence is said to progress through the phases of acquiring a social identity, communicating purposefully, and building relationships in return (Garrison, 2009). Along with its ability to amplify the feelings of closeness to a product (Darke et al., 2016), social presence is also known to influence loyalty of a consumer (Cyr et al., 2007), and their purchase intentions (Hassanein & Head, 2007). In order to operationalize social presence Rourke et al. (1999) divided it into three broad categories namely open communication, group cohesion, and affective expression. Open communication refers to the purpose of the communication and its interactive nature, group cohesion refers to the cooperative behavior of a community and their shared social identity, and affective expression refers to the need for forming interpersonal relationships and thus the socio-emotional elements of the communication (Rourke et al., 1999). Open communication is further operationalized by Kreijns et al. (2014) as indications of continuing a thread of communication, asking queries, referring to or quoting the other, providing feedback, expressing agreement or disagreement, and giving compliments. Similarly, group cohesion is operationalized by the use of salutations and phatic in the form of greetings and goodbyes, vocatives and addressing the other personally or by their names, and inclusive pronouns such as 'us' and 'we' (Kreijns et al., 2014). Additionally, Kreijns et al. (2014) operationalize affective expression as indications of the use of humor in the conversation in the form of teasing, sarcasm, ironic replies, etcetera, showing emotions through the use of capitalization and emoticons/ emojis, and through self-disclosure by showing vulnerability or revealing personal details about oneself. Garrison (2009) elaborates that through the categories of this operationalization it is evident that the phase of formation of interpersonal relationships comes second in the process of social presence, prior to which comes the primary concern of deriving a shared social identity from the purpose of the course. Therefore, social presence as stated by Mone (2016) is like a double-edged sword, where the more social the interactions, the more engaged the users, however, the more realistic the interactions, the higher are the user expectations for the chatbot's communicative adroitness.

2.4. Conceptual model

Based on the previous discussion of the existing literature, the following conceptual framework as visualized in figure 1 was developed. The model features the four main elements of an online consumer experience namely, informativeness, entertainment, sensory appeal, and social presence of a chatbot.

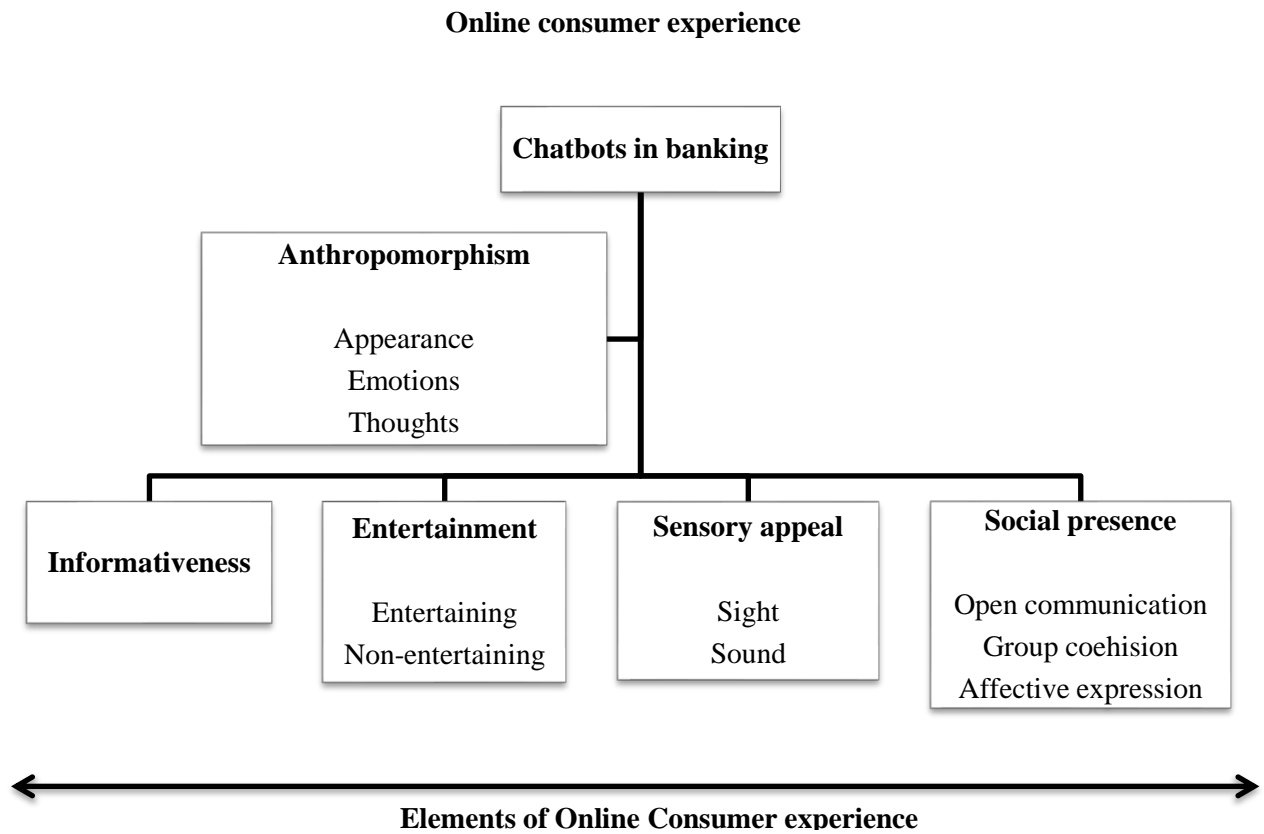


Figure 1- Conceptual model

The next chapter throws light on the methodological decisions made to collect and analyze data in order to answer the proposed research question.

3. Methodology

This chapter provides a detailed description of the research design; justification for the research method used, and elaborates on the validity and reliability of the study. Furthermore, extended information is provided about the data collection, operationalization, and the data analysis.

3.1. *Research design: In-depth interviews*

As the aim of the study was to explore and examine the profundity of meaning in user experience, a qualitative research method was used because it focuses on depth over breadth (Deniz & Lincoln, 2003; Mack et al., 2005). According to Brennen (2017) “qualitative research is interdisciplinary, interpretive, political and theoretical in nature. Using language to understand concepts based on people’s experiences, it attempts to create a sense of the larger realm of human relationships” (p.10). Since anthropomorphism of conversational agents can be perceived in a multitude of manners, a qualitative method, for it focuses on humans’ interpretations of behavior and language (Flick, 2007), fits best. Additionally, Matthews and Ross (2010) reason that a qualitative method allows a study to be based on data that was generated and collected from the participants, specifically for the research itself. While it is ideal to employ when analyzing experiences (Hammarberg et al., 2016), a qualitative approach is applied as it presumably has the ability to understand patterns of perception and the myriad of meanings that people make (Brennen, 2017). Thus, to answer the proposed question “how do consumers perceive the anthropomorphism of conversational agents by banks?” it is deemed suitable.

Furthermore, the selected qualitative method for this research was interviews. By asking people to talk about themselves, interviews help generate empirical data about the social world (Holstein & Gubrium, 1997). Essentially, interviews help understand people and social phenomena in an intimate manner (Hermanowicz, 2002). Thereby, using interviews helped understand the perceptions that consumers ascribe to the anthropomorphism of chatbots, along with their experiences when encountering the same.

More precisely, an in-depth interview approach has been employed in this research. In-depth interviews aid in exploring the contextual boundaries of a perspective and reflect the understandings of an experience (Gubrium et al., 2012). Additionally, in-depth interviews present new ideas (Legard et al., 2003) and allow for meaning- making of the responses (Holstein & Gubrium, 1997), which due to the exploratory nature of this study were essential. Furthermore, as the purpose of the study is to understand the perception of users, interviews helped as they reflect how people draw personal and individual perspectives, make sense of topics based on shared stories and language, interpret things, and explain certain behaviors and motivations (Dumitrica & Pridmore, 2019).

Moreover, for this research, the in-depth interviews were semi- structured. The interviews were flexible and broadly followed the order of a previously prepared topic guide (appendix A). However, during the interview the researcher could deviate from the structure of the topics and ask

other follow-up questions depending upon the responses, making the semi- structured interview similar to an actual conversation (Dumitricia & Pridmore, 2019). In practice, this required the interviewer to not only have a well-prepared interview guide, but also include guiding follow-up questions and probes in order to build rapport with the interviewee and gain new insights by touching up topics that might not have been included in the topic guide (Boeije, 2010). This interview also comprised material probes that were elicited to foster further discussion (Dumitrica & Pridmore, 2019). Therefore, leaving room for further exploration and explanation of the social phenomenon in question (Brennen, 2017).

3.1.1. Advantages and limitations of online in-depth interviews

Electronic in-depth interviews are a sufficient method of conducting social science research. However, as any other research method, it too has several limitations as well as advantages and strengths.

3.1.1.1. Limitations

Traditionally, face-to-face interviews are the preferred way of carrying out qualitative in-depth research as they assist in establishing trust and a sense of safety amongst the interviewer and interviewee, thereby improving the flow of the interview, and the quality of the content produced (Matthews & Ross, 2010). Factors such as body language and voice inflections also play an imperative role in face-to-face interviews, but are often overlooked in the case of electronic interviews due to the lack of physical proximity (Stacey & Vincent, 2011). This might have impacted the additional information that could have been yielded in terms of the feelings, attitudes, and opinions regarding the topic of discussion (Opdenakker, 2006).

Additionally, the influence of external factors such as Internet speed and connectivity, day to day activities, external parties, and technological lags are substantial and more frequent in electronic interviews than in face-to-face interviews (Stacey & Vincent, 2011). As was the case in the interviews conducted where one of the interviews had to be redone as the respondents' laptop crashed and was instantly disconnected from the call, resulting in a loss of the recording, while some others had issues with their internet connections result in a lag in the audio once in a while, and often participants were distracted by their pet animals walking in to the rooms, families calling for them, and doorbells ringing, thus affecting the quality of responses and the flow of the interview.

3.1.1.2. Advantages

Nevertheless, there were also certain advantages for conducting the interviews online. With the participants being at home due to the COVID-19 measures, they felt at ease to voice their opinions in a surrounding that was more known to them, and perhaps more comfortable (Lo lacono et al., 2016). Congeniality also helps in the recollection of memories and experiences more distinctively and

correctly (Matthews & Ross, 2010). Furthermore, interviews online allowed people from different parts of the world to participate in the study. Interviews being carried out online helped mitigate the distance between the interviewees and the interviewer, allowing for a more international and diverse sample, and further enhancing the exploratory nature of the research. Lastly, interviewees were more willing to participate in the research as electronic interviews are more convenient and cost efficient (Stacey & Vincent, 2011) as it not only permits the respondent to participate from where they please, but also saves them travel time and other efforts of similar regards.

3.2. *Validity and reliability*

It is necessary to consider the matters of validity and reliability when carrying out qualitative research (Yin, 2003). All efforts were made to ensure the highest degree of both validity and reliability possible.

3.2.1. *Validity*

In order to produce a valid study, the researcher immersed her in existing literature from which a topic guide for data collection and the coding themes for the analysis were built. Including the perspectives of different authors helped distance the researchers own perspective and ascertain no biases that would impact the study were formed from the researcher's personal experiences (Morse et al., 2002).

Furthermore, the recordings of the interview along with verbatim transcripts permitted the unlimited revisiting of data, resulting in a richer analysis. However, the researcher also acknowledges the potentially imperative data that might have been lost due to the online nature of the interview, and during the translation of verbal into written data (Long & Johnson, 2000). Additionally, the researcher's personal perspective can also influence the results (Dumitricia & Pridmore, 2019). To avoid this from influencing the validity of the research, the participants were invited to comment on the findings of the research.

Similarly, by instigating an interviewee to pay attention to how they thought and felt, the stimuli used positively influenced the validity of the data by helping overcome certain inhibitions that people might have had, therefore adding to the richness of the responses (Catterall & Ibbotson, 2000).

3.2.2. *Reliability*

To accurately analyze and improve the efficiency and reliability of the research, notes were made during the interview, followed by a summary of the discussion at the end. The summary and notes consisted of specific observations made, the key takeaways from the conversation, any problems faced during the interview, and any improvements to be made thereafter. This helped have a

clear and transparent description of the entire process, from the beginning till the end (Long & Johnson, 2000).

Additionally, semi-structured in-depth interviews require the interviewer to multitask, in the way that they are not only required to ask the questions from the topic guide, but also formulate follow up questions based on the responses of the participant to maintain the conversational flow (Opdenakker, 2006). This, as defined by Wengraf (2001), calls for “double attention” (p.194). It is thus the duty of the researcher to guarantee that the participants have ample space and freedom to pose their answers, while also ensuring the depth of the responses match that of the requirements of the study.

Lastly, recording the interview, reviewing it through transcription, analyzing it based on a thorough operationalization of concepts, and revising the decisions made through the research ensured and further improved the reliability of the research (Babbie, 2014).

3.3. *Sampling and recruitment*

Since this research looked at how consumers perceive the anthropomorphism of conversational agents by banks, 10 people were interviewed for it: five female and five male, all from different nationalities and countries of residence. The range of 10 - 15 participants is ideal for phenomenological research, provided there is thematic redundancy in the narrations thereafter (Thomas & Polio, 2002). The interviewees ranged between the ages of 23 and 30, fitting with the broad scope of the study. The spectrum of ages helped include a diversity of opinions on the topic and provided a more nuanced understanding of how people of different ages perceive the same technology (Gubrium et al., 2012). Within the participants, the choice of banks ranged from Bank of America, Swedbank, ING, HDFC, Rabobank, Bank West Australia, First National Bank, and Citibank . Among the participants, three are currently students pursuing a higher education (master’s degree) in different areas namely, migration studies, urban planning, and media and communication. The remainders are working individuals, currently employed in industries such as epistemology, banking, engineering, data analytics, social media strategy, and imports. An absolute overview of the participants of this study (Name, age, gender, nationality, occupation, and bank of choice) can be found below.

Name	Age	Nationality	Occupation
Diana Fletcher	29	South African	Social media strategist
Kartikey Luthra	25	Indian	Data analyst
Stephanie Anniston	24	Dutch	Media student
Megan Jason	26	American	Urban planning student
Elizabeth Deemer	29	American	Epistemologist
Max Nystorm	28	Swedish	Software engineer
Ard Troubowrst	25	Dutch	Energy consultant

Nathan Warren	23	Australian	Data analyst
Kushagr Singh	24	Indian	Self employed
Adriana	24	Belgian	Migration student

Table 1- List of participants

In line with the research question, interviewees need to meet the requirements of being in the age group of 23-35 years, having used a banking service, and having interacted with their bank online through a chatbot. Popular sources and academia generally define individuals born between the years 1981 and 1996 as the millennial generation (Johnson, 2015). The millennial comprise of a generation that was present at the peak of the technology breakout and got to experience the different changes that came along with it (Lagone, 2018). While cordless phones took a while to catch on, they were instantly taken over by smartphones, texting, and social media applications in less than a decade. Making young adults witnesses of a rolling sequence of communication technology revolutions (Hobson, 2019). By the same regard, users within this age group have been considered as they tend to be the more frequent users of messaging applications, making them more likely to adopt chatbot technology earlier than the others (Brandtzaeg & Følstad, 2017). However, it must be noted that one of the participants of the study was born in 1998, making him younger than the aforementioned millennial range. Even so, he was included in the sample as the deviation in age was minimal, and his status as a post-millennial (Fry & Parker, 2018) made him as much a part of the technological changes as the others respondents.

To conduct successful interviews that yield in-depth insights into the proposed question, participants were selected intentionally. Therefore, as termed by Babbie (2014), the study involves a purposive sampling technique. It is a technique where the researcher theorizes the relevant dimensions that a sample will consist of to promote the inclusion of various differing experiences and perceptions (Flick, 2007; Kuzel, 1992). This non-probability sampling allows the researcher to select the criteria for participation best suited for the study, and also use the same to make comparisons once the data have been collected (Brennen, 2017). It is helpful when trying to understand a particular generation (Neuman, 2014), and is thus based on a fixed criterion and used to identify these specific cases. This technique results in a homogenous sample where respondents belong to a similar age group and have a common characteristic (Ritchie et al., 2003). Which is young adults that have interacted with a banking chatbot in the past. Along with allowing a systematic comparison of the data, the primary aim of purposive sampling is not to achieve representativeness of the population, but to reflect diversity in the same (Barbour, 2007). For this purpose, Tongco (2007) reasons for a researcher, albeit at an early stage, to purposefully decide the information needed for the research, and then proceed to look for participants willing to contribute. This results in a more comprehensive understanding of the social phenomenon of interest (Ritchie et al., 2003) “in the most instructive way” (Flick, 2007, p.27).

Furthermore, purposive snowball sampling was used to sample interviewees as a pre-existing network of contacts referred possible participants to the researcher (Matthews & Ross, 2010). Along with asking her existing network to suggest possible participants, the researcher shared a message on her social media asking possible candidates that fit the research criteria and is willing to participate to reach out. Some of the initial participants as well recommended other respondents that fit the sampling criteria (Dumitrica & Pridmore, 2019). For example, the Swedish participant helped the researcher get in contact with one of the respondents from the United States of America who is currently working as an Epistemologist at Harvard University.

In order to achieve a greater representativeness of a globalized society and difference in perspectives, participants were recruited from a variety of countries. All inclusive, the participants hailed from a number of countries namely, the United States of America, South Africa, India, Australia, the Netherlands, Belgium, and Sweden. The composition of 40% females and 60% males in the sample was not an intentional decision but rather a result of the purposive snowball sampling method. Additionally, all of the participants were individuals, who at some point of their lives lived in a country different from their nationality, further adding to the global aspect of the sample. All of the respondents felt at ease speaking in English and were of native fluency. For that reason, to avoid any translation biases, the interviews were conducted in the English language.

As mentioned earlier, the interviews were carried out till it was apparent that new interviews would not necessarily reveal any new insights. This is also known as the point of saturation (Guest et al., 2006) in trying to understand the various user perspectives. The interviews were executed in a period of ten days, after which the audio recordings were transcribed for analysis with the help of a software for transcription (otter.ai), and later reviewed by the researcher in order to ensure the text was verbatim and free of any typographical errors.

3.4. Data collection

Prior to the interviews, the participants were sent a consent form (see Appendix B), which briefed them about the purpose of the research, the technicalities involved, and its duration. As the interviews are held online, interviewees were asked again for their consent to record during the introduction of the session, along with their permission to save the recordings and use their personal information later in the study. The interviews were scheduled to last somewhere between half an hour to an hour, and were aimed at understanding consumer experiences of banking chatbots online. The researcher followed the steps of data collection as mentioned by Dumitrica and Pridmore (2019). To begin the semi-structured interviews, the researcher introduced the study and posed a few open questions in an attempt to develop rapport amongst the participants. Following which the researcher asked certain icebreakers focused around the parameters of the topic. The third step involved asking probing questions. Probing the participants to build upon their comments helped escalate the quality

of the data produced (Dumitricia & Pridmore, 2019). The open questions along with probing and stimulus questions can be found in the interview guide (see Appendix A).

The topic guide for this study was based upon the theoretical framework developed earlier and was divided into the different sections that help understand consumer experiences and perceptions of a chatbot. Following the warm-up questions were queries about user banking preferences and justifications for the same. After which the interview dove into the user experiences of a chatbot based on the theory developed by Bleier et al.'s (2019) study, focusing specifically on its usefulness and informativeness, how entertaining it is, how appealing it is to the individual's senses, and lastly how they feel about its social presence, if at all.

3.4.1. Stimuli

Törrönen (2002) stated three uses of stimulus materials in an interview namely, as microcosms, as clues, and as provokers. When providing the respondent with a perspective against which they compare their own outlook, the stimuli works as a microcosm. In the case of the stimuli being used as a clue, it portrays the context of the study to the respondent. Finally, as a provoker, the stimuli challenge the beliefs of the respondent (Törrönen, 2002). In the case of the current study, the stimuli serve as provokers wherein they are chosen to help question participants' established conventions and meanings of the subject matter (Törrönen, 2002).

After having explained their past experiences, the participants were presented with two different stimuli namely, HARO and Amy. The reason for choosing these particular stimuli was that the respondents were clients of neither Hang Seng bank, nor HSBC Hong Kong. This made them all part of the information search stage of a consumer journey, thus, resulting in increased uniformity amongst their experiences.

The first stimulus for the study was Hange Seng Bank's HARO. Along with engaging customers in an interactive dialogue, HARO assists them with personal finance queries and management through the chat interface (Nikolova, 2018). According to Nikolova (2018), HARO is able to check customer's account balance, help them set balance alerts, make payment transfers, and provides a graphical visualization of their asset allocations along with the option to communicate in English, Chinese, and Cantonese. The name HARO is an acronym reflective of its service objectives namely, helpful, attentive, responsive, and omni (Hang Seng, 2018), making it a perfect example of a service chatbot, and serving as a stimulus for respondents to have the online consumer experience first hand. The link to HARO was sent to the respondents on chat, after which they were asked to observe HARO and have a conversation with it. This particular stimulus was meant to provoke the respondents in the area of online consumer experience. In the case where the respondents could not think of what they would like to ask, a few prompts such as greeting the chatbot, asking it how to open an account, what account would suit them best, and how they could apply for a credit card were suggested. Providing respondents with a script to interact with the chatbot, exposed them to the

stimulus in a consistent manner. Once through, the participants were asked in detail about their key impressions, likes, dislikes, and the experience as a whole. Based on their answers, themes from the previously developed code tree were found to see congruent their experience was to the ones they had had prior to the interview.

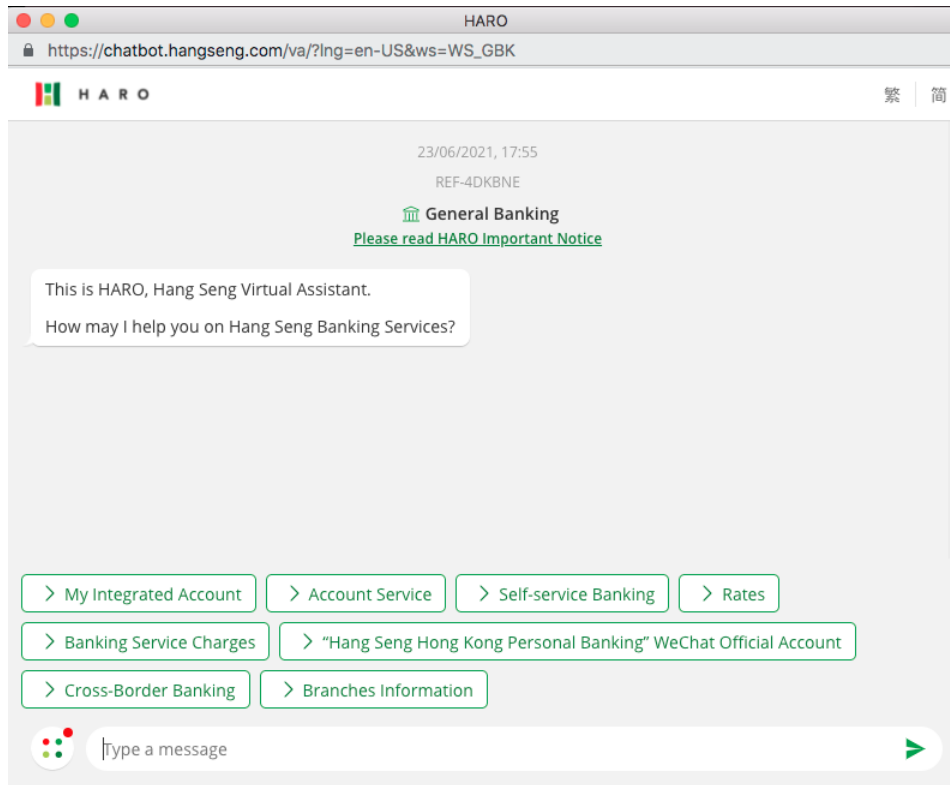


Figure 2- HARO (<https://www.hangseng.com/en-hk/contact-us/contact-us/>)

Similarly, the second stimulus presented was HSBC Hong Kong's Amy. This stimulus was employed particularly to see how consistent the participants' responses are to the ones from their memory that they had mentioned in the interview earlier. Amy is a virtual assistant chatbot for corporate banking, and has been ranked in the top 11 most interesting looking chatbots in banking (Marous, 2018). Aside from Amy's superior technology, her appearance and animations are also considered to be outstanding. Not only does it have a name and an avatar with a female appearance, the avatar also moves, blinks, and mimics speaking (Cheung, 2020), making it ideal to see how participants perceive an anthropomorphized chatbot. For this stimulus, the interviewer shared her screen and asked the respondent to observe for a couple of minutes before describing what they see, their key impressions, likes, dislikes, and if they would change anything about Amy's appearance. Here paying close attention to the feeling words and anthropomorphic features that the respondents elucidate was of utmost importance during the analysis.

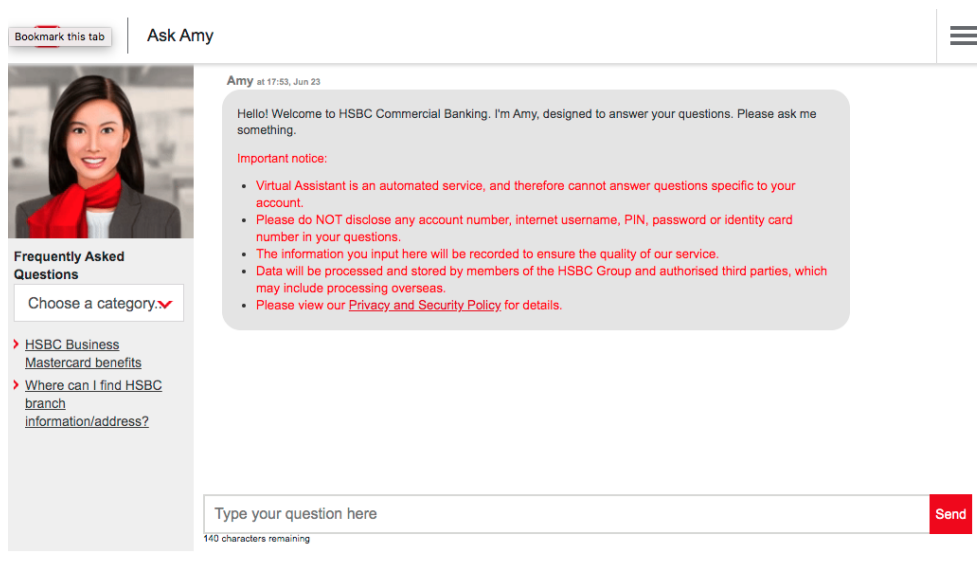


Figure 3- HSBC's Amy

(<https://www.askus.business.hsbc.com.hk/english/bot.htm?isJSEnabled=1&businessArea=Root.Public&channel=Root.Web>).

In the case of the stimuli, more generic questions were posed as opposed to explicit questions regarding the consumer experience. This was to analyze from their responses what element of the experience the participants pay most heed to by themselves. Lastly, the researcher asked the respondents for any final remarks that they would have liked to make, or questions that they might have had for the researcher. In the absence of which, the interviewer acknowledged their contribution, and thanked them before finally dismissing the interview.

3.5. Operationalization

To further guarantee the reliability, a template was developed through the operationalization of the conceptual model and relevant literature of online consumer experience and anthropomorphism. The following served as the topic guide while conducting the interviews, and connecting the interview to the literature. This can be found in appendix A.

3.6. Method of analysis: thematic

At first, the recordings were transcribed in order to begin the analysis (Barbour, 2007). These verbatim transcripts served as the unit of analysis for the study. The transcripts were then uploaded onto Atlas.ti; a computer assisted coding software used for qualitative data analysis. Digital tools, according to Babbie (2014), ascertain closer proximity to the codes, along with ease of sharing the codes for revision. Making the research more coherent and organized (Silverman, 2011). In order to analyze these verbatim transcripts, a thematic analysis was used (Gibbs, 2007). Thematic analysis helps identify the meaning of qualitative data (Joffe & Yardley, 2004), and permits studying the data in multiple approaches by “identifying, analyzing and reporting patterns (themes) within data” (Braun & Clarke, 2006, p. 79). Meaning that, with thematic analysis, the researcher can focus on making

sense of the overall topic by focusing on recurring patterns (Joffe, 2012). In essence, this makes it the suitable method as the study aims to acquire information regarding, and assess how consumers experience the anthropomorphism of chatbots (i.e. the overall topic).

Furthermore, the study uses a deductive manner of thematic analysis. Utilizing existing literature established by other scholars, deductive research flows from “general to specific” (Babbie, 2014, p.22). In essence, it is driven by themes based on previous literature and theoretical ideas (Joffe, 2012). For this study, the thematic analysis is based on the conceptual model established after critically analyzing previous findings of academics. To execute the analysis, Braun and Clarke (2006) developed a six-step model of thematic analysis. However, as in this study the analytical approach is that of a thematic analysis based on theory rather than open codes, an alternative direction is utilized.

Firstly, the researcher familiarized her with the data of the study and formulated initial ideas (Braun & Clarke, 2006). In the case of this study, this phase involved looking at and reading through the transcripts that had been produced in the earlier step. Additionally, due to the analysis’ deductive nature, it is in this step that the researcher produces the coding theme (appendix C) based on existing literature to guide the analysis. Although, as originally proposed by Braun and Clarke (2006), the second, third, fourth, and the fifth phases focus on developing themes and codes, these steps were skipped in the current study as the themes for analysis had already been ascertained prior to the analysis. Instead, in the following step, the findings from the data are structured by linking the analyses and the perceptions to the existing themes. It is however vital to scrutinize the themes to ensure that they instantaneously link to the research question, are specific and not excessively loaded, and are correlated but not repetitive (Braune & Clarke, 2012). The transcripts are then scrutinized and analyzed in depth based on the coding themes generated earlier. Finally, the last phase of the analysis is where the report is formed (Braune & Clarke, 2006). The report includes the results and the prominent pattern that arise from the different themes (Murphy & Ensher, 2008). Despite it being the last, this phase is rather ongoing and continuous. Braune & Clarke (2012) highlight the entwined nature of report writing with data analysis in the cause of qualitative research. In line with which, Mills et al., (2010) refer to this repetitive, systematic, and recursive process as iteration. As a part of the sixth phase, significant attention should be given to the modus operandi of the presentation of the themes of the research. This should be done in a meaningful, objective, and coherent manner (Braune & Clarke, 2012), which in the case of this study meant being presented in an order similar to that in which they have been operationalized and introduced in the theory.

3.7. Ethical consideration

There are a few ethical issues that must be considered when conducting a semi-structured interview. More specifically for this research, the three highlighted by Matthews and Ross (2010) are applicable: first and foremost, the results of the research must be reported in a way that they must not lead to any of the participants. Data such as their name, occupation, and other demographics, along

with their perspectives, and feelings must be kept confidential. If asked, their identity must be kept anonymous and an alias must be assigned instead. The consent of the participants, as expressed, should be followed to the very end. In this study however, no requests for anonymity were posed. Additionally, the data collected during the interview in the form of recordings and transcriptions shall remain confidential as they contain personal opinions, and information from these can be traced back to the participants. Finally, to avoid intimidating or overwhelming the participants by the research topic, they were informed in advance of not needing any sort of expertise in the same. A few of the participants were concerned as it was assumed banking technicalities would be questioned. The purpose of the interview was then summed briefly to them as just wanting to understand their experiences with customer service agents and service technologies such as conversational agents of banks.

This chapter elucidates and clarifies the data collection and how the study was conducted using a qualitative research method, more specifically semi-structured in-depth interviews of 11 young adults, both female and male. It also provides a recapitulation of how the interviews were structured, and an overview of how the participants were recruited using the purposive snowball sampling technique. Finally, a synopsis of the data inspection through a deductive thematic analysis is provided, along with the ethical considerations that were ascertained throughout the duration of the process. Furthermore, the following chapter discusses the results obtained from the analysis of the interviews conducted.

4. Results

To answer the research question “*How do consumers perceive the anthropomorphism of conversational agents by banks?*” Ten in-depth interviews were conducted with participants aged 21 to 30, from six different nationalities. The participants were shown stimuli to see if their responses differ from that of their own perceptions as they had stated in the beginning of the interview. For all participants, their experience remained quiet the same, without minimal to no alterations in their perspectives. This chapter focuses on the responses provided in the interviews⁵ and the results of the critical thematic analysis of the data.

Based on the previously discussed literature of the online consumer experience, the analysis followed the structure of the previously established themes (which will be discussed in the entirety of this chapter): The first theme, *banking chatbots as informative*, observes the respondents’ reflection on a chatbot’s resourcefulness and capability to be helpful. Second, *banking chatbots as entertaining*, illustrates what the users liked, disliked, and remembered the most from their interaction with the chatbot. Thirdly, the theme *banking chatbots as sensorially appealing* focuses on the chatbot’s influence on the user’s senses. Lastly, the fourth theme, *banking chatbots as socially present*, reflects on how the respondent’s experienced the conversation and diction of the chatbot.

4.1. Chatbots as informative

From the interviews, it was observable that for most respondents informativeness was their main motivation to use of a chatbot, making it the starting point of the consumer’s experience. A majority of the interviewees (9 out of 10) revealed that the main purpose of their interaction with the chatbot was to derive information or assistance regarding a specific issue. A chatbot’s ability to provide information was of utmost importance to them, with all else serving a secondary purpose. For example, Kartikey, a 25- year old data analyst from India described the following, which is exemplary of informativeness serving as the primary focus:

[...] I mean I cannot see why people would use chatbots for anything else. I go to a chatbot expecting it to answer my questions and help me with what I need. It is not like I want to hear stories about how the bank was formed, its history or anything. So if a chatbot cannot help me and be useful for what it made, they should probably take it off or something.

In Kartikey’s case, his reason for the subsistence of a chatbot is its usefulness, in the absence of which he finds their existence futile. His perception was shared with most respondents, as they would mostly turn to a chatbot when they needed additional help or support from their banks. A

⁵ The quotes used throughout this chapter have been cleaned to make them more legible, and to avoid reflections of a lag in speech and Internet delays. Virtually however, the quotes remain unchanged.

chatbot's inability to help them renders it *useless* for them. This observation is in line with Brandtzaeg & Følstad's (2017) study where they found the usefulness of a chatbot to be one of the primary determinants of why consumers weild chatbots in the first place. Similarly, a technology's usefulness is also known to be a more significant determinant of the acceptance of a technology (Davis et al., 1989), as seems to be the case with the respondents of this study. To which Megan, a 27- year old American student added:

I will use it as long as it actually is useful. I do not need it to look or act like anything, I just want it to be competent, you know. Like get things done, as you would expect from a human equivalent. That is all I want from it, I just want a chatbot to be able to help me with what I need it to.

Furthermore, while the respondents interacted with a chatbot for the purpose of finding solutions to their concerns, eight of them relied on a similar metaphor to express how unimpressed they were by the chatbot's inability to help them with issues that were either a niche or uncommon. Not only did the interviewees find the chatbots to be incompetent when it came to questions that were a little complex, most seemed to be more disappointed as the chatbots only provided them with information that they could easily find on the website themselves. Max, a 29-year-old software engineer illustrates this by saying:

Here is the thing with that though; it is not a particularly unusual request. They also have all of this information available on their websites or on the frequently asked questions section. I could very much get it on my own. So it is not that impressive. That being said, it was still quicker than me trying to find the information myself. It was quick, good, and effective.

Although, it is apparent that most people look towards chatbots to help them, and facilitate their work, the results of this study reinforce results of previous literature of users not only wanting the chatbot to serve a utilitarian purpose, but also wishing to experience the technology as a channel that is superior in performance (Følstad et al., 2018). The disregard for the chatbot for only being able to resolve issues that the user could also find for them was rather obvious. However, as can be seen from the quote above by Max (29-year old, software engineer) where he talks about the effectiveness of the bot due to its ease, speed, and convenience. While supporting the claims made by Brandtzaeg and Følstad (2017), that consumers are incredibly impressed in the case where chatbots save the user's time by offering quicker access to user manuals or frequently asked questions, and providing effective support. This study questions the results of Davis's (1989) research, where he claims that the usefulness of technology precedes the ease of use in creating a stronger positive impact on the consumer. The current study displayed that the ease of use and usefulness factors of a chatbot had a more proportionate relationship in their influence on the consumer experience than a

hierarchical one as suggested by Davis (1989). Additionally, at times like in the case mentioned above, one factor even compensated for the other in making the user's experience positive as a whole.

Lastly, in line with Zumstein and Hundertmark's (2017) study that the protection of their data tends to be an ongoing worry for users, and providers are responsible for handling this data adequately. This study finds the respondents worrying about their data, appreciated the warning messages that the chatbots delivered at the beginning of the interaction. Elizabeth's (29-year old, epistemologist) statement is illustrative here:

[...] It warned me about not sharing my private information. But it made it seem like they were trying to reassure you about your data security and security of the interaction with the bank. That was really nice of them. It made the interaction more secure, trustful, and reliable which is very important because it is my bank after all.

There seemed to be a divide between the respondents, wherein there were those that appreciated the elaborate warning message that the chatbot conveyed, while the others thought of it as a more unnecessary addition taking away from the main point of the conversation. It is, however, important to note that most users felt the former in the case of a bank. It is not clear whether they felt the same in regards to chatbots from other domains, as the information shared with chatbots in case of the latter would not be as sensitive as that shared with their banks.

4.2. *Chatbots as entertaining*

All eleven of the respondents referred to the chatbot as "annoying" when asked for their spontaneous associations with it. Kushagr (24-year old, self employed in India) exemplifies with his statement: "It is annoying, it is something I do not know much about. Something that I would rather not deal with, and close as soon as it pops up on the website." For half the respondents, it seemed to be the case because of the chatbot's inability to comprehend or make sense of them without the respondent having to "repeat themselves multiple times". As for the other half, it seemed to be the chatbot's persistence. As Stephanie (24-year old, Media student) said:

[...] It pops up very fast, like it comes on too strong. It is almost like going to a shop in the physical world. I am the type of person that just likes to browse through. Sure sometimes a clerk asks me if I need help, but if I say no, they kind of leave me alone. That is what I want, for them to leave me alone. It should not be like, "Oh hey, I have the perfect thing for you. You have to see it. Please see it. Did you take a look at it" [...] I feel like that is too much, and I feel that most chatbots are like that.

How chatbots act with a consumer definitely seemed to influence the degree to which the user enjoyed it, if at all. As was proposed by Köhler et al. 's (2011) research, that an online agents' presence impacts a customer's satisfaction and purchase intention. In spite of the fact that most expressed their dislike for a chatbot that is omnipresent and tenacious in its mannerisms, the interviewees did have an appreciation for the bots that were easier to find in the customer service page, for when they had visited the domain for a specific concern.

Additionally, the results of this study contradict the notion presented by (Brandtzaeg & Følstad (2017), that users give an entertainment value to chatbots, and often use them for enjoyment, fun and to pass their time. As Adriana (25- year old, migration studies student) said: "[...] it is clear. I mean it is not really fun or anything. But I think for a banking application, it does not necessarily need to be something I enjoy; I think clarity is a top priority. A few interviewees shared this viewpoint where they associated a banking chatbot with something that does not need to be fun, or exciting. However, it is good to take into account that most of these perspectives were limited to a banking chatbot. It may be the case that when not dealing with sensitive information, a consumer may look for a chatbot to have some entertainment value to enhance the interaction.

Balancing Mori et al. 's (2012) uncanny hypothesis, where difficulty in being able to distinguish amongst a human-like object and its human counterpart can evoke feelings of eeriness, repulsion, or elicit the experience as a whole. This was the case for a one- third of the respondent's of this study as well. For example:

Yeah, it is too much honestly. [...] It always freaked me out. Maybe because it is getting too close to the world where you know humans and robots are too intertwined. And that feels uncomfortable. [...] I guess it is because it is unfamiliar and scary because you do not know anything. It kind of blurs the line between what you have always known to be true. Which for humans to be is one thing, and robots another (Megan, 26-years old, Urban planning student).

This viewpoint was shared with most of the interviewees where an elaborate anthropomorphism of the chatbot made their interaction as a whole rather unpleasant and forceful, with seven of them referring to the chatbot as "creepy" or "weird". This is in line with Ciechanowski et al. 's (2019) findings, where they found higher dissatisfaction amongst users in interactions with overly humanized chatbots, especially those that are made so ineptly. Having said that, the study also revealed that while users expect a banking chatbot to be neither entertaining, nor fun, there are other features that consumers expect a chatbot to contain. One of which is the ability to facilitate fast-paced communication (Gnewuch et al., 2017). As Elizabeth (29 year old, epistemologist) said: "Wow, it takes a really long time to respond to hello. [...] really? After all this time, it literally gave me the exact same response as earlier. This virtual assistant really needs to get its shit together." The absence of these 'expected' features in a chatbot, often led to rise in negative emotions towards the bot, or the

experience as a whole. This finding is in unison with Meuter et al. (2000), that delays in response time can be perceived as something that impedes with a service encounter and inhibits to consumer from achieving what they needed.

4.3. *Chatbots as sensorially appealing*

“Oh my god, she moves. She is also blinking, no wait, she is glaring at me! Why is she doing that? I definitely do not like that, if not hate it” (Nathan, 22-years old, data analyst). This quote is an appropriate representation of how ten of the eleven participants felt. Gainsaying the findings of Araujo (2018) that provided evidence of human-like chatbot having a positive impact on the consumers, this study showed the contrary. The humanized cues of the chatbot managed to have a negative impact on the consumer’s emotions even before actually interacting with the chatbot. Diana (28-years old, social media strategist) also adds:

I know going into the conversation that it is not going to be able to help me much. It is not like I have high hopes. [...] But it is annoying when it tells me a name and has a face. No, I know you are not Maya, I know you are a chatbot. You do not have to be chitchatting with me for me to want to do this.

As can be seen a human-like chatbot was not only disliked, but oftentimes also dismissed. Contrary to Huang and Rust (2018), this study found the user’s neither treating a humanized bot as a human being, nor expecting it to exhibit intelligence or other aspects of the human psyche. The appearance of the chatbot seemed to have almost negligible influence on the intelligence the user’s ascribed to it. Often calling the avatar “a weird little image”, respondents also exclaimed how unnecessary they thought it was. These findings nuance those of Skjuve et al. (2019), that a consumer much prefers a text only chatbot; over one that has an avatar.

Similarly, the chatbot having a human name did not seem to appeal much to the audience either. Kartikey (25-years old, data analyst) exclaimed:

[...] It bugs me so much that there are always those weird white lady names. I really wish they would not do that. [...] They either need to more wholeheartedly make it the most convincing chatbot, or they need to stop giving it a person’s name. Just accept that it is not a very good chatbot, and give it a weird name, that is not like a human name.

In his case, and the case of a few others, an anthropomorphized name seemed to cause distress in their minds. This is where the current study agrees with Huang and Rust (2018), not in the fact that people have higher expectations from a non- human entity that is anthropomorphized, but have higher expectations from anything that is human. For that reason, they wish for the chatbot to be

intelligent, and capable to a certain degree before introducing itself as anything close to a human. In the case of which, it would take a humanized service robot that is accompanied with a superior ability to deliver services to be able to positively appeal to the customers. In consensus with Angeli et al. (2001), the results support that adding anthropomorphized features to technology that is not yet socially adept, can result in severe negative reactions from the users. As it can reinstate unattainable human prospects to the chatbot, later resulting in frustrations.

Lastly, in line with Cyr et al., (2010), the research found that most preferred their chatbot to be of a lighter color palette with colors such white, blue, and grey. However, the colors seem to receive very little attention from a majority of the respondents, if at all.

4.4. *Chatbots as socially present*

While most participants claimed for informativeness to be paramount in the consumer experience of chatbot, their responses were more influenced by the social presence of the bot. All eleven of the respondents seemed to like the fact that chatbot introduces itself as a chatbot. As Ard (25- years old, energy consultant) puts it:

[...] it was completely transparent that it was a bot. Some websites with the chat bots have an avatar of a little dude, and you know just as you write to it. It will become obvious that it is not a person. But they will not tell you that, which I feel is super dishonest. And I do not like it at all.

The chatbot's self disclosure does not only increase the faith that one has in the chatbot, but also makes them trust it more as they assume it to be honest. Under this logic, the study is consistent with that of Luo et al. (2019) where they found that if a consumer only finds out the autonomous nature of a chatbot later in the interaction as opposed to the outset, it can have deleterious effect on the transactional outcomes as the consumer would react negatively. Similarly, three respondents also shared their appreciation for bots such as HARO having its name capitalized: "I weirdly prefer that its name is all capitalized. I think it is better because it kind of seems more like a program, which it is rather than trying to be a human, which it is not" (Elizabeth, 29-years old, epistemologist). Respondents tend to prefer a generic robot name over a human name as it sets the tone for the communicative capability of the chatbot, which in turn levels expectations. This once again reestablishes the importance of disclosure, the absence of which might be considered as an attempt at deception.

Additionally, the socio-linguistics used by a chatbot play an imperative role in how it is perceived. Although humor has been shown to extend user satisfaction in relation to tasks (Morkes et al., 1999), this study aligns with Goetz et al. (2003), that more serious chatbots gain more compliance from humans in a serious task. As is exemplified from the quote below:

It is very formal, like I want a bank conversation to be. That's one bad thing with [...] the etiquette they show does not have the same standards as the others. They are much more casual which strikes me as untrustworthy when I'm talking to my bank. I have my money in my bank, and I want the people that handle this to be super professional. [...] Even if I start with a 'yo', I want them to be in a suit, replying as 'Hi, sir. Thank you. Greetings.' That is how I want my bank to be. That is because it is my bank; I do not want it to be like a play school. I want it to be formal. (Max, 28-years old, software engineer)

As can be seen, in the case of banks specifically, nine out of ten respondents wanted the chatbot to be more formal, and preferred the absence of humor or informal talk. As stated by Holtgraves et al. (2007), even the slightest difference in chatbot's way of talking can have a substantial impact on how it is perceived. In the case of the current study, when one has certain expectations from its banks, an informal persona may exacerbate the negative feelings that may arise from the interaction.

The results are also in congruence with that of Hill et al. (2005), that users tend to have a poorer vocabulary and more usage of profanity when talking to a chatbot, when compared to its human counterpart. Kushagr (24-years old, self employed) states:

[...] but you kind of do not have to consider being mean or not. You can kind of just x out at any point, you can kind of just leave. Versus it being kind of rude to do that if someone is taking the time to help you in whatever [...] So that is kind of nice about chatbots. It is kind of non-committal, and I do not have to care about its feelings.

It is obvious from the statement that when it comes to talking to another human, humans tend to be careful of the social cues they pass on, or exemplify. However, when talking to a chatbot, they feel far at ease and let go of the well-behaved, social persona that they would have otherwise assumed. Furthermore, a very interesting observation from the study was the respondent's association of genders to the chatbots, even to those without an avatar, or a human name. It was often that the respondents referred to a chatbot with pronouns such as 'he', 'she', or 'them', and often even used personal pronouns making it feel like the chatbot was a part of the human race. This probably comes from our basic need to anthropomorphize things that we do not understand, or beyond our comprehension (Aggarwal & McGill, 2007).

Lastly, this study also found that respondents constructed a more positive social image of a chatbot if it asked them to clarify what it did not understand, or passed their query on to an actual human agent that was perhaps more equipped to help.

It told me how to contact a real person, which is really good. Because the other approach would be to have the chatbot try, and try it over again with its best estimate, which would have been really frustrating. So I like that it was very quick in acknowledging that it could not help me. Or it probably could not help me and therefore, either asks another question, or maybe told me even to rephrase the question. After which, it was just like here is how you contact that person. So I really liked that it was not stubborn. (Ard, 25-years old, energy consultant)

The chatbot asking for clarifications not only made the respondents feel like effort was being put in to understand them, it also made the chatbot's presence more social. As proposed by Sheehan et al. (2020), seeking clarification is a very human thing, as miscommunication is a very frequent occurrence between humans. Asking for clarification, thus, illustrates dialogical effort, and social coordination.

The next chapter summarizes the results the study, highlights the key findings, and uses them to answer the research question. After which it concludes the research by presenting the limitations and societal implications of the study, along with suggestions for future research.

5. Conclusion

The current research has investigated the consumer experience of banking chatbots. Specifically, responses collected through online in-depth interviews of millennial consumers have been analysed to examine how they experience the different elements of chatbots implemented by their banks. In particular, this study has tried to find the answer to the following research question: *how do millennial consumers experience banking chatbots?*

As clarified in the previous chapters, with the increasing use of chatbots in the customer service domain by banks (Araujo, 2018), it is imperative to understand how best to utilize this technology to achieve an inflated customer satisfaction as a result (Trivedi, 2019). To grasp the factors that influence the perception of a chatbot, this study focuses on the consumer's experience of it. Although the concept of consumer experience is anything but recent, and discussed in academic extensively, its connection to a certain technology (chatbots) as the facilitator of the online consumer experience is relatively modern, especially in the case of the banking industry.

Therefore, the aim of this concluding section is twofold. To begin, the results of the study are presented to answer the proposed research question. This is done by consolidating the results of the sub-questions presented in the earlier chapter, in light of the elements from social psychology theory applied to the online consumer experience in relation to chatbots used by banks presented in the theoretical framework. Subsequently, the implications of the study are expressed. Following which, the limitations of the research are highlighted accompanied with suggestions for future research on the same.

In accordance with Schanke et al. 's (2020), the results have provided evidence that in the absence of a chatbot being able to provide a resolution, users often experience dissatisfaction and frustration towards the chatbot. The results have further indicated that in the case that a chatbot does provide sufficient assistance, the user leaves not only feeling positively towards the chatbot, but also the bank that it is representing. This is in line with Zarouali et al. 's (2018) study, which proposed that a positive impact on the cognitive determinant of a visitor, results in an increased liking for the brand, and has an indirect influence on their purchase intentions. Furthermore, in alignment with Goudey and Bonnin (2016), this study found no significant effect of anthropomorphism of a chatbot on the user's perception of its usefulness. Thus, refuting the findings of humanization of a chatbot having positive user perceptions of its utility (Blut et al., 2021), and competence (Stroessner and Benitez, 2019). However, what this study did find was, that adding additional anthropomorphic features to a chatbot that was unable to help the user, would cause further obfuscation and disliking towards the bot.

While Burgoon et al. (2000) illustrated the benefits of human cues in an interaction, the results have indicated otherwise. Anthropomorphic cues in terms of appearance and a name if it all, tend to have a negative influence on the consumer. In this regard, the linguistic features of a chatbot seemed to play an important role as well. Drawing upon Verhagen et al. 's, (2014) study regarding the importance of informal or social language choices made by a chatbot, this study illustrates the

alternative that people prefer their banking chatbot to have a more polite way of interacting. However, it must be noted that this is limited to the banking sector. The results also indicated that when adding anthropomorphic appearances and names to a chatbot, it is imperative to analyse the context and industry in which the chatbot pertains. While the context of this study is unique to banks resulting in most wanting a rather serious interaction or having certain business standard expectations (Belanche et al., 2019), there is reason to believe that adding such features to other industries might result in positive reactions. It might also help to look further into user based customization and chatbot personalities.

Having said that, the study revealed social presence to be the most crucial element of a chatbot. This was in line with Araujo's (2018) results where chatbots with a higher social presence got a better rating from the users. Although consumers have some expectations similar to that of a conversation with a human, the study agrees with that of Angeli et al. (2001) wherein it finds many differences between how humans converse with other humans as compared to how they converse with machines (Hill et al., 2015). Resulting in consumers wanting a more need-specific conversation with a chatbot, over one that is trying to mimic a human conversation. In line with Sheehan et al.'s (2020) findings, the study also illustrated that users are unlikely to dismiss a chatbot in the case of it asking for a clarification. Theoretically, this is based on the fact that miscommunication is an ordinary affair in the case of two humans conversing (Sheehan et al., 2020). In some cases, consumers preferred a chatbot that sought clarification despite the extra effort it would take for the individual to respond to the explanation request. Having said that, the study also observed the increasing use of pronouns from the consumer side when referring to a chatbot. Assigning genders to a chatbot, or speaking of it as a fellow human came quite naturally as a response to them. This substantiates Adam et al.'s (2020) findings, that people tend to attribute characteristics that are exclusive to humans, to agents that are non-human.

Drawing upon Angeli et al.'s (2021) claim of the importance of the behaviour of a bot along with its appearance, this study illustrates the user's expectations to be served well by the agent either in the form of greetings, or by being treated personally by a chatbot. The results indicated that the users preferred when the chatbot disclosed its true nature in the greeting or the initial parts of the conversation itself. As noted earlier, the conversation with a chatbot differs significantly to that with a human due to which, it might be the case that the lack of disclosure may be considered as dishonest behavior, or an attempt at deception (Luo et al., 2019). This may affect the trust one has in the chatbot. However, the importance of context must be highlighted here once again. If the consumers are engaging with the automated agent in a domain where they expect to be interacting with a chatbot, their presuppositions may differ from that of an environment where they are expecting to be conversing with a human.

Ultimately, this research suggests that in the context of banks, informativeness and social presence of a chatbot seem to be the most important elements for a user. Informativeness is salient in

the sense that it is the primary purpose for the consumer to interact with the chatbot in their first place. However, the study revealed that it is the social presence that retains the consumer in the conversation and through the journey. It is also the social presence of an automated agent that makes a lasting impression on the consumer's mind.

Since the knowledge on potential outcomes from the use of a chatbot are lacking, and further analysis is needed on its performance in customer support, this research brings cognizance for marketing managers, and banks by highlighting key insights into the consumer perspective. The study aids companies, and businesses in the way that it provides relevant information that they can use to address their customers when implementing chatbot technology in their processes. Additionally, by understanding the needs of the consumer, the findings of this study also fill the gap between the chatbot's performance and user expectations, which often times is the reason for an agent's failure (Ben Mimoun et al., 2012). Finally, while the study focused on millennials, other demographic data seemed to have no relationship with how users perceive a chatbot. This suggests that a chatbot could serve as a customer service agent to an extensive array of consumers.

In conclusion, it is important to mention that the results of the current study are affected by limitations that future research could mend in order to expand on the current study. Firstly, while the globalised nature of this research did provide a plethora of perspectives and is in line with the millennial lifestyle today, the research does not account for how cultural factors might have influenced certain perspectives, if at all. Based on the findings of previous studies (Belanche et al., 2015) where values play a role in the expectations one has from certain technology, it is suggested for future studies to keep in mind cultural values and their impact on the same. Additionally, it is good to note that the sample consisted of well educated people with a deep understanding of technological advancements and the working of Internet. This impacts the generalizability of the study, as the sample may not be a true representation of the existing population.

Secondly, the study presented is cross-sectional, which means the data was collected from a sub-set of a population during a short period of time (Carlson et al. 2009). Perspectives as we know are often volatile, and are continuously modified (Belanche et al., 2019), this may impact the long term use of a chatbot. Implementing a longitudinal study that collects data over a longer period of time could help validate the study further. Although the current study focused on a specific generation, it may also help to measure whether or not the age of the respondent has an influence on the experience as a whole.

Thirdly, due to the circumstances in which the stimuli were presented to the respondents, it could be said that the study lacks mundane realism. The conditions under which the participants experienced the stimuli were artificially created free from any distractions, this may have impacted the results as the participants were not exposed extral factors that they might have been to in a natural setting (Aaranson et al., 1998). Additionally, due to the online nature of the interviews, the interviewee could not take note of facial expressions and body language. As a result of which the

results of the study are based on the emotion words used by the respondents to describe their feelings. This may have impacted any contradictory emotions that could have been captured had the interviews been carried out in person.

Lastly, the current study focuses on people that had previously interacted with their bank's chatbot, meaning they are existing consumers of the banks. Future research could focus on the different stages on a consumer journey, and study the ability of a chatbot to be able to convert prospects to actual consumers. It is also important to note that the findings of this study are particular to the customer support banking domain. Whether these results will translate to any other areas of banking, or any other industry, requires more research. Where adding chatbots in certain situations could engage the users further, it could also lead to a paramount increase in dissatisfaction. Especially in the case where users are to share sensitive information, or accept advice on crucial topics such as investments (Belanche et al., 2019). As mentioned earlier, the context in which a chatbot is present matters utmost. Future studies could also look into other industries and see how users experience chatbots differently than they do in the sector of banking.

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Appendix A - Topic guide

Hello, first of all, thank you for agreeing to participate in my research for my master's thesis at Erasmus University Rotterdam. Before we start, I want to go over the consent form that I sent to you.

- *Do you consent to being audio recorded so I can later transcribe the interview and use it for my analysis? [SEP]*
- *And second, do I have your consent to use your full name and other demographic information throughout my research? [SEP] Before we start, I want to establish that this interview does not require you to have a lot of knowledge of banking or the different features that banks provide. I just want to understand your perceptions of conversational agents. Therefore, there are no right or wrong answers; this is a safe space for you to voice your opinions and perspectives without any judgment.*

1. Demographics (warm-up) [SEP] **To start off, would you mind telling me a little about yourself...how old are you, where you are from/where you've lived, what's your occupation at the moment, etc. [SEP]**

- Could you state your full name for me please? [SEP]
- How old are you? [SEP]
- Where are you from/where do you live? [SEP]
- What is your occupation at the moment? What industry? [SEP]
- What are some of your hobbies?

2. Banking preferences

- What banks do you use?
- Why do you use banks?
- Contact with their bank
 - How frequently do you contact your bank?
 - For what reasons do you contact your bank?
 - How do they usually seek help from their bank/ what touch points do they use?

3. Chatbots

- What are your spontaneous thoughts or associations when you think of chatbot?
- Have you ever interacted with a banking chatbot?
- When did you last interact with the chatbot?

4. OCE- Informativeness (Cognitive appeal)

- What was the concern/ query about?

- b. Did it manage to help you with your needs? How?
- c. How effective do you think chatbots are in delivering information?

5. OCE- Sensory appeal

- a. Can you tell me more about the features of the chatbot?
 - i. What did it look like?
 - ii. Did it have name?
 - iii. Was it easy to find on the app/website?
 - iv. Where was it on the app/website?
- b. How did you feel about its appearance?
- c. Is the something that you would add or change about it?

6. OCE- Entertainment (affective appeal)

- a. What do you remember the most from your interaction?
- b. What did you like about the chatbot?
- c. What did you dislike about the chatbot?

7. OCE- Social presence

- a. To what extent is it different than going to a human/ person?
- b. If a chatbot were to give you financial advice/investment advice on a chat, how likely are you to accept it?
- c. What would your ideal interaction with a chatbot be like?

8. Stimuli

- a. **They experience the stimulus as in they converse with HARO and pay attention to the different options offered (<https://www.hangseng.com/en-hk/contact-us/contact-us/>, the chat option on the bottom right side of the screen). This stimulus helps better understand the ideal user experience.**

Can you first take a minute or two to look at the chat box and the different options available? After which you can have a conversation with HARO. A few prompts could be: greeting it, asking how you can open an account, asking the procedure to apply for a credit card, and what card suits you best.

- i. What were your key impressions?
- ii. What did you like?
- iii. What did you dislike?
- iv. What can be changed?

- b. **The take a look at Amy, her appearance, and the different features available on the chat window**

(<https://www.askus.business.hsbc.com.hk/english/bot.htm?isJSEnabled=1&businessArea=Root.Public&channel=Root.Web>). This stimulus helps understand better how users perceive an anthropomorphized chatbot.

- Could you take a few minutes to look at the chat box, its different functions, the avatar, etc.
 - i. What were your key impressions?
 - ii. What did you like?
 - iii. What did you dislike?
 - iv. What can be changed?

9. Conclusion

- a. Do you have any final remarks or questions for me?
- b. With that I would like to thank you for your participation for this interview. Thank you for your time!

Stop recording

Appendix B- Consent form

CONSENT REQUEST FOR PARTICIPATING IN RESEARCH FOR QUESTIONS ABOUT THE STUDY, CONTACT:

Gunansh Singh

Lombarkade 46A

3011ZC Rotterdam, NL,

Mail: 542182gs@student.eur.nl Mobile: +31644717934

DESCRIPTION

You are invited to participate in research about chatbots and your experience with them. The purpose of the study is to understand how your experience with the conversational agents of financial institutions has been.

Your acceptance to participate in this study means that you accept to participate in the focus group. In general terms, questions of the focus group will be related to chatbots, their humanization, and customer experience as a whole.

Unless you prefer that no recordings are made, I will be video recording the focus group. You are always free not to answer any particular question, and / or stop participating at any point.

RISKS AND BENEFITS

I am aware that the possibility of identifying the people who participate in this study may involve risks for past and future relationships, reputation associated with label and the individual, and/or other relationships that you may end up discussing these topics. For these reasons, unless you prefer to be identified fully (first name, last name, occupation, etc.), I will not keep any information that may lead to the identification of those involved in the study. I will only use pseudonyms to identify participants.

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 60 minutes. You may interrupt your participation at any time.

PAYMENTS

There will be no monetary compensation for your participation.

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 - Matthijs Leendertse, leendertse@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 recorded during this study:

Name	Signature	Date
------	-----------	------

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

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

Appendix C- Coding tree

Anthropomorphism	Categorization	Appearance	Characteristics of human body	
			Human facial structure	
			Human-like movements	
		Emotions	Fear	
			Anger	
			Love	
			Sadness	
			Joy	
		Thoughts	Warmth	Feeling
				Organic
				Compassionate
				Social
			Competence	Knowledgeable
				Interactive
				Responsive
				Capable
Competent				
Reliable				
Discomfort	Aggressive			
	Awful			
	Scary			
	Awkward			
	Dangerous			
	Strange			
Anthropomorphism	Motivations	Effective	Need to predict and control their environment	
		Social	Need for companionship and relationships	
		Elicited agent knowledge	Need to use the known to make sense of the unknown	
Online consumer experience	Informativeness	Informative		
		Secure		
		Knowledgeable		
		Competent		

		Second, Helpful	
		Credible	
		Resourceful	
		Reliable	
		Useful	
		Confident	
		Intelligent	
		Trustworthy	
	Entertainment	Entertaining	Exciting
			Alive
			Pleasant
			Nice
			Exhilarating
			Interesting
			Arousing
			Sensational
			Stimulating
			Beautiful
			Pretty
			Pleasing
Active			
Non-entertaining	Non-entertaining	Slow	
		Drowsy	
		Inactive	
		Lazy	
		Monotonous	
		Dull	
		Boring	
		Unstimulating	
		Displeasing	
		Dissatisfying	
		Unpleasant	
		Repulsive	
Uncomfortable			
Tense			

			Forceful	
			Panicky	
			Frenzied	
			Hectic	
			Intense	
			Rushed	
	Sensory appeal	Sight	Design	
			Style	
			Architecture	
			Lighting	
			Cleanliness	
			Colors	
			Exteriors	
			Graphics	
			Layout design	
			Presentation	
			Smell	Product congruence
				Advertency
		Signature scent		
		Theme scent		
		Ambient scent		
		Sound	Voice	
			Music	
			Jingle	
Sound brand				
Attentiveness				
Signature theme sound				
Taste	Bitter			
	Sweet			
	Salty			
	Sour			
	Umami			
Touch	Feeling upon			

			touching
	Social presence	Open communication	Continuous thread of communication
			Asking queries
			Referring to the other
			Quoting the other
			Providing feedback
			Expressing agreement
			Expressing disagreement
			Giving compliments
			Group cohesion
		Goodbyes	
		Addressing the other personally (using their name, etc)	
		Inclusive pronouns (us, we, etc)	
		Affective expression	Teasing
			Sarcasm
			Irony
			Use of capitalization
			Use of emoticons
			Self disclosure
			Revealing

			personal details
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