

The dark side of customer engagement in AI-driven interactions: The case of chatbots in the tourism industry

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THE DARK SIDE OF CUSTOMER ENGAGEMENT IN AI-DRIVEN INTERACTIONS: THE CASE OF CHATBOTS IN THE TOURISM INDUSTRY

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Abstract

Given the increase of human-chatbot interactions in the tourism industry, as well as the gap in the existing literature on the impact of such interactions on customer engagement, there is an urgent need for brands and researchers to further investigate this phenomenon.

This thesis investigates the effect of negative chatbot interactions in the tourism industry on customer engagement with a focal brand. Through a qualitative study consisting of semi-structured interviews with 19 participants, this research identifies the drivers of negative consumer engagement and analyses the resulting affective, cognitive, and behavioral dimensions.

There are five identified causes of negative engagement: interactions with monopolistic firms, non-confirmation of promised services, perceived injustice, chatbots unsatisfaction, and negative contextual experiences. The negative outcomes include frustration and anger for the affective engagement, a lack of intention to interact with the brand and a perceived lack of trust for the cognitive engagement, and negative word-of-mouth as well as complaining for the behavioral engagement. Some forms of disengagement were also observed among the participants. The findings emphasize the need for businesses to resolve issues associated with chatbot interactions to increase customer engagement and mitigate negative effects. By understanding the causes and results of negative interactions, brands can improve customer experiences and foster positive engagement. Accordingly, managerial and theoretical implications are suggested along with recommendations for future research.

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List of abbreviations

Abbreviations	Signification
AGI	Artificial General Intelligence
AI	Artificial Intelligence
ANI	Artificial Narrow Intelligence
AR	Augmented Reality
ASI	Artificial Super Intelligence
AV	Automated Vehicle
B2B	Business to Business
B2C	Business to Consumer
CE	Customer Engagement
DL	Deep Learning
DNN	Deep Neural Networks
ICT	Information and Communication Technologies
ML	Machine Learning
NCE	Negative Customer Engagement
NLP	Natural Language Processing
RL	Reinforcement Learning
RPA	Robotic Process Automation
TAM	Technology Acceptance Model
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
VA	Voice Assistant
VR	Virtual Reality
WOM	Word-of-Mouth

1. Chapter 1: Introduction

1.1. Context

In the past few years, the application of artificial intelligence (AI) in the service industry has exploded, with applications ranging from frontline service interactions to customer relationship management (Hollebeek et al., 2021). In contrast to the third industrial revolution, which was characterized by the adoption of intelligent and autonomous systems powered by data and machine learning, in the fourth industrial revolution, machines are interconnected and communicate with one another, enabling systems to make decisions without human intervention. (Tussyadiah, 2020). Consequently, automation has become the principal component of the digital transformation taking place in numerous industries (Tussyadiah, 2020). Intelligent systems are distinguished from non-intelligent systems by their capacity to comprehend the context, gain and keep knowledge, and draw conclusions based on past experiences, allowing them to respond effectively and rapidly to new situations (Filiari et al., 2021). Through these components, AI has quickly progressed from conducting basic tasks such as Siri does, to more complex social tasks such as identifying the feelings of customers for future intervention (Prentice et al., 2020).

AI is nowadays present in a wide variety of fields, including the tourism industry. For customers, AI is a helpful technology to discover better and more pertinent data, to give more flexibility, enhance decision-making, and ultimately improve the tourism experience; while from a business perspective, AI can be implemented virtually in every aspect of management (Tussyadiah, 2020). Marketing automation is dependent on predictive analytics and personalization engines that gather and analyze pertinent customer data, build customer profiles through identity matching, and identify key characteristics of customers (Tussyadiah, 2020 ; Solakis et al., 2022). In 2021, 21% of the travel companies' revenues were influenced by AI and this percentage is expected to grow to 32% by 2024 (Statista, 2023). Today, cutting-edge innovations including chatbots, AI, and robotics are altering how the tourism industry functions (Pillai & Sivathanu, 2020). The use of technology can indeed offer an opportunity for tourism businesses to engage customers with meaningful experiences that facilitate communication and organizational learning (Solakis et al., 2022). In addition, technological advancements offer distinct benefits in terms of service delivery effectiveness, rapidity, predictive accuracy, and reliability (Solakis et al., 2022).

While advances in technology have increased the number of opportunities customers can interact with brands and businesses, digital technologies have allowed companies to automate their interactions with customers (Perez-Vega et al., 2021). Statista reported in 2022 that already 64% of hotels were using chatbots and an increase of 53% of chatbot implementations was expected during the same year (Statista, 2022). Each day, the number and sophistication of service robots that are used in tourism and hospitality grow (Filiari et al., 2021). Chatbots can have many benefits for tourism businesses including continuous customer service, increased revenue opportunities, enhanced engagement, automatic lead capture, reduced administrative costs, a competitive edge, and time savings (Pillai & Sivathanu, 2020). However, when an interaction with a chatbot is perceived as difficult and inconvenient, a negative relationship for customer usage intention was found by Melián-González et al. (2021) in their study.

Over the past decade, customer engagement (CE) has gained a lot of attention in the research field. This is explained by the fact that CE is now linked with important brand key performance indicators (KPIs) such as sales growth or customer feedback (Harrigan et al., 2017). While CE research has now been carried out in many areas, the field of tourism has not been neglected. Customer engagement has been proven to increase brand loyalty, trust, and perceptions of brands in the tourism industry (Harrigan et al., 2017). When customers are unaware that their interaction is occurring with a chatbot,

their engagement is expected to be similar to usual. However, when the customer is aware that he is interacting with a chatbot, his customer engagement towards the brand might differ (Hollebeek et al., 2019). According to a study by Fang et al. (2023) tourism chatbots have shown a positive impact on consumer engagement. The study found that travellers who interact with chatbots when planning their trip and during their stay have a higher level of engagement than those who do not use chatbots. Another study conducted by Huang and Dootson (2022) investigated the effect of chatbot interactions on customer engagement in tourism. The findings indicated that favourable interactions with chatbots, such as prompt and personalized responses, helpful assistance, and pertinent recommendations, increased customer engagement. Popularity of several new messaging services has contributed to the stampede towards chatbots. However, chatbots still encounter numerous technical challenges, such as language processing, where lexical and semantic ambiguity continues to be a frequent obstacle (Ukpabi et al., 2019). Negative interactions, such as inconsistent responses or misunderstandings, may have a negative impact on customers (Huang & Dootson, 2022)

The concept of customer engagement has been used to investigate the nature of interactive, co-creative interactions between an actor and a service provider or a brand. It is particularly crucial in service contexts characterized by a high number of customer-brand interactions, as these interactions could create value for the brand and/or the customer (Do & Bowden, 2023). Indeed, AI has been employed to engage customers in customer service. According to Prentice et al. (2020), as the initial point of contact, chatbots might recognize customer requirements and issues and, if necessary, transfer consumers to actual agents. Occasionally, chatbots engage consumers by providing a positive level of interaction and continuous service that encourage effortless experience of service. The chatbot capacity to understand natural language and participating in conversations enables chatbots to not only provide customer service, but also enhance customer experiences by reducing customers' efforts and enabling them to use their time more effectively somewhere else (Huang & Dootson, 2022).

The concept of negative customer engagement has however been almost ignored so far (Dutot & Mosconi, 2016; Chen et al., 2021 ; Do & Bowden, 2023). Bowden et al. (2017, p.7) defined the negative valence of CE as “a consumer’s negatively valenced cognitive, emotional, and behavioral investments during or related to interactions with focal objects or agents.” In the case of a disappointing brand performance, NCE could also occur as a result of an over-promising service experience, resulting in consumer dissatisfaction (Do et al., 2019). While CE and NCE share the same dimensions, it has been found that the cognitive, affective, and behavioral dimensions of NCE operate differently than those of positive CE, indicating that positive CE and negative CE cannot be viewed as identical (Do & Bowden, 2023).

1.2. Research motivations

From a managerial perspective, the positive impact of chatbots on CE towards the brand has already been widely studied (Ukpabi et al., 2019). Indeed, Ukpabi et al. (2019) showed in their study on chatbot adoption in tourism services, that chatbot adoption increases the number of online bookings, positively impact the economic value of the business as well as enhance the tourist pre-travel experience. In the same light, Duan et al. (2019) propose that the implementation of AI technologies enables businesses to expand their service offerings and provide customers with unforgettable experiences. Indeed, AI will enable tourism companies to anticipate customers' needs, provide customized information and insights, keep and handle vast amounts of customer data, and deliver individualized customer experiences (Solakis et al., 2022).

CE has been conceptualized over the past few years through three dimensions that are respectively the affective, the cognitive and the behavioral engagement (Chen et al., 2021). Considering the significance of CE in a service context, research on a particular service environment has been carried

out to provide deeper comprehension (Do & Bowden, 2023). Rather et al. (2019), for instance, emphasize the impact of CE, genuineness, and attachment on consumer loyalty, trust, and co-creation in a tourism context. While the positive aspects of customer engagement on a brand have been widely studied, negative customer engagement and disengagement has been almost completely ignored so far (Dutot & Mosconi, 2016; Chen et al., 2021). However, studies such as those by Naumann et al. (2020) have shown the extent of the negative impact NCE can have on a brand. Indeed, in their study on the role of negative engagement, they suggested that positive and negative manifestations of engagement may exist in service relationships, and the degree to which engagement appears from positive to negative forms can have a substantial impact on the performance of an organization. Since negative engagement has the possibility to have a deleterious effect on service value, researchers and professionals interested in optimising engagement and restoring positive engagement within the service relationship find negative engagement to be of major interest.

From an academic perspective, although the contributions are limited to descriptions of current applications and potential future implementations and impacts, tourism researchers have begun to demonstrate an interest in artificial intelligence, robotics, and automation (Tussyadiah, 2020). Despite the significance of comprehending negative expressions of CE, studies on the growing area of NCE have been scarce and its conceptualization and measurement have received little attention (Do & Bowden, 2023). Indeed, although previous research has shed light on the effects of positive and negative valence on CE, little has been learned about the particular impacts on each CE dimension (i.e. cognitive, emotional, behavioral) and how companies can leverage positive valence and mitigate or react to negative valence in order to cultivate wanted types of CE (Lim et al., 2022). Huang and Rust already developed a framework on how to use AI with the objective of developing CE. Furthermore, empirical research examining the effect of service robotics on CE is still scarce. Less is understood regarding the nature and extent of service robots' impact on visitor engagement in the tourism and hospitality industry (Fang et al., 2023). Indeed, the literature already studied robots service performance by comparing it with human performance, but very limited research has been made to assess service-robot performance through customer-robot interactions (Fang et al., 2023).

In addition, Adam et al. (2021) already investigated the effects of AI-based chatbots on user compliance but focused on the factors favouring user compliance and only mentioned the potential negative effects of unsuitable answers provided by chatbots. According to Huang and Dootson (2022), customers' chatbot adoption and usage experience have been extensively examined in the existing literature, both areas presume a positive and practical connection between customers and chatbots. An emerging field of study investigates chatbot service failures, which arise when a chatbot's quality of service falls short of customer expectations. However, their study stated that when chatbots have too many human characteristics, customers could experience negative feelings. In fact, little is known about how these interactions with AI-based technologies influence the customer's perception of the service experience (Krishnan et al., 2022).

1.3. Problem statement

As Naumann et al. (2020) expressed in their study, there is an urgent need to operationalize negative engagement, including its dimensions and implications for service organizations, as well as the manner in which it manifests towards specific objects inside a service relationship.

Considering those insights and to address the research gap explained above, this thesis first aims at identifying the drivers that lead customers to negative engagement following an interaction with a chatbot in the tourism industry.

Furthermore, this study also intends to highlight the possible outcomes of negative customer engagement in this interactional context.

1.4. Contributions

“The rise of powerful AI will be either the best or the worst thing ever to happen to humanity. We do not yet know which.” (*“The Best or Worst Thing to Happen to Humanity” - Stephen Hawking Launches Centre for the Future of Intelligence*, 2016). If this thesis will not be able to answer the above statement, this study aims at adding insights to the existing literature on NCE. In particular, insights on NCE will be added through the analysis of a negative interaction with a chatbot in the tourism industry.

Additionally, this research will try to identify the various possible drivers leading to a form of NCE. This analysis will follow the three identified dimensions of CE, also valid for NCE, being respectively the affective, cognitive and behavioral engagement. While studies such as the one of Naumann et al. (2020) on “Expanding customer engagement: the role of negative engagement, dual valences and contexts” or the one of Do and Bowden (2023) on “Negative customer engagement behaviour in a service context” have already used these dimensions to apply them to NCE, they have not yet been applied in the context of an AI interaction, specifically applied to the tourism industry.

Another contribution brought by this study will be to assess the possible outcomes following such negative interaction. The outcomes will be examined, once again, on the three dimensions of CE to be able to provide impactful insights to marketing partitioners.

Through the investigation of this topic, tourism marketers will gain insights on the impact that a negative interaction can have on their brand. Thanks to the result analysis, they will be able to use these insights to develop improvement areas. Indeed, practitioners currently have a limited knowledge on the impact such interaction can have on the brand as well as which drivers can cause harm to their brand.

Finally, this study might be considered by practitioners as a foundation for implementing a better chatbot strategy, to identify its strengths and weaknesses and therefore, to be able to improve the technology to limit negative interactions as much as possible.

1.5. Approach

In order to answer the research questions, a literature review which covers the subjects of artificial intelligence technologies and applications, the tourism industry as well as AI applications in this industry was first conducted. The CE and NCE topics will also be investigated. Afterwards, research questions will be proposed to answer the previously identified gaps in the literature. Then, the data collection technique will be chosen, and the results will be analysed and discussed. Finally, a short summary, the theoretical and managerial implications, as well as suggestions, potential limitations and implications for future research will be presented.

2. Chapter 2: Literature review

2.1. Artificial Intelligence

2.1.1. Definition of Artificial Intelligence

The term "Artificial Intelligence" (AI) was first used by John McCulloch in 1955 and referring to "science and engineering to make smart machines" (Tsaih & Hsu, 2018). However, the appellation of AI was first extensively studied in 1956, during the Summer Research Project conference on "Artificial Intelligence" conducted at the Dartmouth college (Dick, 2019). This concept was not born in 1955 but is part of a larger reflection on the concepts of what is intelligence and what is artificial.

Artificial Intelligence is defined as systems that mimic human attributes such as language, problem-solving, support for cognitive functions, learning, and have the ability to complement and replace human tasks (Sung et al., 2021). AI also has the capacity to interpret outside information correctly, to study from such information, and to apply those learnings to acquire unique skills and responsibilities via bendy adaptation (Grewal et al., 2021). It is now to be considered, that AI is more than an attempt to recreate some static aspects of human intelligence but rather an evolutionary perception of intelligence itself (Dick, 2019). The integrated aspect differentiating such intelligent system is its capacity to understand a situation and to use previous events to be able to understand, acquire and retain information in order be able to respond to a new situation (Dick, 2019). Intelligent systems usually present two main characteristics: the first one being their capacity to understand a given situation, the second one being their competence of learning from previous actions to respond to particular objectives (Popescu, 2019). Furthermore, two researchers, Herbert Simon and Allen Newell, came to propose that AI-enabled systems and humans are now part of the same species (Dick, 2019). They have in fact the capacity to use symbolic data as input, manipulating it in accordance with a set of formal rules, which therefore allows them to develop opinions, solve issues, and make judgments (Dick, 2019).

From a managerial point of view, the employment of humans is seen as less efficient in terms of time and finance than the use of intelligent systems (Pelau et al., 2021). AI is therefore of growing interest to marketers as it offers new opportunities such as the sales process improvement or customer segmentation on social networks (Perez-Vega et al., 2021). AI can be designed to have multiple intelligence to perform multiple tasks, as humans have (Huang & Rust, 2021). Indeed, AI will be able to determine interesting factors and characteristics by itself to learn and improve its performance over time (Solakis et al., 2022). Each type (e.g. mechanical, analytical, intuitive and empathetic) of AI can have its own benefits such as using mechanical AI for standardization (limited learning and adaptation), thinking AI to provide personalisation (data-based learning and adaptation) and feeling AI for relationalisation (experience-based learning and adaptation) (Huang & Rust, 2021). It must be recognized that AI is having an influence in our everyday life, through for example intelligent agents, by means of the development and evaluation of new technologies that can achieve various functions (Adamopoulou & Moussiades, 2020). As an example, Microsoft developed Xiaoice, a chatbot endowed with the sociability to meet the requirements of humans. Through the development of emotional intelligence, it creates emotional relationships adapted to the cultural differences of its users (Adamopoulou & Moussiades, 2020).

According to Strelkova (2017), there would be three levels of Artificial Intelligence. Firstly, the Artificial Narrow Intelligence (ANI) refers to intelligent systems that are specialized in a single domain (e.g. chess). Several applications can be found in the computers of the cars and the ranking pages of Google for example. Secondly, Artificial General Intelligence (AGI) that can be compared to human intelligence due to its ability to have a sense of logic, program, solve dilemmas, have abstract reasoning, understand complex concepts, learn fast and from experience (Strelkova, 2017). They are then able to achieve certain objectives or different tasks in various domains and contexts different from those

expected by the creators (Goertzel, 2014). Thirdly, the Artificial Super Intelligence (ASI) that surpasses the human brain in almost all domains such as interpersonal skills, general knowledge or innovation in science (Strelkova, 2017). Several questions arise from that type of AI such as “What would have happened if AI machines had taken the control over our lives?” which can be associated with various risks as new threats of severe damage or tragedy due to unintentional misuse (Gill, 2016). In this study, we will focus on ANI.

AI is conceptualized as an ecosystem composed of three essential factors that can be categorized as analytical and information technologies, data capture and storage, and output system. The tasks performed by these intelligent systems could be associated with tasks requiring human characteristics such as autonomy in the decision-making process (Puntoni et al., 2021). Huang and Rust (2021) have proposed the existence of four types of intelligence being the mechanical, the analytical, the intuitive and the empathetic. The “mechanical intelligence” represents the application of repetitive tasks with little change (Huang & Rust, 2021) and is considered as a weak or limited AI (Tussyadiah, 2020). The “analytical intelligence” is about performing academic tasks, reasoning in an abstract way and being able to solve problems (Huang & Rust, 2021). Analytical intelligence is heavily based on the concept of Machine Learning or data analytics (Huang & Rust, 2021). The “intuitive intelligence” is the one required by marketers or doctors in the sense that it is associated with a problem-solving and a creative mind (Huang & Rust, 2021) and is considered as a strong AI (Tussyadiah, 2020). Finally, the “empathetic intelligence” is described as the ability to understand and identify peers’ emotions and to respond in the correct way (Huang & Rust, 2021). However, if AI can perform cognitive empathy, it is nevertheless impossible for it to be emotionally empathetic which could lead to serious consequences in terms of non-ethical behavior and forms of manipulation (Montemayor et al., 2021)

2.1.2. Artificial Intelligence technologies

2.1.2.1. Machine Learning

Machine learning (ML) is often used as a synonym for AI. However, it is considered as a subdomain of AI or as the most important application of AI (Gupta et al., 2021). Whereas AI is a general term describing the ability of computer programs to act and think like humans, ML goes beyond this by feeding the machine with data and coupling this with an algorithm that allows the system to learn by itself without having been taught (Gupta et al., 2021). The purpose of ML is to make computer models able to know what to do by themselves rather than having to tell them how to do it (Egger, 2022). ML is utilized to teach machines how to deal with the data in a more efficient way and rely at the same time on specific algorithms in order to solve data issues (Mahesh, 2020). In fact, computers have the ability to learn by themselves without being programmed to do so (Mahesh, 2020). ML is therefore the study of algorithms that can learn from data and consequently, make prediction on it (Ongsulee, 2017). In fact, algorithms can compare many models at the same time as opposed to traditional metrics (Aluri et al., 2019). According to Janiesch et al. (2021), ML often refers to the idea that a computer program performs better over time in terms of a class of tasks and performance measurements. Therefore, it seeks to automate the process of developing analytical models to carry out cognitive tasks like object identification or natural language translation. This is accomplished by using algorithms that repeatedly learn from training data that is particular to the situation at hand which enables computers to discover intricate patterns and hidden insights without having to be explicitly programmed.

The two most widely adopted methods in ML are supervised learning (about 70 percent) and unsupervised learning (between 10 and 20 percent). On the one side, a function that translates an input to an output is learned through supervised learning using sample input-output pairs through the use of external assistance (Mahesh, 2020). The AI is then trained using input and target values to provide a mapping function (Ullah et al., 2020). On the other side, for unsupervised learning, the algorithms are left to find and display the intriguing structure in the data on their own (Mahesh, 2020). Indeed, there is no instruction offered; instead, an AI network is trained to uncover hidden patterns,

solutions, and distributions using just a non-labelled, non-classified input dataset (Ullah et al., 2020). Few characteristics are learned from the data by the unsupervised learning algorithms and when new data is introduced, it recognizes the class of the data using the previously learnt characteristics (Mahesh, 2020). Janiesch et al. (2021) argue about the existence of a third type of ML, the Reinforcement Learning (RL). In fact, instead of giving input and output pairs in an RL system, it describes the system's current state, define a goal, give a list of permitted actions, the environmental challenges on their results, and then let the ML model experiment with how to reach the goal on its own using the concept of trial and error to achieve maximum benefit (Janiesch et al., 2021). The usage of the gathered data allows machines to learn how to make decisions (Jakhar & Kaur, 2020). ML algorithms have been effectively used in a variety of fields, including credit scoring, detecting fraud, next-best offer analysis and natural language processing (Janiesch et al., 2021). According to Go et al. (2020), through recent advances in machine learning, many characteristics of robotic systems could be improved such as optical recognition, speech and item detection. Such technologies have already been implemented in hotels and restaurants and are expected to completely change the tourism sector as well as the customers' experiences. Currently, the main applications in which machine learning is implemented are speech recognition, auto-driving vehicles, text et features recognition, robotics and self-mobility.

2.1.2.2. Deep learning

Deep learning (DL), which is a field of Machine Learning, can be considered as the summary of the progression of artificial neural networks to deep neural networks with enhanced capacities for learning (Janiesch et al., 2021). It is of interest to distinguish artificial neural networks and deep neural networks. An artificial neural network, which refers to systems of neurons, is a collection of algorithms that aims to identify underlying connections in a data set using a method that imitates how the human brain works (Mahesh, 2020). With their flexible structure, this allows them to easily adapt to a wide variety of contexts for the different types of ML (Janiesch et al., 2021). Deep neural networks (DNN) have the capacity to use multiple operations in a single neuron and are therefore able to identify needed representations for the learning tasks based on raw data (Janiesch et al., 2021). DNN have a bigger and deeper quantity of processing layers and, with the use of algorithms, are trained to discover data representations without any external help (Shrestha & Mahmood, 2019). For DL, the algorithm learns the characteristics that predict or explain the outcomes from a large data collection and because the models are arranged into numerous layers in the form of neural networks, this procedure typically takes enormous computing power (Mehta & Devarakonda, 2018). DL helps computation systems to learn data representations with various abstraction levels and have disrupted many fields such as object identification, voice recognition, and visual object recognition (LeCun et al., 2015). DL faces many obstacles to surmount, before analytical models can be successfully applied in actual commercial situations such as minimizing data bias and drift, making an appropriate decision from a variety of implementation possibilities, and reusing previously constructed models (Janiesch et al., 2021).

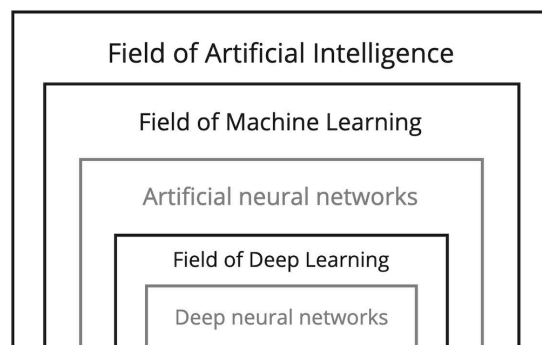


Figure 1 – Field of Artificial Intelligence

Adapted from (Shinde & Shah, 2018 ; Janiesch et al., 2021)

2.1.2.3. Natural Language Processing

At origins, Natural Language Processing (NLP) also known as computational linguistics, was the crossing between artificial intelligence and linguistics (Nadkarni et al., 2011). NLP use computer methods with the purpose of learning, comprehending, and generating material in human language (Hirschberg & Manning, 2015). NLP is in fact described by Mehta and Devarakonda (2018, p.2) as the “Ability of computers to process spoken or written human (natural) language rather than mathematic equations or computer programs”. In the last decades, NLP faced major developments through an improvement in computing power, the accessibility of extremely large quantities of linguistic data, the creation of effective ML techniques, and a much deeper comprehension of the structure of human language and how it is used in social situations (Hirschberg & Manning, 2015). The objective of NLP systems can be threefold: help human-machine interactions as for conversational agents, human-human interactions as for machine translation, and benefit both machines and humans through learning and analysing colossal amount of online data (Hirschberg & Manning, 2015). Machine translation can be considered as the most significant help for human-human communication and, to correctly translate the interaction, need a human-like understanding of background information and context as well as evaluate and create phrases in human languages (Hirschberg & Manning, 2015). NLP focuses on teaching computers to understand spoken or written language, but the concept of understanding is not the same as a human’s since it refers to the ability to solve a problem (Mehta & Devarakonda, 2018). Due to the growing use of social media and to the resulting data, the examination of the relation between language utilization, social interaction and demographic data became possible (Hirschberg & Manning, 2015).

2.1.3. Artificial Intelligence applications

2.1.3.1. Chatbots

The concept of chatbots is considered to have arisen from an innovative idea of Alan Turing who questioned whether a group of people could have a discussion with a computer program without realizing it (Adamopoulou & Moussiades, 2020). However, it was not until 1988 that AI was used in the field of chatbots with the creation of Jaberwocky, a chatbot that employed contextual matching recognition to provide answers based on prior conversations (Adamopoulou & Moussiades, 2020). Over the last decade, chat services have become the preferred way to provide customer support and nowadays, we can observe a growing number of software agents, such as chatbots, replacing human chat service agents (Adam et al., 2021). Such technologies are evolving the service interface from one controlled by a human to one autonomous predominantly controlled by technology (Castillo et al., 2021).

Chatbots are mainly considered as computer software that will interact using human components and natural language (Popescu, 2019). Chatbots are typically examples of Human Computer Interaction (HCI) that use NLP and are therefore capable of communicating using human language with other chatbots or humans (Adamopoulou & Moussiades, 2020). Chatbots have conversations via text or messages while interacting with users by giving them intelligent answers in natural language (Haristiani, 2019). The chatbots are defined by the Cambridge Dictionary as “a computer program designed to have a conversation with a human being, especially over the internet” (2023). Chatbots can be used in various fields such as business, marketing, entertainment, health and education (Adamopoulou & Moussiades, 2020) and have the ability to interact as humans (Adam et al., 2021). As a consequence, customers are now considered as value co-creators since they became a central part of service generation (Castillo et al., 2021). Indeed, the customer is the one that tries to cooperate (i.e. engage) with the chatbot and, therefore, decides value creation while the service provider makes a value proposition by providing the chatbot along with a variety of modules (Castillo et al., 2021).

Chatbots are conversational agents considered as disembodied since they only allow interactions through text or oral conversation (Castillo et al., 2021). Their ecosystem is constituted of voice-driven assistants as well as text-based systems to reply on messaging platforms (Sheehan et al., 2020). Voice assistants, such as Siri (Apple) or Alexa (Amazon), can be integrated in mobile devices or specific home speakers, that take care of specific tasks such as emails, supervise automated home appliances and agendas (Adamopoulou & Moussiades, 2020).

According to Agarwal and Wadhwa (2020) chatbots can be based on two different approaches: rule-based and neural-network based. Rule-based chatbots, also known as decision tree-based bots, use a set of predefined rules to understand and answer users' questions. These rules can be set up to cover specific scenarios and allow for a quick and consistent response in known situations. However, rules can be rigid and rule-based chatbots may not be able to understand complex questions or informal expressions. In contrast, neural based chatbots, also known as deep learning chatbots, use neural networks to understand natural language and learn from past conversations. These chatbots are able to provide more sophisticated responses and can understand more complex questions as well as language variations. They can also learn from real-time data, allowing them to adapt to constantly changing scenarios. In neural based chatbots, there are two types of chatbots: retrieval-based chatbots and generative based-chatbots. On the one hand, retrieval-based chatbots are programmed to recognize specific keywords or phrases in the user's messages, and to respond using pre-recorded answers. They are best suited for short, simple conversations, where the user requests specific information or asks precise questions. Generative chatbots, on the other hand, are capable of producing entirely new responses using NLP algorithms. They are best suited for more complex and longer conversations, where the user can ask broader questions or address multiple topics at once. They can also learn from user interaction and improve over time.

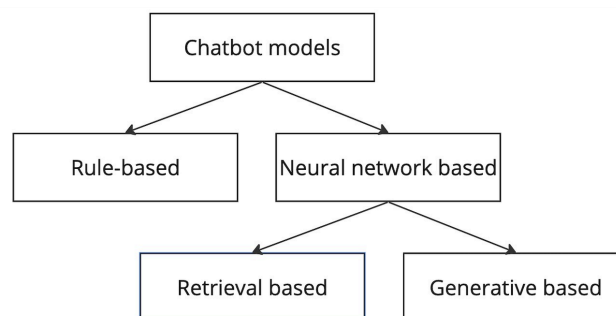


Figure 2 – Chatbot models

Adapted from (Agarwal & Wadhwa, 2020)

Chatbots can have a general or an educational goal (Haristiani, 2019). One of the reasons why chatbots are increasingly being used is the rich nature of information found in the service industry since they can reduce costs and increase productivity because they can handle several consumers simultaneously (Castillo et al., 2021). They are also perceived as more friendly than frequently asked questions (FAQs) as they are very reactive and provide instantaneous answers (Castillo et al., 2021). In addition, through the evolution of ML and sentiment analysis, chatbots are also able to provide emotional responses to customers (Adamopoulou & Moussiades, 2020). Adamopoulou and Moussiades (2020) classify the primary objective of the chatbot into 3 categories: informative, conversational and task based. The informative chatbot generally holds the conversation with users based on a database that allows them to retrieve the requested information. Facebook Messenger chatbot and FAQs chatbot are typical examples of informative chatbots. Chat-based chatbots such as the Aveda booking chatbot holds conversation with users in a natural way as an actual person would do. Finally, task-oriented chatbots are specialized in specific tasks such as giving style advice with the H&M digital stylist chatbot and are characterized as excelling in the way of asking for information and responding to requests in the appropriate manner.

Despite the general benefits provided by chatbots, a clear gap between human-human interactions and AI interactions exists. The differences in the content, quality and duration of the interaction are noticeable differences. The biggest difference is usually pointed out as the lack of empathy of the AI towards humans (Adamopoulou & Moussiades, 2020). Therefore, the subjectivism of humans will usually lead to a compromised vision of chatbots such as a belief of them being less emotionally intelligent and less informed (Adamopoulou & Moussiades, 2020.) Interactions with humans are usually preferred over interactions with chatbots by consumers (Roy & Naidoo, 2021). In fact, customers' perception of a chatbot agent can be significantly impacted by variances in conversation styles (Roy & Naidoo, 2021). To reinstate a form of rationalization and to be able to identify with the AI's behavior for the customer, an effective marketing technique for goods and brands is the anthropomorphisation (Sheehan et al., 2020). The choice of the type of chatbot must thus depend on the positioning of the company since a chatbot with a perceived warm way of conversation will be preferred for not-for-profit enterprises for example (Roy & Naidoo, 2021). Ciechanowski et al., (2019) also demonstrated that individuals preferred interacting with a text chatbot over an avatar chatbot because they found it more enjoyable while the avatar chatbot generated stronger emotional reactions than the text chatbot.

2.1.3.2. Other AI applications

<i>Robotics</i>	An intelligent robot can be differentiated from a conventional robot since it has sensing, mobility, and reasoning components and is able to perceive its surroundings autonomously, link observation to action through autonomous thought, and react appropriately in reaction to the external environment (Tussyadiah, 2020). Robotics can nowadays be found in many fields such as hospitals, warehouses and inventory management (Tussyadiah, 2020).
<i>Voice assistants</i>	Voice assistants (VA) is a type of AI that can detect human speech and is enabled by a voice system to which a personality can be assigned using cognitive, emotional and social features to create more human interactions with customers (Poushneh, 2021). Well-known applications of VA are already part of people's daily lives as Amazon's Alexa, Apple's Siri, Google assistant (Poushneh, 2021).
<i>Autonomous vehicles</i>	In the transportation industry, Automated Vehicles (AVs) are seen as a major disruptive technology that has the potential to significantly alter travel habits using autonomous technology (Rojas-Rueda et al., 2020). This technology can drive a vehicle without supervision by a human operator or 'active physical control' (Rojas-Rueda et al., 2020).
<i>Facial recognition</i>	Facial recognition is the most widely biometric-based method which follows five steps to identify an individual: capture the image, detect the face, extract the features, match with the database and identify the person (Kaur et al., 2020). The use of facial recognition is present in different fields such as recognition of missing persons and victims, security management and automated surveillance systems (Kaur et al., 2020) as well as in the medical field to diagnose diseases (Qiang et al., 2022).
<i>Recommendation system</i>	By anticipating customers' current preferences for specific items and learning about their past activities, recommendation systems offer customized service support to consumers (Zhang et al., 2021). The application of AI has increased forecast accuracy, addressed data sparsity issues, and has helped in increasing customer satisfaction and experience (Zhang et al., 2021). Recommender systems were first

present in the e-commerce sector (Zhang et al., 2021) and are nowadays widely present in the tourism sector to evaluate preferences of tourists and to analyse the dynamic context (Borràs et al., 2014). These systems are considered as crucial for many well-known platforms such as YouTube, Amazon and Netflix (Zhang et al., 2021).

Table 1 – AI applications

2.2. Tourism industry

In recent years, the field of tourism has also been revolutionized by technology and AI. Indeed, this sector has not been spared by the technological revolution through information and communication technologies with the objective of improving the experience of tourists as well as providing more efficient services (Knani et al., 2022). With the use of AI, tourism companies can combine client data and generate more precise forecasts about consumer wants due to its superior data computing skills, extensive storage, and high speed (Solakis et al., 2022). If the integration of AI technologies offers advantages for the customers, it is also important to identify the benefits for the service providers as for instance customized provided service, more efficient operations, and enhanced productivity (Knani et al., 2022). The extensive use of automation and robotics has already impacted both companies and tourists and according to Knani et al. (2022), in the next few years, all stages of the customer journey will include the integration of AI technologies.

2.2.1. Definitions

Since the development of the commercial aviation business, tourism has increased dramatically to become the world's most important industry and employer by 1992 (Theobald, 2012). If the words of travel and tourism are regularly used together, their meaning is however distinct, and it is thus of interest to be able to define them to distinguish them from one another. While travel has existed since the beginning of history, tourism is a phenomenon that arose in the twentieth century (Theobald, 2012). Indeed, if humans have always travelled since the dawn of time to find a new place to live, the term tourism appeared much later including a notion of temporary travel with the aim of getting pleasure from it (Hunt & Layne, 1991). Tourism is defined by the United Nations World Tourism Organisation in 1991 as “the activities of persons travelling to and staying in places outside of their usual environment for not more than one consecutive year for leisure, business or other purposes” (Camilleri, 2018, p.24). Therefore, people can be defined as tourists when they deliberately leave their home environments to explore another one and, regardless how near or remote this location is, these people often participate in distinct activities (Camilleri, 2018). Some clear advantages of the integration of AI in tourism have already been shown such as pleasure, financial savings and ease of use (Tussyadiah, 2020).

The tourism industry has undergone a substantial transformation as a result of digitalization and therefore, became completely integrated into the concept of Industry 4.0 (Pencarelli, 2020). The advancement of technology, the industry 4.0 and the growth of the internet have all had a significant impact on tourism since it has led to the designation of Tourism 4.0 era, in which the digital revolution is changing how tourists, companies, and vacation destinations behave while portraying them into a smart point of view (Pencarelli, 2020). Through the development of mobile technology and smartphones, visitors' behaviours are given an ever-increasing importance and weight in Tourism 4.0, to the extent that it turns traditional passengers into digital travellers and smart tourists (Pencarelli, 2020).

2.2.2. Application of AI in the tourism industry

Over the last few years, the tourism industry has been revolutionized through several applications such as sharing economy and social media and has known a rapid growth regarding its economic importance and in the global tourism demand (Rather et al., 2019). In fact, several technologies of information and communication (ICT) have been used during the past two decades to generate benefits, offer effective services, and improve the travel experiences of visitors (Knani et al., 2022). With the advances in AI, these ICTs have been strengthened and can now help to integrate virtual and physical elements. This integration allowed to improve and personalize the experience of tourists for instance with the use of robots in hotels or restaurants (Knani et al., 2022). The COVID-19 epidemic and the rising demand from visitors for effectiveness, dependability, compassion, individualized care, and safety before, during, and after service encounters have intensified the deployment of AI, such as automation and robots (Knani et al., 2022).

The literature also argues that in order to have value co-creation in the tourism sector, it is essential to have a collaboration between the customer and the hospitality firms (Solakis et al., 2022). This implies that the service provider must be willing to interact with the customer and to consider the customer's opinion to create at the same time a unique experience to the customer and a sustainable relation to the company (Solakis et al., 2022). The implementation of AI technologies allows companies to increase their service offering capacity and create memorable experiences for their customers (Duan et al., 2019). AI will give the opportunity to the hospitality firms to anticipate customer desires, provide personalized information and insights, store and deal with large amounts of customer data and deliver personalized customer experiences (Solakis et al., 2022). Through the use of AI, companies can make better predictions of customer needs due to advanced features such as very fast computing capabilities or the large data storage (Duan et al., 2019).

According to Knani et al. (2022, p.2), there are many application of AI technologies in the tourism sector including "1) search/booking engines, (2) tourism-demand forecasting, (3) virtual agents/chatbots, (4) robots and autonomous vehicles, (5) service automation, (6) kiosks/self-service screens, (7) augmented reality (AR), and (8) virtual reality (VR) devices". For instance, in 2015 in Amsterdam, a robot, named Spencer, helped people navigate the airport (Tussyadiah, 2020). More and more hotels worldwide are also implementing intelligent automation because there is room in the tourism sector to automate some or all the service steps, such as an intelligent system that can register guests independently or room service by robots (Tussyadiah, 2020).

Chatbots are also making their way into the tourism sector and more and more airlines are adopting them, as for example Lufthansa with their chatbot "Mildred" or even United Airlines with "Alex" (Ukpabi et al., 2019). Indeed, an important impact is provided to the customer since they give access to the different company offers at various moments of their customer journey (Ukpabi et al., 2019). Their adoption increases the number of bookings made online, positively impacting the economic value of the business, and they also enhance the tourist's pre-holiday experience by offering additional services such as a spa appointment or scheduling an airport transfer (Ukpabi et al., 2019). Another important area of application for chatbots is the catering industry. Indeed, in 2016, TacoBell launched its own chatbot with the aim of facilitating the ordering system as well as the recommendation of other products (Ukpabi et al., 2019).

2.3. Customer engagement

Customer engagement (CE) has been of growing interest over the past few decades in various sectors and the tourism industry is no exception. The CE has been shown to be one of the drivers of customer

satisfaction and loyalty in the tourism industry since an increase in the engagement could lead to more positive outcomes relating to the experience (Chen et al., 2021).

2.3.1. Definition of customer engagement

Nowadays, service relationships can no longer be seen as simple exchanges between two components but rather as an ecosystem of exchanges with the goal of creating value generated by actors in a network through interactive exchanges (Chandler & Lush, 2015). Although the concept of engagement has been extensively studied in areas such as education and employment, customer engagement remains an important focus in the marketing literature (Hollebeek, 2011). CE is defined by Brodie et al. (2011, p.257) as “a psychological state that occurs by virtue of interactive, co-creative customer experiences with a focal agent/object (e.g. a brand) in focal service relationships”. In addition, Hollebeek et al. (2014, p.3) defines customer brand engagement as “A consumer's positively valenced cognitive, emotional and behavioral brand-related activity during, or related to, specific consumer/brand interactions”.

Engagement could be described as a two-way interaction between a customer (engagement subject) and a brand (engagement object) to generate a specific type of engagement under specific contextual conditions (Hollebeek, 2011). CE is frequently seen as a motivational concept, open to many interpretations and levels of intensity with a valence that can be either positive or negative (Dessart et al., 2015). The rise of several technologies such as the Internet or social medias have garnered a growing interest for customer engagement (Chen et al., 2021) and provide endless opportunities for engagement (Morgan-Thomas et al., 2020). In fact, such technologies facilitate CE through active participation (Chen et al., 2021) and creating interactive CE of digital platforms should be considered as mandatory for managers (Morgan-Thomas et al., 2020). Customer engagement is therefore seen as a strong and strategic instrument that has a favourable impact on a company's sales revenue, earnings, company value, efficiency, and customer loyalty (Do et al., 2019). This concept proposes that customers have a psychological commitment to a brand or company to invest in interactions with it, beyond just the purchase action (Aluri et al., 2019).

Most recently, researchers agreed on a multidimensional vision of CE that captures through a particular brand interaction the cognitive, emotional and behavioral aspect of a customer (Chen et al., 2021). First of all, cognitive engagement refers to a customer's ongoing and active states of mind in relation to the main topic of their involvement (Dessart et al., 2015) and is defined as “a consumer's level of brand-related thought processing and elaboration in a particular consumer/brand interaction” (Hollebeek et al., 2014, p.6). Cognitive CE is distinguished by a high degree of customer-brand relation, which in turn affects consumers' attitudes about the brand or business as well as their resulting behaviour (Kanje et al., 2020). Second of all, emotional engagement catches the level of long-lasting emotions related to the subject of the engagement experienced by the customer (Dessart et al., 2015). According to Hollebeek et al. (2014, p.6), the emotional dimension refers to “a consumer's degree of positive brand-related affect in a particular consumer/brand interaction”. The emotional CE therefore implies a favourable opinion of the brand resulting in an emotional reaction (Kanje et al., 2020). Third of all, the behavioral dimension of engagement is defined by Hollebeek et al. (2014, p.6) as “a consumer's level of energy, effort and time spent on a brand in a particular consumer/brand interaction”. Behavioral CE can also be conceptualized as the demonstration of a brand preference and that it is the most demonstrative dimension in the field in terms of CE to distinguish the level of customer engagement (Kanje et al., 2020).

Engaged customers will be more empowered, satisfied, connected, emotionally bonded and will show more trust and commitment in the relationship (Aluri et al., 2019). It has also been previously proven that customer engagement is a good predictor for business performance as well as a drive for revenue growth and profitability enhancement (Aluri et al., 2019). Kunz et al. (2017) propose 4 types of

customer engagement which are customer-based, firm-based, collaborative or passive. Both positive and negative types of engagement can coexist in service relationships (Naumann et al., 2020). Indeed, the strength of the customer's commitment will depend on the type of service. When the service is of the functional or utilitarian type as for example banking or insurance, the strength of the engagement will be considered weak. In contrast, when the service is of the participative or co-creative type, the strength of the engagement will be considered strong (Bowden et al., 2015).

2.3.2. Customer engagement in tourism industry

Customer engagement in tourism was first studied in 2008 by Filep in order to evaluate customer satisfaction. Nowadays, since one of the most used strategies in the tourism sector, whether in hotels or airlines, is to have connection points with their customers at multiple times, the CE is one of the most pressing points to obtain (Chen et al., 2021). Hao (2020) proposed five dimensions of CE (i.e. *dimensionality, situational conditions, focal objects, focal agents* and *nomological network*) to define the CE in tourism sector (p.1844) as

“Customer engagement is a multidimensional concept depicts customers’ deep psychological commitment and active behavioural involvement. It is cultivated and maintained through a long-lasting service relationship beyond the transactional motive of immediate purchase. In the service eco-system, engaged customers interact with various focal objects (e.g. an economic entity, elements of the tourism encounter, online activities, specific behaviours). Customer engagement occurs within a dynamic, iterative process that customers co-create value through interactions with multiple focal agents, and thus creates a variety of engagement relationships (e.g. customer-to-brand/firm, customer-to-customer engagement, customer-to-staff engagement, tourist-to-community engagement, etc.). Additionally, customer engagement plays a vital role in a nomological network governing service relationship.”

Customer engagement usually favours the firm performance by contribution to the tourist brand experience. In fact, tourists play an increasingly important role in the experience they will get (Rather et al., 2019). Rather et al. (2019) discovered that the more customers were perceiving a place as authentic the more they would be engaged with the site. In addition, the greater the attachment of customers to a place, the stronger their engagement would be. Customer engagement with a tourist site has also shown positive effects on customer loyalty, trust and co-creation (Rather et al., 2019). The customer's trust in a brand or company is essential to ensure engagement as the services offered by the travel industry are, for the most part, intangible (Rather et al., 2019). Ganesan and Hess (1997) defined customer trust as a two-dimensional concept based on *credibility*, which refers to the perceived ability of a specific tourism provider to correctly achieve the service, and on *benevolence* which conveys the service provider's intentions as perceived by the customer as well as its willingness to really take the customer into consideration. As a result, when a customer has confidence in a company, it tends to positively affect their behaviour and decisions as well as reduce their uncertainties (Rather et al., 2019). Because of the intangible character of tourism and its experimental aspect, companies need to segment their consumer bases based on various sociodemographic and behavioral characteristics to engage clients by adapting their service and marketing approaches to address different psychological demands (Hao, 2020).

2.3.3. Customer engagement with AI technology

The number of engagement behaviours is increasing as a result of the growing number of interactions between customers and businesses online. The online customer engagement can be described as an online behaviour expression that happens because of a customer’s motivation sourced in a brand or company interest (Perez-Vega et al., 2021). The rise of new technologies and social media have

changed the way customers engage and interact with companies resulting in the concept of the online behavioral customer engagement (Perez-Vega et al., 2021). Customer data may be leveraged to increase engagement, which can be further increased by using AI chatbots (Krishnan et al., 2022). Additionally, bots could provide reliable replies, saving the customers from unrelated information as well as give answers in a fast and acceptable manner to foster a longer website experience and dialogue (Krishnan et al., 2022). When the AI technology is implemented in a seamless manner, the CE will not be impacted since the customer will not notice the difference with an ordinary interaction with an employee (Hollebeek et al., 2021). However, in the case of advised customers, the CE will have an impacted valence that becomes more positive or more negative depending on the nature of the interaction and the type of AI-based technology (Hollebeek et al., 2021).

The extent to which a customer will be impacted by the implementation and interaction of an AI will depend on its perception of the technology (Solakis et al., 2022). Fred Davis proposed more than 25 years ago the Technology Acceptance Model (TAM) to examine what influences how well people embrace (i.e. accept or reject) the technology (Marangunić & Granić, 2015). The TAM finds its origins in two theories: the theory of reasoned action (TRA), which refers to the behaviours predicted by the behavioral intentions, and the theory of planned behaviour (TPB), which is considered as an extension of the TRA and can be considered as an individual's intention to perform a specific behaviour (Marangunić & Granić, 2015). The types of perceptions of the technology are threefold. First of all, the perceived usefulness that represents the extent to which the use of a service or technology will improve the performance of one's work. Afterwards, the perceived ease of use which demonstrates how the user evaluates the degree of involvement and effort required. Finally, the perceived trust which relates to the customer's previous intentions to adopt a certain technology (Solakis et al., 2022).

2.3.4. Negative customer engagement

While the positive aspects of consumer engagement have been widely studied, negative customer engagement and disengagement has been almost completely ignored so far (Dutot & Mosconi, 2016; Chen et al., 2021 ; Do & Bowden, 2023). In addition, the potential link between engagement and disengagement and the potential underlying interactions have almost not yet been studied by the marketing literature (Bowden et al., 2015). The term 'disengagement' was first proposed in 1987 as a state that could happen at any stage of the relationship and could even lead to the termination of the relationship (Dwyer et al., 1987) and is considered as a form of negative valenced engagement (Heinonen, 2018). Negative valence of CE is defined by Bowden et al. (2017, p.7) as "a consumer's negatively valenced cognitive, emotional, and behavioral investments during or related to interactions with focal objects or agents." The organizational performance can be significantly impacted by the manifestation of positive, or in this case negative, engagement (Naumann et al., 2020) and during the interaction process, co-destroy the value created (Castillo et al., 2021). Bowden et al. (2015, p.779) defined customer disengagement from a psychological perspective as

"A process by which a customer-brand relationship experiences a trauma or disturbance which may lead to relationship termination; which involves a range of trigger based events; which varies in intensity and trajectory; which occurs within a specific set of category conditions and which is dependent on prior levels of customer engagement."

Negative customer engagement (NCE) is a distinct term from disengagement since disengaged customers do not exhibit obviously negative attitudes, feelings, or behaviours while negatively engaged customers are more active and emotionally impacted (Naumann et al., 2017). Indeed, the emotional, behavioral, and cognitive elements of NCE are stronger in terms of intensity, depth, and complexity (Naumann et al., 2017). NCE faces a lack of agreement regarding its definition (Do et al., 2019). In 2014, Hollebeek and Chen (p.69) proposed a definition on NCE which is "consumers' unfavourable brand-related thoughts, feelings, and behaviours during focal brand interactions". This definition, however, would mean that the NCE would be a simple opposite of the CE, yet Naumann et al. (2020) propose that NCE would have its own characteristics. Therefore, Do et al. (2019, p.123)

define NCE as “a customer’s unfavourable thoughts, feelings and behaviours towards a service brand or provider resulting from negative critical events that cause perceived threats to customers”. The distinction between NCE and disengagement is therefore crucial, since customer disengagement is perceived as a psychological process that ends relationships and is brought on by unfavourable significant occurrences (Do et al., 2019). Indeed, disengagement represents a lesser amount of unfavourable action towards a brand or service provider, whereas negative engagement relates to a customer's significant level of negative expressions (Do & Bowden, 2023). NCE can also be understood as the negative valence of customer engagement that includes both disengagement and negative engagement (Naumann et al., 2017). Furthermore, dyadic interactions can be underlying causes of NCE resulting in poor service delivery, unfavourable customer reviews, or any issues that might impact negatively the customer’s behaviour (Siddique et al., 2021). Customers might show their negatively valenced engagement through the expression of unfavourable thoughts and attitudes during an interaction. NCE could also arise, in the case of a weak brand performance, due to an over-promising service/brand experience and therefore a form of dissatisfaction on the part of the customer (Do et al., 2019). In addition, in the case of a weak or inexistent brand value, the driving force of NCE is the perceived distributive injustice (Do et al., 2019) which refers to a perceived unfairness for the customer’s outcome (Afzali et al., 2017).

NCE within a service relationship reflect negative contributions and co-destruction. This leads to the concept of co-destruction that can be defined as “a decline in an individual’s or an organization’s well-being, resulting from an interactional process between them” (Zhang et al., 2018). Customers might become value co-destroyers, whether it is in an intentional manner or not, during the service encounter (Zhang et al., 2018). Castillo et al. (2021, p.909) have found that the co-destruction emerging from a failed interaction with an AI, has 5 antecedents being respectively the “ authenticity issues, cognition challenges, affective issues, functionality issues, and integration conflicts.”. Services using robotic process automation (RPA) will experience a NCE that will occur overtime in the case of slow response times and a lack of perceived alternatives to RPA interactions (Hollebeek et al., 2021). Thus, negatively impacted customers can have an intention to cause damage to the organization by acting as anti-brand activists through the spread of negative Word-Of-Mouth (WOM) (Naumann et al., 2020). The WOM is considered as an outcome of negative customer engagement and is defined as “informal, person-to-person communication between a perceived non- commercial communicator and a receiver regarding a brand, a product, an organization or a service” (Harrison-Walker, 2001, p.63). In fact, it has been proven that positive WOM would have a less significant impact on a customer’s brand perception than negative WOM (Do et al., 2019). NCE becomes contagious if used online and can therefore lead to a lack of trust, negative WOM and a change in behaviour (Naumann et al., 2020). As a matter of fact, when a customer feels strongly involved in a relationship and finds that his expectations have not been met, he may have a strong negative emotional reaction (Naumann et al., 2020). Therefore, when a consumer's engagement is high, it can generate feelings of dislike, hatred or disregard and thus have a strong negative influence on his affective engagement (Naumann et al., 2020). However, in a participatory service creation process, it has been shown that the engagement with the service brand is very strong and a customer will be less likely to disengage itself showing a high tolerance towards the service provider for variability in service quality (Bowden et al., 2015).

Psychological reactance can arise in negatively impacted customers and can be defined as “a state in which a person is motivated to restore control after a restriction which causes more negative evaluations of and hostile behaviours towards the source of the restriction” (Puntoni et al., 2021). Do et al. (2019) propose that NCE would also arise in the case of a perceived distributive injustice in the case of a customer low perceived brand value. NCE is considered as a construct with multiple dimensions that is reflected via consumers' investments in their cognitive, emotional, and behavioral aspects (Do et al., 2021). If CE and NCE share the same dimensions and the same degree of involvement, the way they are evaluated and how they manifest themselves is fundamentally different

(Naumann et al., 2020 ; Do & Bowden, 2023). Indeed, according to Naumann et al., (2020) for CE, a framework of 3 dimensions has been identified representing negative engagement. First of all, regarding the affective dimension of negative CE, strong negative feelings such as hate and dislike can be found when there is a poor interaction or failure in the service relationship. When a customer feels abused and powerless, it can leave him feeling exploited and belittled. Do and Bowden (2023) suggest that when customer service expectations are not met, the affective dimension of NCE can include feelings of anger and resentment towards the brand. Second of all, the behavioral dimension of negative CE manifests itself through anti-brand activism (i.e. e-mail campaigns, negative WOM or personal assault), as well as collective complaint (i.e. demonstration, express resentment publicly or boycott) (Naumann et al., 2020). Do and Bowden (2023) add that the cognitive aspect of NCE can be described as customer curiosity in negative information about a specific brand resulting from provider dishonesty, information improper use, favouritism, and abuse. Finally, regarding the cognitive dimension, this can be interpreted as the level of interest and attention paid to a negative information or interaction which would lead negatively engaged customers to pay more cognitive attention when reading or assessing such information (Naumann et al., 2020). It is argued that the behavioral dimension manifests as co-destructive behaviours towards the focal brand by means of joint complaint and anti-brand activism (Do & Bowden, 2023). In 2017, Naumann et al. found two cognitive dimensions: distrust that arises when there is an asymmetrical informational level between exchange partners and cynicism which refers to customers monitoring the gaps between the actual performance of a service and the expected result. In addition, Do et al. (2021) added three new dimensions: injustice which refers to a perception of unfair treatment regarding the inputs and outputs in a service encounter, incompetence that stands for service providers' failure in the service provision and the lack of perceived professionalism by the customers, and irresponsibility when customer perceive a lack of attention and devotion during the service encounter.

Concept of customer engagement	Authors	Definitions	Dimensions
<i>Customer engagement</i>	Brodie et al. (2011)	“A psychological state that occurs by virtue of interactive, co-creative customer experiences with a focal agent/object (e.g. a brand) in focal service relationships” (p.257)	<ul style="list-style-type: none"> • Cognitive • Emotional • Behavioral
<i>Consumer engagement in online brand communities: dimensionality of consumer engagement</i>	Dessart et al. (2015)	<p>Affective engagement: “The summative and enduring level of emotions experienced by a consumer with respect to his/her engagement focus.” (p.11)</p> <p>Cognitive engagement: “A set of enduring and active mental states that a consumer experiences with respect to the focal object of his/her engagement.” (p.12)</p> <p>Behavioral engagement: “The behavioural manifestations toward an engagement focus, beyond purchase, which results from motivational drivers.” (p.13)</p>	<ul style="list-style-type: none"> • Affective engagement identifying two complementary aspects: enthusiasm and enjoyment. • Cognitive engagement identifying two complementary aspects: attention and absorption. • Behavioral engagement identifying three complementary aspects: sharing, learning and endorsing.
<i>Customer engagement in tourism</i>	Kanje et al. (2020)	“Engaging customers is psychological and physical through affecting thinking and feelings for the former and influencing participation in brand activities for the latter.” (p.285)	<ul style="list-style-type: none"> • Cognitive • Affective • Behavioral
<i>Customer engagement in tourism and hospitality</i>	Hao (2020)	“Customer engagement is a multidimensional concept depicts customers’ deep psychological commitment and active behavioural involvement. It is cultivated and maintained through a long- lasting service relationship beyond the transactional motive of immediate purchase.” (p.1844)	<ul style="list-style-type: none"> • Behavioral • Cognitive • Emotional
Negatively valenced brand engagement	Hollebeek et al. (2014)	“Negatively valenced BE is exhibited through consumers’ unfavorable brand-related thoughts, feelings, and behaviors during focal brand interactions.” (p.69)	<ul style="list-style-type: none"> • Cognitive engagement as immersion: “the level of a consumer’s positively/negatively valenced brand-related thoughts, concentration and reflection in specific brand interactions” (p.66)

			<ul style="list-style-type: none"> Emotional engagement as passion: “the degree of a consumer’s positively/negatively valenced brand-related affect exhibited in particular brand interactions.” (p.66) Behavioral engagement as activation: “consumer’s positively/negatively valenced level of energy, effort and time spent on a brand in particular brand interactions.” (p.66)
Engagement valence duality	Bowden et al. (2017)	Negatively valenced engagement: “a consumer’s negatively valenced cognitive, emotional, and behavioral investments during or related to interactions with focal objects or agents.” (p.7)	<ul style="list-style-type: none"> Cognitive Emotional Behavioral
Multi-valenced perspective on customer engagement	Naumann et al. (2017)	“All three valences are found to exist within the one focal service relationship, with each unfolding through cognitive, affective, and behavioral dimensions. As such, CE is found to be multi-valenced and multidimensional.” (p.177)	<p>Positive customer engagement</p> <ul style="list-style-type: none"> Affective: Enjoyment, belongingness Cognitive: Trust, reciprocity Behavioral: Autonomous co-creation <p>Customer disengagement</p> <ul style="list-style-type: none"> Affective: Frustration, rejection Cognitive: Distrust Behavioral: Neglect <p>Negative customer engagement</p> <ul style="list-style-type: none"> Affective: Anger Cognitive: Cynicism Behavioral: Collective complaining, value co-destruction
Negative customer engagement	Do et al. (2021)	“A customer’s unfavourable thoughts, emotions and behaviours towards a service provider resulting from negative critical events that cause perceived threats to customers.” (p.5)	<ul style="list-style-type: none"> Cognitive dimension: Distrust, cynicism, injustice, irresponsibility and incompetence
<i>Negative customer engagement behavior in a service context</i>	Do & Bowden (2023)	<p>Customer engagement: “CE is defined as a customer’s motivationally driven behaviour focusing on a brand/firm beyond purchase.” (p.3)</p> <p>Negative customer engagement: “NCE is defined as ‘a customer’s brand-related unfavourable thoughts, emotions and behaviours during brand interactions’ that</p>	<p>Customer engagement:</p> <ul style="list-style-type: none"> Cognitive: immersion Affective: passion Behavioral: activation <p>Negative customer engagement:</p> <ul style="list-style-type: none"> Cognitive: cynicism Affective: anger Behavioral: complaining <p>Disengagement:</p> <ul style="list-style-type: none"> Cognitive: distrust Affective: frustration

<p>cause negative consequences for the brand or firm.” (p.4)</p> <p>Disengagement: “disengaged consumers are noted to display ‘distrust’ (cognitive), ‘frustration’ (affective) and ‘neglect’ (behavioural) towards the brand/firm.” (p.4)</p>	<ul style="list-style-type: none"> • Behavioral: neglect
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Table 2 – Dimensions of customer engagement, negative customer engagement and disengagement

2.3.4.1. Negative interactions with an AI

Since the literature on negative customer engagement and artificial intelligence is still scarce, it is useful to study negative interactions with AIs that subsequently result in certain negative behaviours.

The understanding of co-destruction in the consumer perspective (B2C) is still very limited since most studies focus on the business perspective (B2B) (Grewal et al., 2021). Especially in the tourism industry, very few studies have investigated the reaction of people to advanced robots so far (Go et al., 2020). In B2B, AI provides more efficiency for businesses while for consumers the benefits are seen through customized experiences. Regarding the dark side of AI, in B2B it is about a lack of power symmetry and in B2C it is about a lack of trust (Grewal et al., 2021). Indeed, having a relationship with an asymmetric power will usually lead to a lack of trust. Nowadays, even if the bright side of AI technologies is promising, there is a lack of understanding and of studies regarding its dark side (Grewal et al., 2021). The primary problem when employing AI systems is privacy since their systems and apps require the access to numerous tourists' personal data (Knani et al., 2022). The level of trust will depend on several factors such as the attitude, the presentation, the privacy issues and security and the more the chatbot will be human-like; personality, name, human language; the more the relation of trust will be strong (Adamopoulou & Moussiades, 2020). Due to the complex functioning of AIs, customers may feel exploited to obtain their data because they do not understand how it works. The first reason is that data acquisition has become so intrusive, it is almost inevitable. The second reason is that when information is shared voluntarily, its use and destination remain unclear. Finally, there is a lack of transparency and tracking for those handling the data (Puntoni et al., 2021).

The service failure is usually quite high since it is based on collaboration with the customer and therefore makes the process of creating the service complex (Castillo et al., 2021). Sometimes, the utilization of software agents leads to a user-system gap due to the non-accurate responses to the customer's demands (Adam et al., 2021). Indeed, common issues occurring with chatbots include data breaches, security problems, misinterpretation of emotions as well as unsuitable replies (Krishnan et al., 2022). Usually, we talk about value co-creation when discussing about AI in the tourism industry but now we are more talking about value co-destruction (Grundner & Neuhofer, 2021). This implies that when a customer integrates a resource with a resource from a service provider for example, then the welfare of one or both actors will decrease (Plé & Chumpitaz Cáceres, 2010). While interacting with service providers, customers can lose resources such as economic, social, informative, and role definition (Castillo et al., 2021).

The consequence of such interaction can generate upset customers that will buy for example fewer products (Adamopoulou & Moussiades, 2020) or a form of resistance towards chatbot encounters (Adam et al., 2021). From the customer perspective, a failed interaction represents a loss of important time, energy and patience (Castillo et al., 2021). AI-triggered unwanted behaviours will possibly affect service providers as well as users, due to noncompliance since users might treat the findings and recommendations provided by the chatbot differently (Adam et al., 2021). Even if customers agree

with the recommendations made by the chatbots, they could become reluctant and resistant to this type of technology, following an unsatisfactory interaction such as the provision of unsuitable answers to the customer’s inquiry (Adam et al., 2021). In fact, when negative WOM is used on social media, the reputation and the brand image of the service provider might be harmed (Castillo et al., 2021). An example of chatbot failure that impacted its public perception, is when two chatbots designed for children did not identify sexual abuse (Sheehan et al., 2020). Indeed, mental health chatbots failed at recognizing children sexual abuse, which caused a deterioration in the public chatbots’ perception when the press reported it (Sheehan et al., 2020).

Authors	Topic	Definitions and statements	Negative interaction with an artificial intelligence	Dimension
Sheenan et al. (2020)	Customer service chatbots		Miscommunication errors as for instance, failed identification of sexual abuse	
Grewal et al. (2021)	Negative impact on customer relationship		Perceived power symmetry leading to a lack of trust	Cognitive engagement
Castillo et al. (2021)	Co-destruction in negative customer engagement	“a process that is set into motion by a number of factors (antecedents), resulting in a decline in well-being for at least one of the actors – in this case, the customer.” (p.915)	Failed interaction (i.e. incorrect interpretation from a chatbot) leading to dislike, anger and bewilderment. Lack of empathy from a chatbot.	Emotional engagement
Puntoni et al. (2021)	Customer experience from an interaction with an AI technology	Data capture: “The listening capability enables AI systems to collect data about consumers and the environment in which they live” (p.132)	Perceived exploitation of customers for data gathering	Affective engagement
Adam et al. (2021)	Effects on customer compliance with AI-based chatbots	“The request can be either explicit [...] or implicit [...] Nevertheless, in all situations, the targeted individual realizes that he or she is addressed and prompted to respond in a desired way.” (p.8)	Unsuitable answers provided to customers’ requests	
Krishnan et al. (2022)	AI-based chatbots impact on customer engagement		Data breaches, security problems, misinterpretation of emotions, and unsuitable replies	
Huang & Dootson (2022)	Chatbots and service failure: customer aggression	“[...] balance between human and non-human employees in the context of service failure, where the outcome of the service failure could be customer aggression, which is one negative outcome a service failure can trigger, alongside emotions of frustration and anger.” (p.2)	Negative feelings experienced when a chatbot has too many human characteristics	Affective engagement

Table 3 – Negative interactions with AI

While the positive impact of interaction with artificial intelligence on customer engagement has been widely studied, the negative impact of this type of interaction has been almost completely ignored in the scientific literature so far. If some aspects of AI negative interactions with regards to NCE have already been pointed out, the literature is still very scarce in this field. Indeed, negatively-valenced customer engagement research is still in its early stages and further research should explore the damaging effects of negative engagement to develop the current understandings (Chen et al., 2021). As a matter of fact, there is little knowledge about the impact of these interactions with AI-based technologies on the customer's perception of the service encounter (Krishnan et al., 2022). This therefore leads to the first research question:

What are the drivers of negative customer engagement resulting from an interaction with a chatbot in the tourism sector?

There is an urgent need to address the dimensions and implications of negative customer engagement as well as how it manifests itself in the context of the service relationship (Naumann et al., 2020). For some studies, negative engagement may generate bad reviews that disengage clients while other studies show that even negative involvement can result in good results. These inconsistencies show that there is not a direct connection between antecedents and customer engagement outcomes (Siddique et al., 2021). Considering the previous elements, the second research question is:

“What are the possible outcomes of negative customer engagement arising from an interaction with a chatbot in the tourism sector?”

3. Chapter 3: Research design

3.1. Choice of methodology

The choice of the adapted methodology is crucial for the success of the research. In order to answer the two research questions of my study, an exploratory research design was developed. Indeed, an exploratory research design is a flexible and dynamic approach to study marketing phenomenon that are intrinsically challenging to assess (Malhotra et al., 2017). Since the negative engagement of the customer resulting from a negative interaction with an AI has hardly been studied yet, this phenomenon must be further investigated. While quantitative research often involves the use of measurement and statistical analysis, qualitative research is based on limited samples with the aim to give knowledge and comprehension (Malhotra et al., 2017). Considering these distinct factors, the nature of the research is a qualitative research.

To answer the research questions, the in-depth interview method was chosen to gather respondents' interpretation of their experiences. According to Malhotra et al. (2017), the in-depth interview is defined as "an unstructured, direct, personal interview in which a single participant is probed by an experienced interviewer to uncover underlying motivations, beliefs, attitudes and feelings on a topic". In-depth interviews have several advantages compared to focus groups. Indeed, this method of data collection allows for deeper insights while allowing respondents to respond freely without peer pressure (Malhotra et al., 2017). This method of data collection was therefore the most suitable to understand the population studied.

3.1.1. Sample

A convenience sample was chosen as the sampling method. Indeed, respondents were found by first sending personal messages to persons with the profile of regular travellers or persons close to the tourism industry. A more general message was also sent on social networks (Facebook, Instagram and LinkedIn) to reach as many people as possible. In this case, WOM also played a key role to find respondents. The number of required interviewees was also limited since a qualitative data collection usually requires few respondents. Regarding the criteria to take part in this study, respondents only needed to have experienced at least one negative interaction with a chatbot in the tourism industry.

Due to the different methods of contact, 19 persons responded favourably to the interview. The vast majority (17) of the interviews took place via Microsoft Teams since it was more convenient for most of the respondents. These interviews lasted between 19 and 36 minutes and were all conducted in French, since it was the mother language of the respondents, except for one interviewee that responded in English. The tool allowed easy recording of different respondents as well as a possibility to transcribe the conversation. Face-to-face interviews were however held with 2 interviewees. When conducting the interviews, flexibility was also required to adapt to the respondent's profile.

As mentioned above, a total of 19 people were interviewed with a duration time that varied between 19 and 36 minutes. The main characteristics of those respondents are available in appendix 7.1. Of these 19 people, 18 had a customer point of view while one respondent provided expertise from a professional point of view. Since the 19th interview was conducted from a professional point of view on chatbots, this interview will be analysed separately from the other 18. The majority of respondents were women (14) against 5 men. It can be observed that the sample is not normally distributed in terms of age and gender. The country of residence of respondents was mainly Belgium (12) but also Luxembourg, Portugal and Iceland, for example. In terms of age, most respondents were in the age category 18-24 (9) as well as 25-34 (7). The majority of negative interactions occurred either before (9) or after (6) the trip. In terms of their knowledge of AI, most respondents (9) had a medium knowledge of AI versus 4 with a low knowledge and 5 with a high knowledge. The sectors where negative

interactions with chatbots happened are quite diverse including mainly airlines, car rentals, and train lines with a corresponding number of respondents of 5, 3 and 3 respectively.

3.2. Interview guide

The first part of the interview guide in English (Appendix 7.2) and in French (Appendix 7.3) was intended to ask the respondent for their consent to participate in the study, the possibility to stop the interview at any time, and to inform about the anonymity of the answers. Participants were also informed of the start of the audio recording of their interview. The goal was then to put them at ease with a brief explanation of the purpose of the study and the context in which it was conducted. Throughout the interview, phrases marked in light grey were present as prompts to guide and clarify the interview.

Following this, the interview was divided into 4 parts. The first part also intended to put respondents at ease by asking questions about their travel habits, their technology usage or even their AI and chatbots knowledge. Then, the second part focused this time on interactions with chatbots in the field of tourism and more specifically on negative interactions. The aim here was to collect the participants' feelings and insights to assess their emotional, behavioural and cognitive engagement. This part was therefore crucial to the study to be able to analyse the gathered data. The third part was devoted to the respondent's future relationship with both the chatbots, and the brand concerned. This section was also used to assess whether the participant could be considered a disengaged customer. This part therefore aimed at assessing the impact of such negative interaction on their future engagement. The fourth and final part was used to collect the demographic data of the participant to assess the representativeness of the sample.

3.2.1. Analysis of data

To analyse the data, two interviews were first transcribed in full (Appendix 7.4 and 7.5). Following this, all interviews were listened to via audio recording and a grid analysis (Appendix 7.6) was carried out. The objective of this table was to be able to carry out a vertical study (i.e. analysis by question) and a horizontal study (i.e. analysis by respondent) and to have a clear view of the gathered data. This grid helped in identifying important affective, cognitive and behavioral engagement factors that were then displayed in a table (Appendix 7.7) to assess the dimensionalities of engagement before and after the chatbot interaction. It should be noted that all analyses will be in 'he' as to refer to "the respondent".

4. Chapter 4: Results

4.1. Data analysis

To analyse the impact of negative interactions with a chatbot, respondents' emotional, cognitive and behavioural engagement were analysed before and after the interaction. A distinction was also made between the impact on chatbot or on the brand. The resulting negative engagement and disengagement were also analysed to understand the underlying reasons.

4.1.1. Affective engagement

Of all the negative interactions that occurred, no positive impact, either on the image of chatbots or on the brand, happened. It is interesting to note that in 10 of the cases, the emerging feelings following the interaction are directed at the brand as respondents are aware that the chatbot is only a technology. If we combine the above number with customers presenting negative feelings towards the chatbot and the brand at the same time, this number rises to 13. Therefore, it is important to stress that an important impact is made on the brand image as well as on the cognitive and behavioural dimensions.

Three reasons emerged to explain the interviews where the company was not held responsible for the negative interaction. The first one was the good reputation of the company. Respondent 1 blamed the technology for his bad interaction and did not hold the company responsible, knowing the good reputation and renowned transportation services of Voyages Léonard. That respondent was also reluctant of using chatbots at first and thought the problem came from a bad technology implementation. The second reason concerns a trusted customer service, due to previous experience. Indeed, respondent 13 had already had positive experiences with the company in the past, was a positively engaged customer and knew that he could trust their services. Therefore, he did not hold the company responsible for the interaction, blaming instead the chatbot's poor functioning.

"I just think it was towards the chatbot. I was confident about the customer service; I had never used it myself before, but I knew it was a good company." – Respondent 13

Finally, the third situation concerns good customer service. For respondent 18, even though this was his first interaction with the company, the customer service was very efficient, and his ticket refund situation was resolved very quickly. This is indeed a case of distributive justice, where the issue was resolved by receiving what was owed in a good time period. This situation shows the importance of having an efficient customer service that is ready to take over when the chatbot reaches its limits and to be able to fix the initial problem.

"It was directed at the chatbot directly. Since I had human contact very quickly, I managed to keep things in perspective." – Respondent 18

An observation that can be made is the similarity between the negative feelings resulting from the interactions (Appendix 7.7). Frustration and anger are the negative feelings that emerged most during these interactions.

a. Frustration

Frustration emerged towards the company in 9 of the cases but only in 1 situation towards the chatbot. Three main reasons emerged to explain this first feeling. The first point that came up was the duration of the interaction. Many respondents were frustrated that their situation took so long to resolve, when it was resolved at all. Their negative feelings were mostly directed at the company as it was not doing anything to resolve this more quickly or to take over from the chatbot when it could not solve their problem. Another theme that was mentioned was the reception of an inappropriate response or the

absence of response. Indeed, in almost all the cases creating frustration, the chatbot did not understand the initial question, asking the respondent to reformulate his request.

“It is some frustration because we do not have an answer to the question we were asking and we are going around in circles. The chatbot does not understand, but we do not really have an alternative to that.” – Respondent 11

	Frustration	Anger	Disappointment	Lost	Overwhelm	Injustice
Respondent 1	✓	✓	✓			
Respondent 2	No negative feelings					
Respondent 3	No negative feelings					
Respondent 4			✓			
Respondent 5			✓			
Respondent 6	No negative feelings					
Respondent 7	✓					
Respondent 8	✓					✓
Respondent 9	No negative feelings					
Respondent 10	No negative feelings					
Respondent 11	No negative feelings					
Respondent 12	No negative feelings					
Respondent 13		✓				
Respondent 14				✓		
Respondent 15	No negative feelings					
Respondent 16	No negative feelings					
Respondent 17	No negative feelings					
Respondent 18					✓	

Table 4 – Affective engagement towards chatbots post-interaction

	Frustration	Anger	Disappointment	Lost	Injustice
Respondent 1	No negative feelings				
Respondent 2	✓				
Respondent 3	✓	✓			
Respondent 4	Mixed feelings				
Respondent 5			✓		
Respondent 6		✓		✓	
Respondent 7	✓				
Respondent 8	✓	✓			✓
Respondent 9			✓		
Respondent 10	✓	✓			
Respondent 11	✓	✓			
Respondent 12	No real negative feelings				
Respondent 13	No negative feelings				
Respondent 14				✓	
Respondent 15	✓	✓			
Respondent 16	✓				
Respondent 17	✓	✓		✓	
Respondent 18	No negative feelings				

Table 5 – Affective engagement towards the brand post-interaction

Other times, the chatbot also gave an answer that was not really related to the request, sending the respondent on the wrong track. The last main reason is the fact that no easy contact alternative was proposed to contact the company. For example, a few respondents thought it would have been necessary to have another available option to contact customer service that could be proposed by the chatbot. The example of interview 16 with Ryanair illustrates this point well. Indeed, to have a quick

and free contact, the chatbot is the only way proposed by the company. When the person needs to have information or answers beyond the chatbot's competences, getting a contact by email is very complicated and calling the customer service is expensive. This generates a situation where the customer feels trapped in the interaction with the chatbot. Some respondents were therefore frustrated because they thought the company had implemented the chatbot to discourage customers from further complaints.

"I went after the chatbot because there was no other way. I did not receive answers to my e-mails, the call was priceless. I would have chosen another option if there was one. Ryanair's strategy is very clearly to make you waste your time with the chatbot and give up." – Respondent 16

"I guess it is to discourage people because if it had been for sorting, the chatbot's questions would have been clearer. I had the impression that this chatbot did not understand anything other than "Hello"." – Respondent 17

As suggested by respondent 11, a system should be put in place to detect when the chatbot starts going in circles, for example by proposing a contact number or an email address. Another solution also proposed by this respondent to solve this frustration would be to have a real agent take over the discussion when the chatbot does not know how to answer the request.

b. [Anger](#)

The second most common negative feeling was anger, which came out in 50% of cases. Of the cases that generated anger, seven were directed at the company and two at the chatbot. A few reasons emerged to explain this feeling of anger. A first reason similar to the one creating frustration came up. Indeed, anger was generated several times when customers failed to get in touch with a real customer service employee. This situation gave them the impression of being stuck and generated anger because of the loss of time or due to an irritation following the lack of efficiency of the chatbot. Indeed, in almost all cases, a loss of time (significant or not) was generated because of the interaction. Yet, most respondents perceive the chatbot as a time saver on a classical procedure but are aware of the fact it is only a technology with its limitations. For respondent 10, anger emerged as a result of erroneous, or at least incomplete information provided by the chatbot. Indeed, the information provided by the chatbot put him in a tricky situation where a loss of money even occurred.

"I was angry because I was wasting my time and I didn't know what to do at the time." – Respondent 10

Anger was generally observed when a certain amount of money, such as a refund, was requested. One other example is respondent 15, who tried to get a refund through the chatbot for a night's stay and who became angry at the brand when the interaction did not lead to the desired outcome. Indeed, that respondent had no previous apprehension for the interaction since he was positively engaged with Airbnb, not thinking a negative interaction with their chatbot could happen.

c. [Disappointment](#)

A negative feeling that was also mentioned several times is disappointment. Some people had quite high expectations of this interaction with the chatbot and therefore did not expect the interaction to be negative. It is interesting to note that for the four people presenting disappointment, three had little knowledge about chatbots. Indeed, because of the current echoes about AI going to surpass the world, their expectations were quite high compared to the effectiveness of the chatbot. Many participants mentioned their knowledge of ChatGPT when discussing their knowledge of AI. Given the popularity of the tool and its promising skills, some people with limited knowledge of the technology have set the bar too high on the effectiveness of the chatbot.

"I thought since it was Artificial Intelligence, it would be able to react based on my reactions. It offered me each time a very limited amount of answers and I could not go beyond these propositions. I expected better." – Respondent 5

d. Lost

Some respondents also felt lost because of this interaction. Indeed, finding the procedure to follow on a website can sometimes be complicated, especially in the field of tourism where the importance of getting an answer is often crucial. Indeed, in the case of the interview 14, the person required an answer to know whether his train was still scheduled. As the chatbot was the only quick way to contact the company, the person was lost on what he needed to do or put in place to get to his destination.

"I wondered how I was going to find the information, so I was even more lost. I felt that even with them the information was not clear so I wondered how it could be clear to the users." – Respondent 14

"It was the only solution the company offered, so we wondered how we were going to get our refund." – Respondent 17

e. Overwhelm

As explained in interview 18, a chatbot also felt oppressive by sending multiple messages to the customer. This chatbot was a WhatsApp chatbot, which means that the respondent received the interactions directly on his phone as well as notifications. This negative situation created in the respondent a feeling of an overwhelming interaction and irritation. Indeed, these continuous and oppressive private messages ultimately created a feeling of privative intrusion with the customer.

"I felt annoyed and felt intrusion into my personal life. I hate giving out my phone number [...] and the interaction lasted another 2-3 days after I got my refund where it kept sending me messages in retargeting." – Respondent 18

4.1.2. Cognitive engagement

4.1.2.1. Chatbot cognitive engagement

In this section, a distinction will be made between the impact of a negative interaction on the cognitive engagement towards the chatbot and towards the brand. Regarding cognitive engagement for chatbots, two situations were present at the start.

a. Intention and trust

First, 12 respondents already had an intention to use chatbots, either because of their knowledge of them or because of their curiosity about the technology. Indeed, many of these participants spoke of the fact that they saw chatbots as a good first contact with a company as well as a way of relieving the workload on employees.

"I think that it can help a lot of companies in the first contact with customers for example and that for recurring questions, chatbots can be a tool that relieves the after sales or support." – Respondent 2

Of these 12 participants, despite their negative experience, 11 of them did not change their intention to continue using chatbots with the same frequency. While their intent has remained intact, it is interesting to note that also only 4 of these 12 participants have a low level of trust in chatbots. There are two reasons for this lack of trust. The first regards the accuracy of the provided answers, since they have experienced a chatbot that does not always understand their query or provides incorrect answers. The second reason is their lack of trust in the handling of their data. For example, respondent 14 mentioned that they would not share any sensitive data with a chatbot, such as sensitive professional information or banking data.

“For data confidentiality I would say 1/10 because we are traced from everywhere, I will not give my card number for example. For the quality of the data provided, I would say 5/10 for basic answers but I do not have very high expectations.” – Respondent 14

	Intention	Trust
Respondent 1	×	×
Respondent 2	✓	—
Respondent 3	✓	✓
Respondent 4	×	✓
Respondent 5	✓	—
Respondent 6	✓	×
Respondent 7	✓	—
Respondent 8	×	×
Respondent 9	—	✓
Respondent 10	—	×
Respondent 11	✓	✓
Respondent 12	—	✓
Respondent 13	✓	✓
Respondent 14	✓	×
Respondent 15	×	×
Respondent 16	✓	✓
Respondent 17	✓	×
Respondent 18	✓	×

✓ High
— Medium
× Low

Table 6 – Cognitive engagement towards chatbots post-interaction

The rest of these interviewees remain positive about the technology and are mostly curious about possible future improvements. However, respondent 10 was very open to chatbots and had high expectations prior to the interaction. Unfortunately, due to the incorrect answer given and because of this interaction, he has become more suspicious, and he knows that he will verify the information provided by a chatbot much more in the future. However, his intention of using chatbots is still high (8/10). As a result, his level of trust in the information received has also decreased because he trusts it for general questions but less when it comes to the payment procedures (6/10).

“I will be more suspicious. I will respond to requests in relation to what I am looking for but everything revolving around the payment, where I will pay, I will be more cautious. I will see if the answer suits me and if it's clear enough for me, and if not, I will ask the chatbot to send me a link to their terms and conditions so I can read them in detail.” – Respondent 10

The second scenario was that respondents did not have a specific intention to use chatbots at the beginning. This situation occurred for 6 of the respondents and is related to the fact that they are either unfamiliar with the technology or prefer a more personalised contact via human interaction. As a result of this negative interaction, none of these respondents now intend to further integrate chatbots into more regular use. However, 3 respondents mentioned that they would remain open to this technology if it was improved.

“It is a technology that is only coming in for consumers. I am quite open to this technology if it is to succeed in receiving valid answers in a fast time that still has maturation ahead of it.” – Respondent 1

The results in terms of their trust in chatbots, however, are rather surprising. Indeed, while intuitively one might have thought that all these respondents did not trust chatbots, two of the respondents, nevertheless, mentioned that it was a technology they trusted to process their data, for example. The main argument that stands out for trust in chatbots is also that because the chatbot is linked to a brand, their trust in the brand determines the level of trust in the chatbot. Therefore, for most

respondents, trust in terms of data processing or validity of responses vary depending on their trust in the related brand.

“It is hard to answer because my trust is not in the chatbot, it is in the company.” – Respondent 16

“I think it depends a lot on the site it's on. For example, I think ChatGPT is much more developed than a chatbot you can find on Expedia.” – Respondent 6

b. Expectations

As it was depicted in the previous section on affective engagement, most of the negative feelings were directed towards the brand and not towards the chatbots, which can be explained by the fact that 14 respondents had quite low or medium expectations of their interaction. Most respondents thought the chatbot would not solve their problem but rather help them get the information they needed. For example, as respondent 17 mentioned, he thought that the chatbot could give him the steps to follow to get his refund by putting him in touch with a customer service person or providing him with an e-mail address. However, four people thought the chatbot would be able to answer their question or solve their problem. Interestingly, three of these four respondents have relatively low knowledge of AI and chatbots and very little previous interaction with technology, whether in tourism or otherwise. This could explain the fact that they did not know before interacting with the chatbot the possible limitations they could encounter, thus placing high expectations on the technology.

4.1.2.2. Brand cognitive engagement

The second part of the analysis of cognitive engagement this time concerns the impact of negative interaction on cognitive engagement with the brand. It is interesting to note that all participants had an initial intention to travel with the brand, to book or simply use it out of curiosity. Several cases explained their intent to interact with the brand. Firstly, there was the case where their interaction could be forced by the fact that the company had a monopoly in the industry. In the case of respondents 2, 3 and 14 who had interacted with SNCB and Thalys, making their journey with the company the only option to get to their destination.

“Since it is a monopoly, you do not have a choice of having a positive or negative image since you don't have a choice of going through them.” – Respondent 3

	Intention	Trust	
Respondent 1	✓	×	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> ✓ High — Medium × Low </div>
Respondent 2	—	—	
Respondent 3	—	✓	
Respondent 4	✓	✓	
Respondent 5	✓	—	
Respondent 6	✓	✓	
Respondent 7	—	×	
Respondent 8	×	×	
Respondent 9	×	×	
Respondent 10	✓	✓	
Respondent 11	✓	✓	
Respondent 12	×	—	
Respondent 13	✓	✓	
Respondent 14	—	—	
Respondent 15	✓	✓	
Respondent 16	—	×	
Respondent 17	×	×	
Respondent 18	✓	—	

Table 7 – Cognitive engagement towards the brand post-interaction

Following the negative interaction, if they still intend to travel with the company, it is because no other option is available. Despite this, the level of trust in the company remained good. The intention to travel with the company was also due in 3 cases to the low price charged. In this situation, no positive emotional engagement was present, and the intent was therefore motivated by very low cost. The result on two of these three cases was therefore that no real desire or intention to travel with the company was present but that it remained nevertheless attractive when similar prices were not practiced elsewhere. Their trust in the company was also very low because of interaction with the chatbot.

"I would say Ryanair is a mixed feeling because it has very cheap prices, beating any other airline. But of course, you cannot expect a premium service from a cheap airline." – Respondent 4

"I have already chosen more expensive airlines when the price difference was relatively small, for about fifty euros I book elsewhere without any thought. When it is from simple to double, so much the worse I still take Ryanair." – Respondent 16

A third motivation identified for the intention to travel/book with a company was due to a previous positive experience and/or good reputation. Of the seven respondents in this case, six still have the intention to travel/book through the company and still have high trust, even if more precautions will be taken in the future. A single respondent in this situation, respondent 8, has indeed decided to end his relationship with the company permanently despite his previous positive engagement. This case will be analyzed in more detail in section 4.1.4

"9/10, it's a good company, they fixed the problem after the interaction." – Respondent 13

Finally, the last case explaining the intention to interact with the company is when the respondent showed a curiosity to discover the services offered. As a result, two of the three respondents in the case no longer intended to use the proposed service and therefore had a very limited level of trust in the company. Indeed, their curiosity was not sufficient motivation to decide to re-engage with the tool afterwards. However, one of the people in the case, respondent 1, was not demotivated by the interaction and still has the intention to travel with the company because of its good reputation and its interesting concept. In his case, however, his trust in the brand remains limited by his experience. It is interesting to note that only disengaged customers kept their negative feelings towards the company in the long term. Indeed, to take the example of respondent 6, although he has now become more suspicious of the company, he has nevertheless overcome his negative feelings towards the brand. Indeed, he thinks that their chatbot has been improved since his negative interaction because it is a constantly evolving technology.

"I think I get over it because it was only a technology and I tell myself that they have improved the technology since that." – Respondent 6

As explained above, while the chatbot was perceived as intrusive by one respondent, the chatbot's behaviour in other cases was perceived as cordial most of the time. Two scenarios arose: the chatbot was either very neutral and very robotic or was very friendly with many smileys. If in most cases there was no doubt that people were communicating with a chatbot, this was due in part to the company's transparency about it. Indeed, the chatbot rarely had a human first name, but rather a name of the type "virtual agent". However, when the chatbot tried to show familiarity in its exchanges, a little more confusion occurred. For example, in the case of respondent 2, because the conversation took place with the WhatsApp chatbot, it was more difficult for him to realize from the outset that he was communicating with a chatbot. Indeed, the chatbot had a human name that could confuse the person with whom the chatbot was communicating. The respondent eventually realized that he was talking to a chatbot because of the speed and inaccuracy of his answers. This led the respondent to believe that the company lacked transparency on the use and implementation of the chatbot.

"They claimed it was a person who communicated with me by giving it a first name, so I thought it was a real person at first." – Respondent 2

4.1.3. Behavioral engagement

4.1.3.1. Chatbot behavioral engagement

a. Relationship continuity

With regards to behavioural engagement, different scenarios are outlined. First of all, regarding behavioural engagement with chatbots, only 3 of the 18 respondents decided to stop using chatbots completely or as little as possible. Respondents 8 and 15 had little knowledge of the technology at the beginning and very few interactions to their credit. Since they chose to use the chatbot without much conviction from the start, this negative interaction only confirmed their fears.

"I do not really plan on further using chatbots and communicating with them." – Respondent 15

Another common feature among these respondents was the lack of complaints against the company. Indeed, despite a loss of money the two people decided not to waste any more time contacting the company to complain about their experience or to get a refund.

"I did not mention it to the company, I thought it was a waste of time. I did not care at the time to have a chance to give my opinion on that interaction." – Respondent 15

"I tend to give up quickly and anyway I had planned a big budget for this trip, so I ended up giving up. I told myself "Never again"." – Respondent 8

	Desired behaviour	Negative WOM	Complaint	
Respondent 1	—	—	×	✓ High — Medium × Low
Respondent 2	✓	×	✓	
Respondent 3	✓	×	✓	
Respondent 4	—	✓	×	
Respondent 5	—	✓	×	
Respondent 6	✓	×	✓	
Respondent 7	✓	✓	✓	
Respondent 8	×	✓	×	
Respondent 9	—	—	×	
Respondent 10	✓	✓	✓	
Respondent 11	✓	×	✓	
Respondent 12	×	×	×	
Respondent 13	✓	✓	✓	
Respondent 14	✓	✓	×	
Respondent 15	×	✓	×	
Respondent 16	✓	✓	×	
Respondent 17	✓	✓	✓	
Respondent 18	✓	—	×	

Table 8 – Behavioural engagement towards chatbots post-interaction

Respondent 12 also decided to use chatbots as little as possible, but the situation is slightly different. Indeed, having already created a chatbot, the person has very good knowledge of this technology. However, he still favours human interactions since chatbot interactions usually lack the personalized and empathetic aspects. The person also knows the complexity to program a chatbot and thus knows that most may be unsatisfactory.

In the remaining 15 cases, different situations were observed. First, there are 11 respondents who, despite their negative interaction, remain enthusiastic about this technology and thus present a form of positive engagement with chatbots. They continue to use chatbots on a regular basis, whether in the field of tourism or in other areas of e-commerce, for example.

“9/10, I am pro chatbot, I will always go through the chatbot before making a phone call or sending an email.” – Respondent 16

Finally, for the remaining four respondents, they will continue to use chatbots and interact with them, but they are waiting to see an improvement in the current technology to be really satisfied and to use chatbots more regularly.

Regarding the respondents' behaviour towards the chatbot during the interaction, 16 of them behaved calmly, not losing patience in the chat. Instead, they tried to reformulate their query with simple words or keywords to put all the chances on their side for the success of the interaction. One of the reasons why they decided not to get angry was because they knew they were talking to a technology and getting angry about it would not have changed the situation. However, two of the respondents remained somewhat less calm about the situation. Indeed, respondent 8 began to get angry at the chatbot, annoyed that he did not understand his request. However, he quickly stopped, thinking that getting angry at the chatbot would certainly not help the chatbot to be more effective. Respondent 15 also ended up losing patience with the chatbot, but it did not last very long either, realizing that it would be useless since he was only talking to a chatbot and not a human who could understand his feelings.

“At first, I got mad at it, then I thought about it a bit and thought that it probably did not help the chatbot to give me a correct answer. Anyway, it did not feel my anger, I knew it was useless.” – Respondent 8

b. [Complaint](#)

A second category of behaviour that has emerged as a result of these interactions is the complaint to the company. In fact, eight respondents decided to complain to the company about their bad experience with the chatbot in three different ways. The first situation was directly with a customer service employee where the respondent took the opportunity to explain his situation and his dissatisfaction with the time lost and the ineffectiveness of the chatbot. The second form of complaint was through a satisfaction questionnaire. In fact, for respondent 3, he left a score of 0/10 to mark his interaction with the chatbot because he was dissatisfied. However, no news was received from the company because of the evaluation. The third situation concerns respondent 7 who, despite his extensive efforts to solve his problem and to complain about his poor interaction with the chatbot, has not yet been able to complain to the company. Several problems prevent the respondent from getting a communication with the company, such as the language barrier (company based in Germany) or simply the lack of a means to directly contact the customer service. Indeed, the chatbot is currently the only easy way to make a complaint. If the person has not yet been able to complain about the interaction with the chatbot directly to the company, this will be done as soon as a contact with the customer service is established. Of all those who complained, none received any form of compensation from the company except respondent 6 who received an apology from the employees. However, respondents were not surprised or disappointed by this. Indeed, as respondent 10 explained, since his problem was finally resolved, he was still satisfied with the outcome of his problem. On the other hand, if the initial problem had not been solved, he would have taken his complaint against the chatbot further to the company.

“I have not received a reply to my email, but the refund of my booking has been made in full. So, I was satisfied because in their mistake with the chatbot, they acknowledged that the mistake came from

their side and so they refunded 100% of the booking. But on the other hand, if I had not recovered 100% of the amount, I would have insisted more with the site for the chatbot and I would have made more requests.” – Respondent 10

“If the company had solved our initial problem, I would not have wanted the company anymore because as I said it is just a chatbot, I do not blame a machine.” – Respondent 17

“I trust the company (8/10), at the moment I had a real person on the phone, they were able to solve my problem, so I do not hold it against them for the bad interaction with the chatbot.” – Respondent 6

In this case, the company implemented a form of distributive justice for the initial situation, and even if nothing was put in place for the poor interaction with the chatbot, the respondent was still satisfied with the outcome. However, in the case of respondent 2, for example, the person would have appreciated having the negative experience reported to the SNCF to improve future experiences. Unfortunately, it was understood that nothing would be done about that.

“The person just considered my complaint about my problem. I wish the person would have communicated internally that the chatbot couldn't answer the question, so they could make sure it works.” – Respondent 2

c. [Negative WOM](#)

Finally, a third form of behavioural reaction following the interaction was observed. Negative WOM was seen in 10 of the cases and was intended to speak ill or explain the situation they had with the chatbot. For example, respondent 17 talked a lot about it with various people around him and will continue to talk about it if the topic comes up. It is interesting to note that none of the respondents who spoke negatively about their experience with chatbots mentioned that they intended to harm the image of chatbots by doing so. It is also important to note that few respondents made the distinction between chatbot and brand by talking to their relatives. The brand to which the chatbot was connected was indeed mentioned in most cases. One exception was respondent 4 who decided to talk to his relatives about the general disappointment he had with chatbots, not to mention this interaction in particular. If some people have not yet spoken ill of chatbots, three respondents still said that if the topic came up in a discussion, they would take the opportunity to mention it at that time.

4.1.3.2. Brand behavioral engagement

Second of all, regarding behavioural engagement with the brand, the same forms of behavioural reactions could be observed following the negative interaction with a chatbot.

a. [Relationship continuity](#)

Firstly, regarding the continuity of interactions or travels with the brand, three situations arose. To start with, eight participants decided to continue interacting and travelling, on a regular basis, with the company. If we take the case of respondent 13, since he already had good previous experiences with the company, knew their reputation and had found a solution to his initial problem, he decided to continue travelling with them because in spite of everything, the situation turned out to be positive in his eyes. It is interesting to note, however, that out of these nine participants, six of them nevertheless blamed the company for their bad interaction with the chatbot and felt negative feelings towards that brand. It can be observed that a good reputation or previous positive experiences have had a real impact on the continuity of the relationship with the brand. Afterwards, another situation has emerged concerning travelers who will continue to travel with the company but only because of certain parameters. In the case of respondent 3, the interaction occurred with the SNCF and if the individual had the choice, he would probably stop travelling with them permanently. The problem is that the SNCF holds a monopoly on French rail transport, making disengagement very complex. However, the

participant indicated that he regularly checked for other options available to provide a similar service to the company. Indeed, if he could find another brand that would allow him to travel in the same manner at similar costs, he would not hesitate to travel with the other company. As respondent 14 also mentioned, if this type of interaction had taken place on a clothing website for example, he would have automatically gone to another site and ended the relationship with the brand.

“If I had had that experience with a company where there were alternatives, I would have changed and looked elsewhere because it's hard when you're a consumer to have such a hard time getting an answer to your questions.” – Respondent 3

“If I want to go to Paris quickly, I have no other choice than to take the Thalys so I do not think the interaction will slow me down to take Thalys.” – Respondent 14

Other participants who also fall into this category are those who will continue to interact with the brand only because it has a form of monopoly on the low prices charged. Taking the example of respondent 16, if he was never satisfied with Ryanair's customer service and was often disappointed with their services in general, he continues to travel with them since they usually have the lowest fares on the market. As has also been mentioned, if the price difference with another airline is not too big, he will choose that other airline without hesitation. Finally, the last category corresponds to the 4 respondents who decided to stop interacting with the brand because of their negative interaction. The reasons are varied and will be discussed in more detail in the section below 4.1.4.

	Desired behaviour	Negative WOM	Complaint	
Respondent 1	✓	—	×	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> ✓ High — Medium × Low </div>
Respondent 2	✓	✓	✓	
Respondent 3	✓	✓	✓	
Respondent 4	✓	×	×	
Respondent 5	✓	✓	×	
Respondent 6	—	✓	✓	
Respondent 7	—	✓	✓	
Respondent 8	×	✓	×	
Respondent 9	×	—	×	
Respondent 10	✓	×	✓	
Respondent 11	✓	✓	✓	
Respondent 12	×	×	×	
Respondent 13	✓	×	✓	
Respondent 14	—	✓	×	
Respondent 15	✓	×	×	
Respondent 16	✓	✓	×	
Respondent 17	×	✓	✓	
Respondent 18	✓	✓	×	

Table 9 – Behavioural engagement towards the brand

b. Complaint

Secondly, about the complaint to the company, no real distinction could be made as to whether the negative engagement was directed at the brand or at the chatbot. In this case, the complaints reported to the company included interaction and experience as a whole. Indeed, their complaint was aimed at the bad experience with their chatbot and thus aimed at the technology that the company had put in place. For this reason, the analyses made in 4.1.3.1.b are also valid for this part.

c. Negative WOM

Thirdly, negative WOM representing a negative engagement behaviour to the brand was also observed. 11 of the respondents explained that they had already spoken ill of the brand to relatives following their bad experience and interaction with the chatbot.

“Yes, I talked about it, but I didn't talk about the chatbot at all, I talked about the interaction with the SNCF, that I had a problem and the finality.” – Respondent 3

Two respondents also mentioned that they could speak negatively about their experience and the brand if the subject was discussed. Despite a significant presence of negative engagement behaviours, it is interesting to note that none of the respondents were intended to hurt the brand. Their objective was to either tell their experience to their relatives to relieve their emotions, or to warn them about the risks by interacting with the brand concerned. As was explained by respondent 18, he decided to warn his relatives about the platform service and to take extra precautions when booking on this site considering his personal experience.

“If I have people around me who want to book tickets with them, I will warn them.” – Respondent 18

A more virulent form was observed in respondent 17, advising as many people as he knows not to book through Gold Car, not sparing them the very negative feelings he felt because of this bad experience. This respondent decided to speak negatively of the company because it had not solved his initial problem, leaving him frustrated and lost on the procedure to follow. While respondent 16 has spoken ill of his experience with Ryanair to his relatives, he thought of doing it on a larger scale, but he quickly dropped the idea. Indeed, he said he could have talked about it on social media to try to make more noise, but he was discouraged by the fact that Ryanair is an industry giant and that his online testimonial would not change things.

“I totally advise against Rental Cars.” – Respondent 17

*“I could have talked about it on social media for example, but for me Ryanair is not someone that I'm going to come and enthrone with my negative experience, so it stayed in my family circle.”
– Respondent 16*

4.1.4. Disengagement

While conducting this study, the NCE was the outcome that wanted to be assessed at the outset, however, disengagement was also observed among participants. Of the 18 participants, four cases of disengagement were observed. Of these four respondents, 3 situations explained this disengagement. First of all, respondent 9 and respondent 12, both tested a chatbot messenger that proposes travel and flights based on customized criteria. These two people both have an attraction for travel and decided to test this tool out of curiosity. Both respondents also had no emotional engagement to the brand prior to their interaction. This interaction therefore created negative feelings of disappointment and a sense of insecurity in the responses provided by the chatbot. These feelings surfaced because the chatbot did not respond correctly to their query, not considering some of the requested criteria such as the price. One of their basic objectives was to find cheaper trips, except that respondent 9 observed that the trips offered by the chatbot were more expensive through that intermediary than by booking directly by themselves. Respondent 12 explained that he did not have sufficient trust in what the chatbot offered and that he felt obliged to check for himself on the corresponding sites to see if he could find better alternatives. As a result of this unsuitable answer, having only used the tool out of curiosity and having no concrete travel idea at the outset, both respondents agreed that they did not intend to use the tool in the future anymore.

“I have no intention of using the Flybot chatbot again because I love to do the research myself, so I won't go back to a flight comparator of this type.” – Respondent 12

A second case of disengagement was observed in respondent 8. While he had previously been positively engaged with the brand and had no apprehensions about his journey, he was initially very disappointed by the poor organization of the company and his interaction with the chatbot only made his frustration worse. Indeed, the chatbot did not understand his problem and tried to redirect it to categories of questions that did not match. Even though there was a lot of money at stake, the respondent decided not to be more insistent than that, seeing that his interaction was not leading to anything to try to take advantage of his leave. As a result, he did not contact Bongo to try to get a refund as he tends to give up quickly. Indeed, seeing that the chatbot could not help him, he preferred not to waste any more time. However, feelings of sadness and injustice towards the brand remained in the long run, causing it to never buy a Bongo on its own again. He has therefore decided to stay as far away from the company as possible, and he doubts that he will ever decide to interact with the company again. He said, however, that if someone offered him a Bongo He would go as a matter of principle, but having spoken with his relatives, he doubted that that would happen.

“I will no longer buy it for myself, I will no longer recommend it to others, and I will no longer offer it to relatives because I do not want to risk it happening to others. I think I have had bad luck with the company, but I still stay away from it as much as possible.” – Respondent 8

Finally, the last case of disengagement is the case of respondent 17 that was not engaged previously and that decided to disengage from the company after his interaction. During a trip, the respondent was confronted with an excessive amount of money requested by the company and therefore decided to submit a request for a refund of this amount by contacting the company. The customer service then sent him back to the chatbot so he could submit his request, except that the chatbot did not understand his question, was spinning the conversation around and thus provided an unsuitable answer. This led to frustration because of a huge waste of time during his vacation and the respondent also felt lost not knowing what else to put in place to solve his problem. The negative feelings were directed towards the brand, and he believes that the chatbot was a way to discourage customers from filing complaints. As the respondent explained, if the company had solved the problem, he would have given up on the bad interaction with the chatbot. Because of the negative feelings towards the company as well as their non-reaction following their complaint about the chatbot, the respondent decided never to make a reservation again via the company. Indeed, only a radical change could potentially change the person’s opinion, but he is very doubtful about the fact that this could happen one day.

“I plan to continue to interact with them until they pay me back, but I will never drive with them again. My intention and trust level with the company is at -10/10. Everything is wrong with their customer service both human and chatbot. My choice is permanent unless they completely change sides, but I doubt it.” – Respondent 17

4.1.5. Engagement tendencies

Trapped customers	Loyal customers	Dangerous customers	Run-away customers
Respondents who were at first either negatively engaged or not engaged who would disengage from the brand after the interaction if they had the opportunity.	Respondents who had positive feelings and intentions before the interaction and stayed positively engaged with no or little NCE behaviours.	Respondents who had positive feelings towards a brand previous to the interaction and became negatively engaged customers.	Respondents who were not engaged with the brand before the interaction and decided to disengage afterwards.

As a result of this study, four tendencies in customer engagement were identified. The first group was called the “Trapped customers” and concerns customers who find themselves locked in a relationship without the intention of further interacting with the brand. If they had another similar option for a similar service, they would change brand without hesitation. This represents respondents 3, 14 and 16 who all present a form of negative engagement in the 3 dimensions of engagement as well as negative behaviour such as negative WOM that could tarnish the company's image or reputation. For respondents 3 and 16, interacting with the chatbot only confirmed their negative feelings towards the company, but did not change their desire to continue interacting with chatbots in the future. Regarding respondent 14, even though he had never interacted with the brand, he already had apprehensions about the smooth running of his experience and his interaction with the chatbot confirmed his concerns but did not change his regular use of chatbots.

Subsequently, a category called "Loyal customers" was identified. This group represents customers who had positive feelings about the company before interacting with the chatbot and who, as a result, still have a positive intention to interact with the company in the future. Respondents 1, 10, 11, 13 and 15 are part of this group and have little or no negative brand behaviour. Thanks to the company's reputation or previous positive experiences, for the most part they did not hold the company responsible for their bad interaction with the chatbot and were satisfied with the company's response to their initial request through customer service (when mentioned).

Then, the third group called “Dangerous customers” represents participants 5,6 and 2 who initially had positive feelings towards the company but who, following their negative interaction with the chatbot, still want to interact with the company while presenting negative feelings towards the company. These customers therefore exhibit negative behaviours towards the company, such as negative WOM, which can also damage the image and reputation of the company. It also had an impact on the trust they had in the company but also in the chatbots.

Finally, the last category of customers has been called "Run-away customers" since they represent customers who have disengaged from the brand as a result of their negative interaction. This time it concerns respondents 7, 9, 12 and 17 who were not initially engaged with the brand and who decided to test this out of curiosity for example. This negative interaction has tarnished their brand image as well as their confidence in the brand and chatbots for the most part. A slightly different case was that of respondent 8, who had previously been positively engaged with the brand and decided never to interact with the brand again. In this case, no complaint was transmitted to the company in order not to lose more time because of the previous interaction with the chatbot. This is consistent with the study of Do and Bowden (2023) that explains that a respondent could neglect the issue or service provider to prevent future dissatisfaction or to prevent escalating to negatively engaged complaining, in reaction to several unfavourable incidents.

4.1.6. Management experience perspective

In order to bring an additional point of view to this study, an interview was also conducted with a professional point of view this time. The objective was to have the insights of a person being on the other side of the chatbots and having experienced the failure of its installation. The interviewed respondent works for a company that specializes in leasing in the mobility sector. The objective of the implementation of this chatbot was very simple and common: to succeed in relieving the teams working in the call centre by decreasing the number of calls made thanks to a first handling done by a chatbot. It was a test carried out by the company two years ago that lasted for 6-9 months. Following a study on the most frequently asked questions, scripts were provided to the chatbot to help it answer the various customer queries. However, they soon noticed that the implementation of this bot did not change the number of calls received at the call centre.

As a result, a decision was made to stop this chatbot for two reasons. The first was the workload that had not decreased, the second was the workload resulting from the implementation of this chatbot that had been underestimated by the company. Indeed, they thought that only the implementation of the tool would be enough to reach their goal. However, as the respondent pointed out, it was important to continually feed the chatbot with new data so that it could be improved and thus enhance the customer experience. The company acknowledges having had a part of responsibility in this failure as well as having underestimated the workload that represented the implementation of a chatbot. The respondent also explained that employees working in the call centre had also complained about the tool. Indeed, the problem was that not only did customers keep calling, but they were already frustrated with their interaction with the chatbot at the beginning of the call. The customers therefore pointed out that the chatbot had wasted their time, made them go in circles and still failed to provide them with their answer.

This interview also highlighted the fact that this failure to implement the chatbot also affected the respondent's perception of the usefulness of chatbots. If he was already not fond of this type of technology and had already had bad experiences, this interview confirmed his fears and reservations. This also helps to understand the importance on the part of the company of continuously feeding the chatbot with new data. Indeed, if setting up a chatbot can have real benefits for a company, poorly executing it can also have negative consequences as observed with the 18 other respondents.

5. Chapter 5: Discussion

5.1. Drivers of NCE

The main objective of this thesis was to understand the impact that a negative interaction with AI, in particular with a chatbot, could have on the customer's engagement with a brand. Thanks to the qualitative study carried out, relevant insights have emerged to understand this impact in the tourism industry.

5.1.1. Monopoly

The first elements analysed in this thesis were the drivers that explained the appearance of NCE. To start with, the company's monopoly position in the market has had a negative impact on customer engagement as some participants felt trapped in this relationship with no real alternative available. This happened when a company held a complete monopoly on the market but also when a company held a form of financial monopoly on the prices charged on the market. This factor can therefore be very problematic, as customers who have no intention of having an interaction with the firm are thus forced to have one. Indeed, the four respondents presented a more or less strong negative WOM about their experience with the brand. This negative WOM resulted from negative affective engagement (e.g. frustration, anger, lost) and negative cognitive engagement (e.g. no intention of travelling with the brand) As Naumann et al. (2017) explained in their study, that when a client finds himself in a monopoly situation, there is a good chance he will become a passive loyal customer, yet completely rejecting the brand. This study therefore completes this study by going a step further since the presence of these customers is not passive but negative and could cause harm to the company if these negative behaviours persist over time. Hollebeek et al. (2021) also suggested that when a customer senses a lack of alternatives in the context of RPA-based interaction, it could increase NCE and transform into a negative spiral.

Drivers of NCE	Interview	Development
<i>Monopoly</i>	Interview 2 Interview 3 Interview 14 Interview 16	Since the customer has no other (similar) choice on the market, he continues the relationship without the intention to do so and without satisfaction of the service provided.
<i>Disconfirmation of promised service and actual service</i>	Interview 5 Interview 9	High expectations of a service that did not meet the actual service performance.
<i>Perceived injustice</i>	Interview 7 Interview 8 Interview 17	The customer was frustrated that he did not receive the desired compensation following his interaction with the chatbot and that the company did not solve his initial problem.
<i>Chatbot dissatisfaction (i.e. unsuitable answer, failed interaction)</i>	Interview 1 Interview 5 Interview 6 Interview 7 Interview 11 Interview 14 Interview 18	The chatbot was useless to the customer for the request, discussion going in circles, causing frustration and seen as an unnecessary step.
<i>Context of the negative interaction</i>	Interview 8 Interview 17	Their negative interaction with the chatbot took place during the stay, wasting their time during their holidays.

5.1.2. Disconfirmation of promised service

Furthermore, a disconfirmation between the promised service and the actual service also explained the NCE. The case of respondent 9 represented this factor since he tested the travel chatbot solely out of curiosity through the promotion of a trusted influencer. The expectations of the chatbot performance were therefore high and not met as a result of the interaction. When a chatbot provides

an unsuitable answer, it might lead to a gap between the customer expectations and the actual chatbot performance (Adam et al., 2021). Such negative disconfirmation can in fact lead to negative emotions such as frustration or anger which will usually result into a negative form of WOM (Do et al., 2019). In addition, high expectations of a service performance might lead to a strong negative effect on customer satisfaction, especially for highly engaged customers (Mittal et al., 2018). Some other customers also showed high expectations regarding the chatbot interaction such as for respondent 10. Indeed, even if his knowledge on chatbots is limited, since the technology is regularly described as prodigious by the media especially, he still had high expectations of his interaction with the chatbot. However, the media's depiction of AI as technology able to handle most duties in the tourism and hospitality industries is usually overrated (Ukpabi et al., 2019). In this case, the fact that he trusted the company and that the company also solved his case prevented him from presenting negative behaviours towards the brand. The efficiency of the customer service is therefore crucial since customers will usually first complain to the company before starting to disengage or to negatively complain to relatives (Do & Bowden, 2023). The importance of having a customer service ready to fix the error or bad interaction with the chatbot is therefore crucial to avoid any form of negative engagement with the brand.

5.1.3. Perceived injustice

Another factor that also emerged is the perceived injustice. Indeed, since the chatbot was not able to solve the respondent's problem, the respondent may have felt lost not knowing what other procedure to put in place to successfully resolve the query. For example, the use of the chatbot made respondent 7 feel that he was being "side lined" without being able to receive the compensation due for his loss of time for example. Cases of injustice were identified when participants made input-output comparisons and perceived that service providers handled their situation unfairly (Do et al., 2021). This type of factor was caused by several negative feelings such as frustration and anger, which resulted in negative customer behaviours such as complaint to the company as well as negative WOM. It also impacted the cognitive engagement negatively removing the intention to interact with the brand in the future. Another negative cognitive factor that arose was the distrust in the company. Do et al. (2019) argues that if this lack of trust can impact the focal brand, it could also have a negative impact on similar brands with the same service or product proposition. If the tourism technology research supports the positive impact of trust in a brand on the behavioural intention to use chat assistants (Pillai & Sivathanu, 2020), this study showed that distrust, on the contrary, can have a significant negative impact on the intention of using such technology within a brand. This can be explained by the fact that customer perceived injustice can be a cause of NCE in a service context (Do & Bowden, 2023). Indeed, customers usually expect employees to take over and to assist with the service recovery when it is about technology-related service failures (Huang & Dootson, 2022). The service recovery failure can thus be seen as an aggravating factor leading to a stronger negative emotional response (Do & Bowden, 2023).

5.1.4. Chatbot dissatisfaction

Afterwards, the failed interaction with the chatbot itself was the factor that caused the most NCE. Indeed, because of failed interactions or unsuitable responses provided by the chatbot, many respondents held the brand responsible. Customers can indeed face some cognitive problems while interacting with a chatbot such as an incorrect interpretation of a query which can therefore lead to feelings of frustration and anger (Castillo et al., 2021). Even if most respondents did not expect the chatbot to fully solve their case, they usually at least expected it to understand the context of their question as well as a suggested guidance. As a result, customers usually perceived the chatbots to be a good tool as first assistance contact but still very limited in their functionalities. For example, some respondents considered the chatbot useful for very basic and general questions but limited for more specific or unusual requests. Respondents also pointed out the loss of time resources when there was a need to repeat the request or to start over the conversation with a human. The chatbot could

therefore also be seen by some as a way to discourage them from pursuing their complaint to the company.

“It was really just a pointless chatbot step apart from making us freak out. He did not help us find a more specific service, it was not even used for sorting, I do not understand what it was used for.” – Respondent 17

Since this interaction created frustration and anger in most cases, negative WOM as well as complaint could be observed. When customers experience negative feelings like anger, they are more likely to disseminate negative WOM as well as a form of complaint (Do & Bowden, 2023). In this sense, the dissatisfaction of an interaction with a brand, in this situation an interaction with a chatbot implemented by a brand, might create a form of NCE because of the perceived dissatisfaction (Do et al., 2019).

5.1.5. Interactional context

Finally, the context of interaction with the chatbot was also observed as a factor having a negative impact on CE. This was the case for both respondents who had to interact with the chatbot at the time of their trip, causing an unpleasant moment as well as a waste of time. This can therefore be seen as an aggravating factor to their failed interaction with the chatbot. In fact, the user experience can be defined as “a consequence of a user's internal state, the characteristics of the designed system and the context within which the interaction occurs” (Hassenzahl & Tractinsky, 2006, p.95). Indeed, the result of a chatbot interaction is argued to depend on the customer, the chatbot and the context (Rapp et al., 2021).

5.2. Outcomes of negative customer engagement

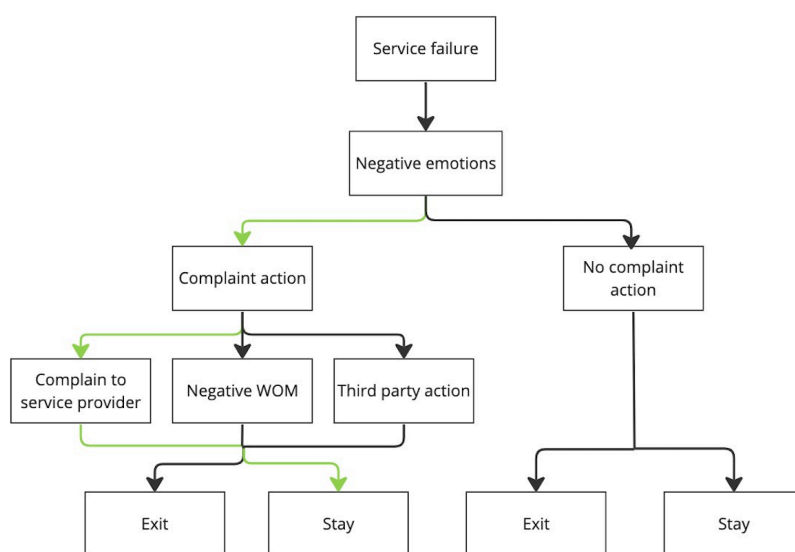
The second objective of this thesis was to successfully identify the consequences of NCE in the interactional context with a chatbot. First of all, the results showed that most of the observed impacts were directed at the firm directly and not at the technology. However, three respondents still decided to use as little as possible chatbots following this interaction but only one of them was optimistic about chatbots at the beginning. Indeed, negative chatbot interactions can have a negative impact on customer willingness to use chatbots which can be attributed to mistakes caused by chatbots' unsuitable interaction with customers and their inability to comprehend or respond to customers (Huang & Dootson, 2022). However, since the objective was to identify the outcomes of negative interactions with chatbots on a focal brand, only the consequences on the brand will be further discussed. The results have made it possible to clarify the different consequences on the 3 dimensions of engagement towards the brand, thus making it possible to complete the current literature, which has, so far, almost ignored the negative impact on these dimensions. The results suggest that the negative affective and cognitive engagement generate the negative behaviours observed towards the brand. It is indeed argued in the literature that NCE behaviours are the consequence of customer cognition and affection (Do et al., 2021).

Regarding the consequences on affective engagement, the feelings that emerged most because of these interactions were frustration and anger. If these feelings had already been identified as consequences for emotional engagement following interaction in the field of services, this study has suggested that these feelings are also reflected in negative emotional engagement following interaction with a chatbot in the field of tourism. Do and Bowden (2023) suggested that when customer service expectations are not met, the affective dimension of NCE can include sentiments of anger and resentment towards the brand. Some customers also felt lost because of a lack of clarity of the answer provided by the chatbot or because of a lack of solutions to solve their initial problem.

In terms of outcomes in the cognitive dimension of CE, two main negative factors being respectively distrust as well as a lack of intention of interacting with the company were identified. This can be explained by the fact that when service providers repeatedly failed to provide consumers with essential services, distrust emerged. In such instances, participants expressed a lack of confidence in the service provider's ability to provide services that meet their future requirements (Do et al. 2021).

In regard with the negative behaviours that arose from the affective and cognitive dimensions, this study's findings show that negative WOM are consistent with the CE literature, which asserts that customers are more likely to disseminate negative WOM when they are experiencing negative emotions such as anger (Do et al., 2023). Indeed, negative WOM was a way for customers to free themselves from the negative feelings they felt by talking about it with their relatives. The complaint to a third party usually happens to request assistance or report a negative service experience to a relative (Do & Bowden, 2023). This finding is consistent with the study of Naumann et al. (2020) suggesting that negative behavioural engagement manifests itself through anti-brand activism, negative WOM as well as complaint to the focal brand. Another form of negative customer behaviour was also observed being the complaint directly at the company. Do and Bowden (2023) suggest that the majority of complaints occur when service providers fail to provide essential services that are threatening customer resources.

In addition, according to Wilson et al. (2016), some customers can choose not to complain to the company but instead spread negative WOM about the company directly to their relatives, for instance. This can be extremely detrimental because it can reinforce a customer's negative feelings, and the company has no chance of recovering unless the negative WOM is accompanied by a formal complaint. Indeed, it was observed that only 6 out of 11 respondents who presented negative WOM did a complaint to the company about their negative interaction. On the 18 participants, only two respondents presented the ideal complaint action: they decided to complain directly to the service provider about their experience with the chatbot, without spreading negative WOM about the company, and decided to stay engaged with the brand afterwards. This is in fact the ideal scenario, represented in green on the figure hereunder, because when a customer complains, the company has a second chance to satisfy the customer by fixing the problem (Wilson et al. 2016). However, the case of respondent 8 represented the worst scenario for a brand: leave the relationship, without complaining directly to the company, while presenting a form of negative WOM.



Adapted from Wilson et al. (2016)

Finally, if disengagement is usually associated with “*neglect*” behaviour normally presenting a more passive-negative behaviour than “complaining” for negatively engaged customers (Naumann et al., 2017; Do & Bowden, 2023), this study showed more virulent forms of disengagement than neglect. Indeed, disengaged customers presented the same forms of negative behaviours such as complaining and negative WOM.

6. Chapter 6: Conclusions

6.1. Short summary

This thesis investigates the impact of a negative interaction with a chatbot in the tourism industry on the customer engagement towards a focal brand. The research first focused on identifying the drivers that lead to negative customer engagement, whether it is chatbot-driven or brand-driven. The study also focuses on the outcomes of these interactions and how they translate into customer engagement both with the brand and the technology.

In order to carry out effectively this research, a qualitative study was conducted and 19 people were interviewed using a semi-structured interview guide. The goal was to find the most heterogeneous respondents possible in the sample to ensure data quality. However, due to the nature of the innovative technology, not all age and gender categories could be equally represented.

Afterwards, the data were analysed with respect to the three dimensions of customer engagement being affective, cognitive, and behavioural engagement distinguishing between the impact on the technology and the brand as well as looking at the before/after impact on the dimensions. An analysis could then be carried out based on these data and several findings were made.

First of all, five drivers leading to negative customer engagement have been identified. The first driver is when respondents were interacting with a firm holding a monopoly on the market. Indeed, since the customer had no other option on the market, he continued the relationship despite having no desire to and not being satisfied with the service provided. Then, some respondents were also disappointed with the disconfirmation between the promised service and the actual service received. One other reason also leading to the NCE was also a perception of injustice by the respondent on their interaction with the chatbot. In fact, some customers were frustrated that they did not receive the desired compensation following their interaction with the chatbot and that the company did not solve their initial problem, showing a failure in the customer service. The fourth driver identified regards the chatbot dissatisfaction since it was considered as useless to the customer for the request or as a waste of time. Finally, the last driver was the context of the negative interaction since some customers interacted with the chatbot during their stay.

Second of all, four engagement groups could also be identified during the data analysis. The first group identified is the trapped customers, that are initially negatively engaged or disinterested customers who, if given the opportunity, would disengage from the brand after interacting with it. Then, the loyal customers are respondents with positive feelings and intentions prior to the interaction who remained positively engaged with little to no NCE behaviour. The third engagement group identified is the dangerous customers that had positive feelings regarding the company prior to the interaction and became negatively engaged customers. Finally, the run-away customers are respondents that were not engaged (positively or negatively) with the brand prior to the interaction and still became disengaged customers afterwards.

Third of all, outcomes on customer engagement following the negative interactions with the chatbots were identified. It was found that in 14 cases the company was partly to blame for the poor interaction and a form of negative engagement emerged in these cases. Regarding the affective engagement, negative feelings such as frustration and anger for example emerged towards the brand. With regards to the cognitive engagement, what emerged the most is a lack of intention of interacting with the brand as well as a perceived lack of trust. These affective and cognitive dimensions led to negative customer behaviours such as negative WOM or complaint to the company. Finally, disengagement was also identified as an outcome of these negative interactions in the case of four respondents.

6.2. Managerial implications

This thesis tackles the impact of a negative interaction with a chatbot in the tourism industry to identify the impact on customer engagement. If negative customer engagement has already been widely studied following the three-dimensional construct, this concept applied to the AI interactions in the tourism industry has almost been ignored to this day. As of today, understanding how and why NCE behaviours grow, as well as their impact on key business outcomes, is crucial to help managers create strategies to avoid or minimize the occurrence of NCE behaviours (Do & Bowden, 2023).

Through the analysis of the results, a negative noteworthy impact following a negative interaction with a chatbot is observed. Indeed, these interactions created various negative feelings, thoughts and behaviours towards the focal brand and have also had a less significant impact on technology. As chatbots and AI applications become more common in everyday life and offered by more and more companies, it became essential to identify the sources and consequences of these negative interactions.

What first emerged was the reluctance to use chatbots due to a perceived lack of customization of the technology. If the goal of companies is to relieve the customer service, successfully implementing forms of emotion to chatbots, could make users want to use them more and generate less frustration when the interaction does not go well. For example, implement a form of empathy to lessen the effects of negative interaction by giving customers a sense of understanding. However, transparency about the fact that respondents were interacting with a chatbot and not a human was indeed essential in order not to feel deceived by the company. Names such as "company chatbot x" or "service bot" can avoid this confusion. If the company wants to implement more anthropomorphisation for their chatbot, clarifying it in the first message sent by the chatbot such as "My name is x, the chatbot of the company x, ..." would avoid, once again, any confusion.

As found in this research, what created the most negative feelings was the failed interactions as well as the unsuitable answers provided by the chatbot. This underlines the importance to have a chatbot as well programmed as possible. However, as the respondent from a professional point of view pointed out, their company did indeed underestimate the workload of a chatbot, and the resources needed to feed the system with new data. Indeed, if implementing a chatbot is an increasingly common phenomenon in the field of tourism, it is important to carry out a preliminary study to determine whether the company is ready to implement the technology. Although adoption of chatbots may be simple for large companies due to their human and financial resources, since the tourism industry is dominated by small and medium-sized businesses, a lack of resources may impede the adoption of chatbots (Ukpabi et al., 2019). Tourism marketers should therefore pay attention to the most common reasons of failure (e.g. unsuitable answer, misunderstood request) to avoid as much as possible interaction failure. To do so, it would be interesting to set up a small satisfaction questionnaire (Wilson et al., 2016) at the end of the interaction. Indeed, if the customer does not bother to call customer service for example, employees will not be aware of the negative chatbot interactions, thus not giving them the opportunity to put in place some form of distributive justice to remedy the situation.

In line with the previous recommendation, managers should develop a mindset of opportunities hidden behind complaints (Wilson et al., 2016). Indeed, complaints should not be seen as the company enemy, rather as a valuable source of feedback, allowing them to improve their chatbot easily. Furthermore, making complaints easy will avoid situations where customers do not know where to complain, facing complex complaint procedures when customers are already dissatisfied. A good company practice in the tourism industry is KLM, that put an easy complaint system on Twitter and

Facebook. Indeed, the company promises to respond to every complaint within an hour thanks to their chatbot as well as 130 employees focused on customer care (Wilson et al. 2016).

Still with the aim of minimizing bad interactions with chatbots and being able to put in place service recovery when this happens, another recommendation formulated is to program the chatbot in a way as to detect when the chatbot is spinning in circles or fails to give the customer an answer. Indeed, several respondents suggested that if the chatbot gets stuck and asks to repeat the question several times in a row, for example, the chatbot will then offer an available number or e-mail address to send customers to the customer service. In addition to distributive justice, firms should also focus on procedural and interactional justice to attain customer perceived fairness within a service context, to make them apprised of procedures in a plain and concise manner (Do et al., 2019). As the respondent with the professional point of view mentioned, allowing this would prevent customers from coming directly upset to customer service by allowing them to contact them easily. Another solution could also be for a customer service employee to take over the chat when the chatbot has reached its limits. However, this solution would again require additional resources to be considered before any decision is made.

6.3. Theoretical implications

This research and its findings contribute to the literature on Negative Customer Engagement, specifically in the interactional context with a chatbot in the tourism industry. If the concept of Customer Engagement has been widely studied in the literature, the impact of NCE on a service provider is still in its early stages (Do & Bowden, 2023), particularly when it comes to service robots (i.e chatbots) in the tourism industry (Fang et al., 2023). Among the few existing studies, the three dimensionalities of the NCE have started to be investigated and to gain interest in the literature (Naumann et al., 2020; Do & Bowden, 2023). In addition, the impact of chatbots in customers' adoption and usage experience has already been widely studied (Huang & Dootson, 2022). This thesis therefore contributes to these concepts.

Firstly, this thesis contributes to the research made by Naumann et al. (2017) where they stated that customers that interact without any intention with a brand in a monopoly situation, will usually become passive customers. However, this study shows that, when customers have no other choice than interacting with a brand despite of previous negative interactions, there is a high chance that these customers will develop a form of negative behaviour such as negative WOM.

Secondly, this study mainly contributes to the study of the impact of a negative interaction with a chatbot on each dimension of engagement. Indeed, if the impact on the intention to use the technology has already been studied (Adam et al., 2021 ; Huang & Dootson, 2022), the impact on the brand and the customer is much more scarce (Do & Bowden, 2023). In fact, this thesis examines the impact of a human-chatbot interaction using the three dimensions of NCE. This therefore contributes to the study of Do and Bowden (2023), Naumann et al. (2017) and Lim et al. (2022) by providing new insights into NCE manifestations in a context of service failure. In addition, the results allow us to complete the study conducted by Adam et al. (2021) and Krishnan et al. (2022) by adding the impact of this interaction on the service provider as well as a more in-depth study on the negative behaviours and impact on CE as a result. Furthermore, this thesis provides insights of these NCE manifestations in the tourism industry, extending the literature on the impact of these human-robots interactions in this field and the focus on disembodied robots (Fang et al., 2023). This study also contributes to the research of Grewal et al. (2021) by adding new factors affecting the customer cognitive engagement following an interaction with an AI.

Thirdly, this thesis also confirms the study of Naumann et al. (2020) which aimed at further understanding the impact of NCE. Indeed, because of the potential deleterious effect of NCE, academics and practitioners interested in optimising engagement and restoring positive engagement inside a service relationship are highly interested in negative engagement. Indeed, this study confirms, with its limitations, the dimensions of NCE and their components such as anger and frustration for the affective dimension, distrust for the cognitive dimension, and negative WOM for the behavioural dimension, suggested in this previous study. Therefore, their findings were not only observed in this study but also extended to a more specific area of services, namely tourism but also to a specific interactional context, namely human-chatbot interactions.

6.4. Limitations and implications for future research

As depicted above, this thesis extends the existing literature on Negative Customer Engagement resulting from an interaction with a chatbot in the tourism industry. If this research brings relevant findings, those must be considered with caution because of the existing limitations.

First of all, since the nature of this research is exploratory, no generalization of the findings can be made for chatbot users in the tourism industry. In fact, the objective of this study was to bring insights on these barely studied concepts to the existing literature. These results can therefore only be considered as applicable to this sample. Future research could try to validate these findings using a quantitative approach to generalize the concepts on the population. Indeed, it would first be interesting to test how the perceived brand value and the perceived chatbot value could impact the negative interaction with a chatbot. Furthermore, the negative chatbot interaction could then be tested to assess its impact on the three dimensions of NCE as well as on disengagement. Finally, the loyalty to traditional customer service agent and the monopoly context could be tested to check if they are moderators of the relationship between the negative chatbot interaction with the NCE and disengagement.

Since the age plays a role of a moderator in the adoption of new technologies (Venkatesh et al., 2003), having a more representative sample would be important for future research. Indeed, among the respondents of this thesis, only three participants did not fall into the 18-34 age category. It would also be interesting to assess if the age of the respondent might have an impact on the outcomes of engagement following an interaction with a chatbot. Indeed, with a larger and more representative sample among the population, it could be investigated if the age of the customer plays the role of a moderator in the relationship between chatbot interaction and NCE.

Second of all, it is also important to focus on the field in which this study was conducted. Indeed, the field of tourism is known to be particularly focused on human interactions. To be able to generalize these findings to other domains in the service industry, it would be necessary to identify the similarities as well as the differences to apply these concepts to other domains.

Third of all, if the objective of this thesis was to address the NCE following an interaction with a chatbot and its impact, this could also be used to assess the disembodied service-robot adoption based on its performance. Indeed, understanding the interaction between tourists and robots is crucial because it can identify the viability of service robot acceptance (Fang et al., 2023).

Another limitation of this study is that the basic objective was to evaluate NCE in this context. However, forms of disengagement, even if they did not concern the majority of respondents, were also found. For future research, it might be interesting to focus only on the different dimensions of disengagement to also be able to identify the antecedents and consequences. Indeed, if Naumann et al. (2017) already

conceptualized the dimensions of disengagement, it would be interesting to extend this literature when applied to the tourism sector in the interactional context with a chatbot.

A final limitation identified was that only two of the respondents had interacted with the chatbots during their travel. While the context of these respondents' interaction has been identified as a driver of NCE, the fact that only a few respondents have had these on-site interactions may be limiting in terms of seeing the effects. If the context of the interaction was already identified as important when interacting with a chatbot (Rapp et al., 2021), future research could look at the context of the interaction as an aggravating factor in a poor interaction with a chatbot in the tourism sector. In particular, being able to assess on a larger scale whether a negative on-site interaction with a chatbot in the tourism sector is an aggravating factor for NCE.

7. Appendices

7.1. Respondent profile

	Age	Gender	Nationality	Country of residency	Language	Travel frequency	Moment of interaction	Company	AI knowledge	Interview duration	Sector	POV
Interview 1	57	Male	Belgian	Belgium	French	1-2/month	Pre	Voyages Léonard	Low	25 minutes	Buslines	Consumer
Interview 2	24	Female	Belgian	Belgium	French	4-5/year	Post	SNCF	Middle	34 minutes	Trainlines	Consumer
Interview 3	23	Female	French	France	French	1/month	Pre	SNCF	Middle	25 minutes	Trainlines	Consumer
Interview 4	28	Female	Vietnamese	Island	English	2-3/year	Post	Ryanair	Low	34 minutes	Airlines	Consumer
Interview 5	24	Female	Belgian	Belgium	French	2-3/year	Pre	Volunteer World	Low	20 minutes	trips	Consumer
Interview 6	24	Female	Belgian	Belgium	French	3-4/year	Post	Expedia	Middle	25 minutes	Airlines	Consumer
Interview 7	39	Female	Belgian	Belgium	French	2/year	Post	Eurowings	High	25 minutes	Airlines	Consumer
Interview 8	24	Female	Belgian	Belgium	French	1/year	On-route	Bongo	Low	26 minutes	Organized trips	Consumer
Interview 9	24	Female	Belgian	The united States	French	4-5/year	Pre	No name	High	19 minutes	Trips comparator	Consumer
Interview 10	26	Male	Belgian	Belgium	French	2-3/year	Pre	Rentalcars	Middle	26 minutes	Car rental	Consumer
Interview 11	25	Male	Belgian	Luxembourg	French	4-5/year	Post	Rentalcars	Middle	19 minutes	Car rental	Consumer
Interview 12	23	Female	Belgian	Belgium	French	4-5/year	Pre	Flybot	High	25 minutes	Flight compartor	Consumer
Interview 13	25	Male	Belgian	Germany	French	1/month	Pre	Iberia	Middle	27 minutes	Airlines	Consumer
Interview 14	23	Female	Belgian	Belgium	French	4-5/year	Pre	Thalys	Middle	21 minutes	Trainlines	Consumer
Interview 15	23	Female	Belgian	Belgium	French	3-4/year	On-site	Airbnb	Low	25 minutes	Hotels	Consumer
Interview 16	29	Female	Belgian	Belgium	French	1/month	Post	Ryanair	High	36 minutes	Airlines	Consumer
Interview 17	26	Female	Belgian	Portugal	French	2/year	On-site	Goldcar	Middle	26 minutes	Car rental	Consumer
Interview 18	27	Female	Belgian	Belgium	French	2-3/year	Pre	Live Football Tickets	High	24 minutes	Football tickets	Consumer
Interview 19	58	Male	Belgian	The Netherlands	French	5-7/year	/	Volkswagen	Low	18 minutes	Car industry	Professional

7.2. Interview guide – English version

Interview guide: Impact of AI technologies on customer engagement in tourism industry

Introduction:

- Start recording (ask if they agree)
- Thank participant
- Ask for explicit agreement to participate in the study and to be recorded during the interview.
- Inform participant of confidentiality rules and possibility to stop the interview (temporarily or definitively) at any time.
- Present myself and my master thesis subject.

First part: participant profile (as a traveler and as a user of technology)

1. Could you tell me about your travel habits? How often do you travel? When was the last time and for what purpose (leisure, business, family, ...)? Do you travel alone or with people/in groups?
2. How would you describe your usage of technologies (on a daily basis)? Which technologies do you use and for what purpose (leisure, business)?

Prompt: give example of tech that interest you.

3. My project is about AI, I wanted to know if you know this term? How do you understand it? What do you know about it?

Give examples of AI technologies, a simple definition to make sure respondents understand it correctly.

Explain to the participant in simple terms AI-based chatbots. Show examples to help participant remember past interactions/experiences.

4. Do you know chatbots? What do you know about it? What do you think about it?

Second part: Negatives interactions/experiences with chatbots

5. Did you already interact with a chatbot in the tourism industry? How many times? For what purpose? Could you describe the interaction(s)? Would you qualify the interaction more positive or negative?

From now, we will focus on your most negative experience you had with a chatbot.

6. What happened? When did this experience happen? With which brand? Why did you decide to use the chatbot? Was it your first time interacting with a bot? What was the response/feedback of the chatbot (to your query)?

Prompt: (i.e failed interaction, lack of empathy, unsuitable answer)?

What kind of bot? what did it look like? Did it have a name? how did it answer?

7. What was your previous experience/interaction with the brand (to know if it is an already engaged or even loyal customer)? What was your attitude toward that brand before the interaction?
8. What did you expect from this chatbot? How did you expect it to react/interact?
9. How would you describe the way the chatbot treated you? How did you treat the chatbot?
10. How did you feel during and following this negative interaction? Why? How do you feel now?

Prompt: Were your feelings directed towards the chatbot or the brand?

11. What did/do you think about the brand implementing the chatbot?
12. How did you react to the negative interaction during the experience? What did you do during and following the interaction?
13. Did you complain about your negative experience to the brand? What did the brand do about it? Did you feel it was enough? How would you have wanted the brand to react?

Prompt: to what extent did you talk about this experience with your relatives?

Third part: future relation with chatbots and the brand

1. How would you qualify your intention for further use chatbots? How would you describe now your level of trust regarding chatbot?
Why?
2. How would you qualify your intention for further interact with the brand (with a human instead of a bot)? How would you describe now your level of trust regarding the brand?
Why?
3. (For disengaged customers) Do you think you will stop interacting with the technology or the brand temporarily or you will terminate it definitively? Why?
4. Would you like to add/share something else regarding this subject?

Fourth part: Conclusion and demographic data

- Name:
- Age:
- Gender:
- Nationality:
- Country of residency:

Thank the participant and stop recording.

7.3. Interview guide – French version

Guide d'entretien : impact des technologies d'IA sur l'engagement des clients dans l'industrie du tourisme

Introduction:

- Commencer l'enregistrement (demander s'ils sont d'accord)
- Remercier le participant
- Demandez un accord explicite pour participer à l'étude et pour être enregistré lors de l'entretien
- Informer le participant des règles de confidentialité et de la possibilité d'arrêter l'entretien (temporairement ou définitivement) à tout moment.
- Me présenter ainsi que présenter mon sujet de mémoire de master

Première partie : profil du participant (en tant que voyageur et en tant qu'utilisateur de la technologie)

1. Pourriez-vous me parler de vos habitudes de voyage ? À quelle fréquence voyagez-vous ? À quand remonte la dernière fois et dans quel but (loisirs, affaires, famille, ...) ? Voyagez-vous seul ou avec des personnes/en groupe ?
2. Comment décririez-vous votre utilisation des technologies (au quotidien) ? Quelles technologies utilisez-vous et dans quel but (loisir, business) ?

Message-guide : donnez un exemple de technologie qui vous intéresse.

3. Mon projet concerne l'IA, je voulais savoir si vous connaissiez ce terme ? Comment le comprenez-vous ? Que savez-vous à propos de ceci ?

Donnez des exemples de technologies d'IA, une définition simple pour vous assurer que les répondants la comprennent correctement.

Expliquez au participant en termes simples les chatbots basés sur l'IA. Montrez des exemples pour aider les participants à se souvenir des interactions/expériences passées.

4. Connaissez-vous les chatbots ? Que savez-vous à propos de ceci ? Qu'est-ce que tu en penses ?

Deuxième partie : Interactions/expériences négatives avec les chatbots

5. Avez-vous déjà interagi avec un chatbot dans l'industrie du tourisme ? Combien de fois ? Dans quel but ? Pourriez-vous décrire la ou les interactions ? Qualifieriez-vous l'interaction de plus positive ou négative ?

À partir de maintenant, nous nous concentrerons sur votre expérience la plus négative que vous avez eu avec un chatbot.

6. Qu'est ce qui s'est passé? Quand cette expérience s'est-elle produite ? Avec quelle marque ? Pourquoi avez-vous décidé d'utiliser le chatbot ? Était-ce la première fois que vous interagissiez avec un bot ? Quelle a été la réponse/le feedback du chatbot (à votre requête) ?

Message-guide : (c.-à-d. interaction ratée, manque d'empathie, réponse inappropriée) ?

Quel genre de robot ? À quoi cela ressemblait-il ? Avait-il un nom ? comment a-t-il répondu ?

7. Quelle a été votre expérience/interaction précédente avec la marque (pour savoir s'il s'agit d'un client déjà engagé ou même fidèle) ? Quelle était votre attitude envers cette marque avant l'interaction ?
8. Qu'attendiez-vous de ce chatbot ? Comment vous attendiez-vous à ce qu'il réagisse/interagisse ?
9. Comment décririez-vous la façon dont le chatbot vous a traité ? Comment avez-vous traité le chatbot en retour ?
10. Comment vous êtes-vous senti pendant et après cette interaction négative ? Pourquoi ? Comment tu te sens maintenant ?

Message-guide : vos sentiments étaient-ils dirigés vers le chatbot ou la marque ?

11. Que pensez-vous de la marque qui a mis en place le chatbot ?
12. Comment avez-vous réagi à l'interaction négative pendant l'expérience ? Qu'avez-vous fait pendant et après l'interaction ?
13. Vous êtes-vous plaint de votre expérience négative auprès de la marque ? Qu'a fait la marque à ce sujet ? Avez-vous trouvé que c'était suffisant ? Comment auriez-vous voulu que la marque réagisse ?

Message-guide : dans quelle mesure avez-vous parlé de cette expérience avec vos proches ?

Troisième partie : relation future avec les chatbots et la marque

14. Comment qualifieriez-vous votre intention d'utiliser davantage les chatbots ? Comment décririez-vous maintenant votre niveau de confiance envers le chatbot ? Pourquoi ?
15. Comment qualifieriez-vous votre intention d'interagir davantage avec la marque (avec un humain au lieu d'un bot) ? Comment décririez-vous maintenant votre niveau de confiance envers la marque ? Pourquoi ?
16. (Pour les clients désengagés) Pensez-vous arrêter temporairement d'interagir avec la technologie ou la marque ou y mettre fin définitivement ? Pourquoi ?
17. Souhaitez-vous ajouter/partager quelque chose d'autre concernant ce sujet ?

Quatrième partie : Conclusion et données démographiques

- Nom :
- Âge :
- Genre :
- Nationalité :
- Pays de residence :

Remercier le participant et arrêtez l'enregistrement.

7.4. Transcription – Interview 2

- Interviewer : Je démarre l'enregistrement. Alors tout d'abord, je voulais te remercier de participer à mon étude.

- Répondant 2 : Avec plaisir.

- Interviewer : Et donc je voulais te demander si tu étais d'accord de prendre part à cette interview et d'être aussi enregistrée tout au long de l'interview.

- Répondant 2 : Oui, pas de problème.

- Interviewer : Je voulais aussi t'informer que tout ce que tu allais me dire ici était confidentiel et qu'à tout moment tu as le droit d'arrêter l'interview, que ce soit temporairement ou définitivement.

- Répondant 2 : Oui c'est d'accord.

- Interviewer : Pour me présenter, moi c'est Aurélie et je réalise actuellement mon mémoire plutôt sur l'impact que peut avoir une technologie d'intelligence artificielle sur l'engagement du consommateur dans le domaine du tourisme.

Alors, on va tout d'abord passer à la première partie pour un peu plus en apprendre sur ton profil en tant que voyageuse mais aussi en tant qu'utilisatrice de technologie.

Tout d'abord, est-ce que tu pourrais m'en dire un peu plus sur tes habitudes de voyage ? À quelle fréquence est-ce que tu voyages, quand était la dernière fois ? Et aussi pour quel objectif ?

- Répondant 2 : Actuellement l'objectif est principalement personnel. Donc vacances de détente. Pour la fréquence, je dirais, plus ou moins 4 à 5 fois par an. Si on compte les City trips dedans. Je pars majoritairement en voiture et il m'arrive de prendre le train et l'avion pour le reste. Le dernier voyage en date c'était début février, un voyage en car au ski.

- Interviewer : Est-ce que tu voyages souvent seul ou avec des personnes en groupe ?

- Répondant 2 : C'est toujours en groupe. Que ce soit avec ma famille ou mes amis.

- Interviewer : Super. Alors, est-ce que maintenant tu pourrais me décrire ton utilisation des technologies au quotidien ? Les technologies cela peut être large ça peut être très large mais par exemple ça peut être ton smartphone ou un ordinateur. Est-ce que c'est plutôt pour ton loisir ou ton travail ?

- Répondant 2 : Alors la technologie que j'utilise le plus au quotidien, c'est l'ordinateur de travail. Je suis en moyenne 8h devant cet ordinateur. Et je sais que pour mon utilisation plus personnelle de smartphone, j'ai un temps d'écran de actuellement 2h30 par jour.

Actuellement, c'est les 2 principales technologies que j'utilise maintenant. Si on parle de technologie voiture, j'y suis aussi constamment dedans. Alors comment intelligence artificielle au travail, il y a de plus en plus l'utilisation de chat ? Chat GPT. Je pense qu'on peut aussi considérer ça comme une intelligence artificielle. On utilise énormément le correcteur orthographique de la suite office.

Puis bon après tu as teams, les mails, voilà tout ce qui concerne le l'environnement de travail de manière générale.

- Interviewer : Pour te remettre du coup un peu dans le contexte, mon projet donc sur l'intelligence artificielle et donc comme tu m'as dit que tu connaissais ce terme, je voulais savoir ce que tu en comprends, qu'est-ce que tu sais à propos de ça ?

- Répondant 2 : Oui, alors je sais que c'est une technologie qui, qui existe, pardon depuis plusieurs années, qui a descend du machine learning. Ce sont des technologies qui peuvent surpasser l'intelligence humaine et aider énormément au quotidien et surtout apprendre d'elles-mêmes. Ça peut être tant un digital twin ou Chatbot du coup. Il y a aussi les moteurs de recherche optimisés. Je pense que à l'heure actuelle on ne se rend pas compte à quel point il y en a qui est intégré au quotidien dans nos vies.

- Interviewer : Par rapport à ça, est-ce que tu connais donc ce que sont les chatbots ?

- Répondant 2 : Oui, oui, tout à fait.

- Interviewer : Donc juste un peu pour mieux t'expliquer je parle donc de chatbots basés sur de l'intelligence artificielle ? C'est à dire que, étant donné qu'il y a plusieurs types d'intelligence artificielle,

Il y a 4 types d'intelligence artificielle, les chatbots vont pouvoir donc se baser sur différents types d'intelligence artificielle et donc avoir un niveau d'évolution tout simplement différent, voilà.

Qu'est-ce que tu penses des chatbots ?

- Répondant 2 : Je pense que ça peut aider pas mal d'entreprises dans la prise de contact. Enfin, dans la première prise de contact avec les clients par exemple, et pour des questions assez récurrentes que les entreprises pouvaient avoir par exemple aussi par téléphone, les chatbots peuvent être un outil qui peut soulager. Je pense principalement à la partie pour l'after sales ou à l'assistance, au support.

- Interviewer : On va maintenant passer à la 2ème partie de cette interview qui va maintenant se plus se focaliser sur les interactions et expériences négatives en lien avec les chatbots.

Est-ce que tu as déjà interagi avec un chatbot dans le domaine du tourisme ?

- Répondant 2 : Oui.

- Interviewer : Combien de fois ?

- Répondant 2 : Honnêtement, je pense une dizaine de fois.

- Interviewer : Et dans quel objectif ?

- Répondant 2 : Alors c'était soit pour poser des questions sur comment réserver. Soit pour poser des questions pour connaître les assurances qui peuvent exister et ensuite pour me plaindre de si quelque chose s'est mal passé durant le voyage.

- Interviewer : Les interactions que t'as eues, comment est-ce que tu les décrirais en quelques mots ? Si tu devais les qualifier, elles seraient plutôt positives ou plutôt négatives ?

- Répondant 2 : Pour le délai de réponse, à l'heure actuelle, c'est quand même toujours chouette que quelqu'un nous réponde rapidement et ne pas patienter 1h au téléphone par exemple. Maintenant, je dirais négative dans le sens où ça tourne vite en rond quoi.

On n'a pas souvent une réponse aussi précise qu'on le souhaiterait et y a rien à faire et à ce côté impersonnel, moi j'ai j'aime quand même bien. Voilà parler à une vraie personne en fait, même si je suis consciente que c'est optimiser beaucoup de choses. Voilà il me manque ce contact humain. Je trouve c'est froid quoi en fait.

Je trouve que des fois il y a un manque de transparence que tu parles à un chatbot, c'est pas clair que c'est pas une vraie personne en fait.

- Interviewer : On va y revenir juste après, justement.

On va maintenant se focaliser sur l'expérience la plus négative que tu as pu avoir un chatbot.

Raconte-moi ce qui s'est passé. Quand est-ce que ça s'est passé ? Avec quelle entreprise, quelle marque ?

- Répondant 2 : Alors ça va faire 2 ans et cette histoire m'a vraiment marquée. Je prenais un TGV de la SNCF pour rentrer de Paris sur Bruxelles. Et il s'avère que le train a eu pas moins de 5h de retard. Je suis donc arrivée à la gare de Bruxelles à 1h du matin. Donc ce n'est pas juste le fait d'arriver en retard qui pose problème, c'est que à 1h du matin, il y a plus de transports en commun pour rentrer chez toi, qui en particulier dans mon cas, c'était pour rentrer à Charleroi.

Voilà pour la mise en situation.

Par réflexe, je me suis dit que j'allais contacter la SNCF pour me rembourser parce que je vois dans leurs conditions générales qu'à partir d'un certain délai de retard on peut se faire rembourser x% du ticket. C'était proportionnel à l'heure de retard, donc je pense que y avait facilement moyen de se faire rembourser 50% du ticket de TGV.

Le lendemain matin je contacte le WhatsApp de la SNCF où là tu me vois plus, je suis toujours là et donc je contacte le WhatsApp et en fait il s'avère que c'est que là par contre c'était automatique. On m'a donc dit votre message a été pris en compte, on va vous répondre dans les plus brefs délais. Et j'ai reçu le message dans 3 langues pour me dire : on va prendre en compte votre plainte.

Et puis je renvoie un message et là plus de réponse donc je renvoie un message parce que je ne vais pas me laisser faire. Au final, je n'ai plus reçu de réponse via le WhatsApp.

Le dossier a tellement traîné que je n'ai jamais été remboursé de ce de ticket de train. Donc j'ai facilement perdu septante euros et beaucoup de temps pour rien au final.

Alors que dans train, on avait l'air de me dire « Ah mais si tu passes par Facebook ou par WhatsApp, on te répondra plus vite que par téléphone. » Alors que ça s'est avéré ne pas être le cas, le chatbot n'a jamais su répondre à ma demande en fait.

- Interviewer : Donc la réponse du chatbot a été tout simplement une interaction ratée et une réponse non satisfaisante, voire pas de réponse du tout ?

- Répondant 2 : Oui, c'est ça.

- Interviewer : D'accord, et donc tu m'as dit c'était sous forme de WhatsApp, c'est ça ?

- Répondant 2 : Oui oui, c'est ça.

- Interviewer : Est-ce que y avait des caractéristiques particulières, un prénom, une apparence, quelque chose ?

- Répondant 2 : Mais il me semble que 2e message il disait « Bonjour » avec un prénom. Oui, ils ont prétendu que c'était une personne qui répondait.

- Interviewer : Alors pour passer à une autre question, je voulais savoir si tu avais déjà eu des interactions avec la SNCF ? Et qu'elle était ton attitude envers la SNCF avant cette interaction-là ?

- Répondant 2 : Les interactions que j'avais, c'était principalement réserver mes billets de trains. Ce n'était pas vraiment des interactions directes, par mail ou par téléphone. Je dirais donc que c'était une relation cordiale. C'est une entreprise de service de transport qui permet de voyager, donc de base c'était tout bénéf.

- Interviewer : Donc comme tu m'as dit, ce que t'attendais de ce chatbot, c'est qu'il puisse te rediriger soit vers une personne, soit qu'il puisse répondre à ta requête d'avoir un remboursement d'une partie du remboursement de ce billet de train.

Et qu'est-ce que tu attendais toi de cette interaction ? C'était que le chatbot, arrive lui-même à répondre à ta requête qu'il te redirige vers quelqu'un ?

- Répondant 2 : J'attendais que le chatbot m'envoie la procédure de remboursement à la SNCF.

- Interviewer : Et ça n'a donc pas été le cas ?

- Répondant 2 : Non, je sais, je ne l'ai jamais reçu par WhatsApp.

- Interviewer : Est-ce que du coup tu pourrais me décrire la manière dont le Chatbot t'a traité ? Et comment toi tu l'as traité, en retour ?

- Répondant 2 : De base il y avait des smileys dans le message pour faire le gentil, pour faire joli, cordial. Moi, dans mes réponses, j'ai toujours aussi essayé d'être cordiale. Je n'ai jamais été menaçante ou malpolie. Donc ça n'est pas sur le chatbot que je me suis énervée. C'est plus sur la personne de la SNCF au téléphone.

- Interviewer : Mais du coup, comment est-ce que tu t'es sentie après cette interaction négative ?

- Répondant 2 : Frustré. Parce que on ne savait pas répondre à ma demande et que ça tournait en rond.

- Interviewer : Est-ce que ce sentiment, de frustration était dirigé envers le chat bot ou plus directement envers la SNCF ?

- Répondant 2 : Je dirais directement avec la SNCF.

- Interviewer : Comment est-ce que tu as réagi, durant ou après cette interaction ?

- Répondant 2 : J'ai tout d'abord espéré qu'on me réponde, donc j'ai attendu. Et par la suite rien de particulier.

- Interviewer : Ensuite, est-ce que tu as su parler de ton expérience négative avec ce chatbot directement à la SNCF ?

- Répondant 2 : Quand j'ai eu la personne au téléphone, je lui ai dit que j'avais essayé de contacter le WhatsApp justement pour éviter d'avoir quelqu'un au téléphone et que ça s'est avéré être un échec en échec total.

- Interviewer : Est-ce que la personne que t'as eu au téléphone a fait quelque chose par rapport à ça ?

- Répondant 2 : Elle n'a rien dit par rapport au chatbot, elle a juste pris en compte ma plainte par rapport au retard de mon train.

- Interviewer : Est-ce que tu aurais voulu qu'elle fasse quelque chose ? Qu'elle réagisse d'une manière différente par rapport donc à ton interaction avec ce chatbot ?

- Répondant 2 : Peut-être pas s'excuser mais dire qu'elle en avait bien pris note en interne que le chatbot n'est pas su répondre à ma question, ça oui. Qu'ils s'assurent que cela fonctionne correctement.

Et ensuite, j'aurais préféré qu'on prenne directement en charge ma plainte au lieu d'en encore me faire passer par les procédures de mail.

- Interviewer : Est-ce que tu aurais donc voulu que la SNCF soit plus transparente sur le fait que c'était donc un chatbot avec lequel tu interagissais ?

- Répondant 2 : Oui oui clairement. Je me suis doutée que le délai de réponse était tellement court, je me suis bien doutée que ce n'était pas vraiment quelqu'un qui me répondait, c'était quasiment instantané. Maintenant oui, moi je pense qu'il y a clairement un manque de transparence sur le fait que c'est automatisé et que ce n'est pas une vraie personne, surtout quand ils prétendent l'être quoi. Je pense que ça pourrait surtout poser problème pour une personne plus âgée ou qui a moins d'attrait avec la technologie.

Si tu es une personne un peu plus âgée enfin ça c'était c'est stéréotypé. Les personnes âgées, mais pour les personnes qui ont moins d'attrait à la technologie qui connaissent peut-être moins. Enfin, même si je n'ai pas un expert, mais je veux dire à quelqu'un qui est qui est moins sensible à ça.

- Interviewer : Dans cette partie on va se concentrer sur ta relation future avec les chatbots et avec la SNCF.

Comment est-ce que tu qualifierais ton intention d'encore interagir avec un chatbot dans le futur ?

- Répondant 2 : Je dirais que j'essaierai quand même de passer par un WhatsApp ou un Messenger donc 7/10. Pour le chatbot le WhatsApp, ce serait plus simple de me dire qu'à un moment donné il y a une vraie personne qui va prendre le relais.

Je me rappelle que pour des cours particuliers, un chatbot faisait la première interaction, puis disait qu'il transférait ça à quelqu'un en interne. Ça c'était bien.

- Interviewer : Le fait que le chatbot ait été nommé comme un humain, est-ce que tu penses que c'est une erreur de la part de la SNCF d'avoir humanisé ce chatbot ?

- Répondant 2 : Oui, je pense que ça peut vraiment avoir des travers malsains. Je ne suis pas contre qu'on vive dans un monde hyper numérisé. Mais je pense que c'est essentiel de savoir si on parle à une vraie personne derrière la technologie ou si c'est juste une IA qui nous parle quoi.

- Interviewer : Tu as donc pris le fait que le chatbot avait un prénom comme si on te mentait sur le fait que c'était un chatbot et pas un humain ?

- Répondant 2 : Oui, complètement

- Interviewer : Comment est-ce que du coup maintenant tu décrirais ton niveau de confiance envers les chatbots ?

- Répondant 2 : À 5 sur 10. Neutre parce que j'ai déjà eu des interactions positives et que c'est dur de se dire que c'est que du négatif, ça contrebalance.

- Interviewer : Comment est-ce que tu qualifierais ton intention d'interagir dans le futur avec la SNCF ? Cette fois-ci, avec idéalement du coup un humain plutôt qu'avec un Bot.

- Répondant 2 : Avec un humain, je dirais une fois 5 sur 10 dans le sens où ça reste très neutre. Si on me répond et avec une vraie procédure. Maintenant, si c'est pour interagir avec leur chatbot, je dirais un 2 sur 10.

- Interviewer : Et comment est-ce que du coup tu qualifierais maintenant donc ton niveau de confiance envers la SNCF ? Est-ce qu'il a changé par rapport à avant ?

- Répondant 2 : En fait, je sais que je continuerai de voyager avec eux parce que si je veux aller en train en France, sachant que j'aimerais diminuer ma consommation d'avion, je suis obligée de passer par eux. Ils ont un monopole, je n'ai pas le choix, c'est un peu ça qui est compliqué. Les entreprises ferroviaires ont un monopole qui ne nous permet pas de passer par d'autres entreprises de service. Je dirais donc quand même 7 sur 10 parce qu'au final si on pense en termes de services, les trains sont très bien, d'habitude à l'heure. Là le problème était sur les rails, donc au final ce n'était pas vraiment aussi leur faute.

- Interviewer : Du coup, une dernière petite question, est-ce que tu voudrais encore ajouter, partager quelque chose dont tu n'as pas encore parlé par rapport à cette interaction ou autre sur ce sujet ?

- Répondant 2 : Ça fait un peu peur quand on voit ChatGPT par exemple. Ça me fait peur dans le sens ou même en tant que consultante, j'en viens à me demander à quoi est-ce que je vais servir le jour où on aura ChatGPT pour tout ? Je me demande où sont les limites de la technologie et j'ai l'impression qui dépassent mon intelligence. C'est, vraiment à se demander à quoi est-ce qu'on va encore servir ?

- Interviewer : Mais du coup, justement, par rapport à ça, ça, est-ce que tu penses justement que ce serait d'utilité publique de plus informer sur les chatbots, sur leur fonctionnement et sur leurs limites ?

- Répondant 2 : Je m'informe beaucoup sur ce genre de technologie au quotidien mais je pense que je ne connais pas vraiment tout ce qui se cache derrière comme les différents types d'intelligence, leur fonctionnement, etc. Par exemple, bientôt ça pourra me générer un PowerPoint tout seul ce qui est très bien. Mais donc je me demande à quoi je vais servir ?

Je pense qu'il y a un réel manque dans l'enseignement depuis l'enseignement primaire, sur les technologies. Je me rappelle que pendant le cours de Sciences Po, en première bac à HEC, on en parlait déjà.

Mais qu'en même temps c'est l'avenir et qu'il y a justement beaucoup de jobs qui vont être créés en réponse à ça. Je prends parfois l'exemple de l'agriculture, quand il y a eu l'arrivée des moissonneuses-batteuses, ce n'est pas pour autant qu'elle heure actuelle, on manque de travail.

Je pense que ça serait important de beaucoup plus inclure ça dans les cours déjà en primaire et en secondaire. Pour moi ça devrait être plus d'autorité publique. Je pense aussi que l'Europe par rapport aux États-Unis, on peut aller se rhabiller.

- Interviewer : Il me reste quelques petites questions. Quel est ton âge ?

- Répondant 2 : 24 ans.

- Interviewer : Ton genre ?

- Répondant 2 : Féminin.

- Interviewer : Ta nationalité ?

- Répondant 2 : Belge.

- Interviewer : Et ton pays de résidence ?

- Répondant 2 : Belgique.

- Interviewer : Je voulais te remercier pour avoir pris part à cette interview et pour ton temps.

- Répondant 2 : Avec plaisir.

- Interviewer : J'arrête l'enregistrement.

7.5. Transcription – Interview 3

- Interviewer : Tout d'abord, merci beaucoup à toi d'avoir répondu présente. Je voulais tout d'abord te demander ton accord explicite de participer à cette étude et d'être enregistrée tout au long de l'interview.
- Répondant 2 : Oui, je suis d'accord.
- Interviewer : Je voulais aussi t'informer du fait que ce qu'allais dire ici est tout à fait confidentiel et que t'avais la possibilité d'arrêter l'interview temporairement ou définitivement à tout moment. Je me présente, je m'appelle Aurélie, je suis actuellement en 2e année de master en marketing stratégique international et je réalise donc mon mémoire sur l'impact de l'intelligence artificielle sur l'engagement du consommateur dans le domaine du tourisme. On va pouvoir passer à la première partie de cette interview. Je voulais tout d'abord un peu plus en savoir sur tes habitudes de voyage, à quelle fréquence est-ce que tu voyages ? Quand est-ce que c'était la dernière fois que t'as voyagé ?
- Répondant 2 : Alors la dernière fois que j'ai voyagé, c'était il y a 10 jours, je suis allée à Budapest pendant une semaine en avion. Et sinon, je voyage principalement en train ou en voiture. Je fais beaucoup d'aller-retours entre Lyon et Paris principalement. Je pars souvent aussi pour des week-ends. Et en général, quand je pars pour des vacances, c'est plutôt en voiture.
- Interviewer : Et quel est le but souvent de ces voyages ? C'est pour du plaisir, c'est pour le travail, c'est pour la famille ?
- Répondant 2 : Pour le plaisir, pour voir des copains etc. Et plusieurs fois par an, c'est pour voir ma famille. Mais pour l'instant, je n'ai jamais eu l'occasion de voyager particulièrement avec mon travail.
- Interviewer : D'accord et en général, tu voyages plutôt seule ou plutôt en groupe ?
- Répondant 2 : Seule.
- Interviewer : Maintenant, est-ce que tu saurais me décrire ton utilisation de la technologie ? Au quotidien quel type de technologie est ce que tu utilises principalement dans ta vie quotidienne, que ce soit pour le travail, pour ton plaisir ?
- Répondant 2 : Je travaille sur ordinateur tout le temps, je travaille dans le marketing digital, je suis beaucoup sur les réseaux sociaux dans mon travail. Et à côté de ça, je suis très connectée, j'ai tout le temps mon téléphone avec moi. Je suis très active sur les réseaux sociaux. Je me connecte plusieurs fois par jour, et globalement je fais tout avec mon téléphone, je fais mes achats sur internet avec mon téléphone, mais quand je dois réserver, typiquement des transports, je le fais avec les applis de transport.
- Interviewer : Comme tu sais mon projet est par rapport à l'intelligence artificielle. Je voulais un peu savoir si tu connaissais ce terme et qu'est-ce que tu en comprenais tout simplement. Qu'est-ce que tu en sais ?
- Répondant 2 : Intelligence artificielle c'est très vaste. Déjà je trouve qu'il y a pleins de termes qui se ramènent à ça, mais pour moi c'est un peu toutes les technologies qui se développent et qui n'ont plus besoin de l'intervention humaine pour fonctionner. Par exemple, je pense à ChatGPT qui peut rebondir sur les différentes questions posées.
- Interviewer : Il faut savoir qu'il y a différents types d'intelligence artificielle et donc un chatbot peut être basé sur différents types d'intelligence artificielle. Voilà, c'est ça que tu peux en avoir, on va lire des plus évolués que d'autres. Donc maintenant je voudrais savoir ce que tu connais des chatbots et qu'est-ce que tu en penses ?
- Répondant 2 : Alors moi je les utilise régulièrement. Par exemple, quand il y a des grèves, je vais souvent sur le chatbot de Twitter de ma ligne de bus à Lyon pour recevoir les informations en temps réel. Et avec la SNCF aussi parce que j'ai un abonnement TGV Max et quand il n'y a pas de billet TGV Max, tu peux mettre une alerte grâce à un chatbot qui va me prévenir dès que y a un billet gratuit qui sort, donc ça j'utilise pas mal. J'ai déjà été testé par exemple pour des concours où il fallait passer par un chat Bot. Après ce que j'en pense, je pense que c'est pratique, mais

c'est limité. Parce que y a des moments où en fait, je pense qu'il y a des entreprises typiquement la SNCF en France. En fait, ils mettent des chats de partout et du coup t'arrives pas à t'en sortir et quand tu veux vraiment parler à quelqu'un parce que bah le chatbot peut pas répondre à ta question t'es bloqué et c'est un peu pénible et c'est hyper compliqué pour avoir vraiment quelqu'un au téléphone ou pour un message derrière.

- Interviewer : D'accord ! Donc voilà maintenant on va vraiment passer dans la 2ème partie de l'interview et se focus sur le côté interaction négative/mauvaise expérience avec les chatbots. Donc tu m'as déjà expliqué que tu as déjà interagi avec un chatbot dans le domaine du tourisme. Saurais-tu plus ou moins quantifier, dire combien de fois ou à quelle fréquence, est-ce que tu as pu interagir avec un chatbot dans ce domaine-là ?
- Répondant 2 : Je dirais peut-être 20, 30 fois, dans ces eaux-là.
- Interviewer : Okay top et au total, est-ce que tu décrirais ces interactions plutôt positives ou plutôt négatives ?
- Répondant 2 : je dirais 6/10 parce que c'est une avancée donc je vois ça plutôt avec un œil positif. J'ai par contre déjà eu beaucoup de galères et ne pas réussir à avoir quelqu'un au téléphone ça a gâché mon expérience.
- Interviewer : Je te propose maintenant qu'on se focus sur ton expérience la plus négative que tu as pu avoir avec un chatbot, essaye de te rappeler celle qui t'a le plus marqué.
- Répondant 2 : Oui j'en ai une qui m'a plus marquée.
- Interviewer : Parfait, que s'est-il passé, quand est-ce que ça s'est passé ? Et donc tu m'as dit que c'était avec la SNCF c'est ça ?
- Répondant 2 : C'était en septembre dernier, donc septembre 2022 en fait, j'étais abonnée à TGV Max et il y a eu un problème, j'ai eu un défaut de paiement. Ils m'avaient bloqué mon compte TGV Max. Sauf que quand j'ai voulu récupérer mon compte, ils m'ont dit que j'étais radiée de TGV Max et que j'avais plus accès à ça. Donc moi j'étais dégoûtée et j'ai voulu résoudre le problème pour montrer que j'avais bien payé, que j'avais bien rattraper les factures et en fait je n'arrivais à avoir que le chatbot et j'arrivais pas à avoir quelqu'un. Vu que mon problème était assez précis, je pense qu'il ne comprenait pas forcément ce que je voulais dire, et donc il m'emmenait pas du tout au bon endroit et en fait j'ai mis ça m'a pris plusieurs semaines pour réussir à vraiment avoir la réponse que je voulais. Donc à l'heure actuelle je suis toujours radiée. Et puis il y avait le côté où je n'arrivais pas à m'en sortir. Enfin, je voulais vraiment avoir quelqu'un au téléphone ou avoir l'adresse mail de quelqu'un et je pense qu'ils ont voulu tout automatiser sauf qu'il n'y avait rien qui répondait à ma question. Ce qui aurait été bien c'est qu'après 3 essais, il me propose d'envoyer un mail à une personne et ça aurait réglé le problème. Mais ça n'a pas été le cas vu qu'on me renvoyait toujours vers des chatbots, ça a juste été long et pénible.
- Interviewer : De ce que tu te souviens, est-ce que le chatbot avait une apparence particulière ? Un nom ?
- Répondant 2 : Non de mémoire il n'y a pas de nom et pas d'avatar.
- Interviewer : Je comprends que t'avais déjà pas mal interagi avec la SNCF. Comment est-ce que tu qualifierais ces interactions précédentes avec la SNCF ? Est-ce que ton attitude envers eux était plutôt positive ou plutôt négative avant ces interactions ?
- Répondant 2 : Vu que c'est un monopole tu n'as pas trop le choix d'avoir une image négative ou positive parce que dans tous les cas tu es obligé de passer par eux. Donc je dirais globalement (en dehors du chatbot) avec toutes les grèves etc., je dirais que c'est image négative mais il n'y a pas d'alternative. Je pense que si j'avais eu cette expérience-là avec une entreprise où il y avait des alternatives, je pense que je serais partie voir ailleurs parce que c'est pénible, en tant que consommateur, de galérer autant pour avoir des réponses à tes questions.
- Interviewer : Qu'attendais-tu concrètement de cette interaction avec ce chatbot, est-ce que tu attendais justement à ce qu'il te résoudre ton problème ou plutôt à ce qui t'envoie vers une personne de contact travaillant pour la SNCF ?

- Répondant 2 : J'attendais à ce qu'il me renvoie vers le bon service et qu'il me donne un numéro de téléphone ou une adresse mail à contacter.
- Interviewer : Pensais-tu qu'il allait savoir répondre à ta requête ? Est-ce que t'avais des à priori ?
- Répondant 2 : Au départ, je pensais qu'il allait me réorienter, mais en fait pas du tout.
- Interviewer : Est-ce que le Chatbot t'a traité d'une manière particulière ? Est-ce qu'au niveau de la discussion que vous avez eu, quelque chose t'a marqué ?
- Répondant 2 : Non, c'était très neutre. J'avais vraiment la sensation de parler avec un robot.
- Interviewer : Et toi, est-ce que tu as traité le chatbot d'une manière particulière ?
- Répondant 2 : Non, je sais que j'envoie un message à un chatbot, je dis « Bonjour, s'il vous plaît, merci » comme si ça allait impacter quelqu'un derrière. Je fais ça parce que ça fait bizarre de parler de manière robotique mais je ne l'ai pas insulté. Je sais que c'est un robot derrière donc il n'y a pas d'intérêt à cela.
- Interviewer : Et comment est-ce que tu t'es senti pendant et suite à cette interaction négative ? Est-ce qu'encore maintenant t'as des sentiments particuliers envers cette interaction ? De la frustration, de l'énervement, des déceptions ?
- Répondant 2 : Quand ça commençait à faire plusieurs semaines que je galérais, je commençais à ressentir de la frustration et de la colère. Mais j'ai quand même réutilisé des chatbots depuis, je sais que c'est un robot donc je n'en tiens pas rigueur.
- Interviewer : Est-ce que cette frustration et cette colère que tu as pu ressentir était plutôt dirigée vers le chatbot ou envers la SNCF ?
- Répondant 2 : C'était plutôt envers la SNCF parce que je comprends que les chatbots sont des robots et qu'ils sont donc limités et qu'ils ne peuvent pas répondre à tout. Je pense que c'est très bien pour des cas généraux mais que quand t'as une question spécifique, il n'a pas forcément de réponse. Ce qui m'a énervée c'est de ne pas avoir été réorientée vers quelqu'un de la SNCF.
- Interviewer : Que penses-tu du fait que la SNCF mette en place des chatbots ?
- Répondant 2 : Bah alors je pense que Ben comme je disais avant, il y a plein de cas où ça fonctionne bien dans le sens où pour la réservation des trains, pour avoir des infos sur les trains ça marche très bien parce qu'en fait c'est automatisé et je pense qu'ils peuvent avoir les infos en interne pour faire tourner l'intelligence artificielle. Je ne sais pas trop comment ça fonctionne mais je pense que ça se fait. Je pense que, comme je disais avant, il y a plein de cas où ça fonctionne bien dans le sens où pour la réservation des trains, pour avoir des infos sur les trains ça marche très bien parce que c'est automatisé et je pense qu'ils peuvent avoir les infos en interne pour faire tourner l'intelligence artificielle. Mais par contre pour les questions spécifiques, c'est quand même important d'avoir quelqu'un de physique derrière. Les clients, s'ils ont besoin de joindre quelqu'un de physique parce que les robots ne savent pas répondre à toutes les questions.
- Interviewer : Et est-ce que t'as eu du coup des réactions particulières suite à cette interaction ?
- Répondant 2 : Non, juste à la fin peut être qu'on arrête d'utiliser le chatbot, la SNCF te demande de noter ce que t'as pensé de ton interaction. Voilà, j'ai mis 0 et je leur ai écrit un mot en disant que c'était pénible de chercher un numéro de contact pendant 15 jours. Je leur ai dit que j'avais pas du tout aimé et j'ai été moins polie qu'avec le chatbot. Donc je l'ai juste noté mais rien fait d'autre de particulier.
- Interviewer : Mais donc tu t'en es plainte au final directement à la SNCF ?
- Répondant 2 : Ouais, et je leur ai-je leur ai écrit aussi sur Twitter. Je leur ai dit que j'arrivais à joindre personne. Est-ce que vous pouvez me réorienter vers quelqu'un ?
- Interviewer : Ok. Et est-ce que t'as eu une quelconque réponse au final de la SNCF ?
- Répondant 2 : Bah ouais, enfin ils m'ont ils m'ont donné un numéro de téléphone mais qui était surchargé et du coup tu pouvais pas appeler et il fallait attendre 3h avant d'avoir quelqu'un au téléphone et c'était hyper long. Ce n'est pas top mais ils ont fini par me répondre sur Twitter quand même.
- Interviewer : Est-ce que tu trouvais que cette réponse fournie était suffisante ? Est-ce que tu aurais voulu une compensation ? Comment aurais-tu voulu que le SNCF réagisse ?

- Répondant 2 : J'aurais préféré qu'ils ne me radient pas de TGV Max. Mais je ne m'attendais pas à grand-chose. Je pense que j'aurais bien aimé, qu'ils aient plusieurs personnes qui sont derrière un même compte Twitter qui puisse te répondre par message sans avoir besoin de rester 3h au bout du fil. Par message, tu peux laisser la discussion et revenir. S'il te répond 3h après ce n'est pas grave parce que c'était pas j'avais pas besoin d'une réponse à la minute mais je voulais juste qu'il y ait un échange. En plus quand tu travailles dans la journée, c'est trop long.
- Interviewer : Et du coup, cette expérience négative t'en as parlé avec des proches à toi ?
- Répondant 2 : Alors oui j'en ai parlé mais j'ai pas du tout parlé du chatbot. J'ai juste dit que j'avais une galère avec la SNCF et que j'avais plus accès à mon compte TGV Max, ...
- Interviewer : Tu as donc parlé de tes sentiments négatifs envers la SNCF ?
- Répondant 2 : Oui.
- Interviewer : Là on va pouvoir passer dans la 3ème partie de cette interview, on arrive déjà vers la fin si ça peut te rassurer. On va se concentrer sur tes futures relations avec les chatbots et la SNCF en général. Donc, comment est-ce que tu qualifierais ton intention d'utiliser dans le futur un chatbot ?
- Répondant 2 : Je vais continuer à les utiliser. En fait, c'est une expérience négative, mais j'ai déjà eu des expériences positives où ça s'est bien passé, donc je pense que pour des questions simples c'est très pratique donc 9/10.
- Interviewer : Peux-tu me donner sur une échelle de 1 à 10 de ton niveau de confiance envers un chatbot ?
- Répondant 2 : Je dirais 8.
- Interviewer : Du coup la même question, mais cette fois-ci vis-à-vis de la SNCF, comment est-ce que tu qualifierais ton intention d'interagir dans le futur avec la SNCF ? Mais cette fois-ci, si t'avais la possibilité que ce soit avec un humain plutôt qu'avec un Bot.
- Répondant 2 : Là par contre non. Par exemple, il y a une nouvelle ligne de train italiens qui fait les trajets Lyon et Paris et si j'ai le choix entre les 2, je choisirai peut-être la nouvelle ligne. Le problème c'est qu'il y a beaucoup moins de train. Mais je ne regarde plus que la SNCF à cause de tous les problèmes.
- Interviewer : Et du coup de nouveau sur une échelle de 1 à 10. Comment est-ce que tu qualifierais ton niveau de confiance vis-à-vis de la SNCF ?
- Répondant 2 : 5.
- Interviewer : Et du coup dans ce cas-ci, si t'avais la possibilité de ne plus interagir avec la SNCF suite à ce type d'expérience, est-ce que tu pourrais arrêter cette relation définitivement ?
- Répondant 2 : Je me dis que si j'avais eu cette interaction avec une marque de vêtements, s'il y avait des alternatives je pense que j'aurais changé. C'est pénible quand tu es consommateur de devoir faire autant d'efforts pour avoir une réponse à ta question.
- Interviewer : C'est clair. Dernière question, est-ce que tu as encore quelque chose à ajouter ?
- Répondant 2 : Il y a un chatbot qui s'appelle Vick Asthme. Avant je faisais de l'asthme et régulièrement il t'envoyait des conseils par rapport à ton niveau d'asthme actuel comme quand il y avait des pics de pollution etc. T'avais une question sur ton traitement, sur les sites que tu peux consulter. C'était hyper pratique. Je pense que c'est bien pensé et quand c'est pour des sujets un peu simples, c'est très pratique et ça te fait gagner vachement de temps par rapport à essayer de contacter quelqu'un.
- Interviewer : Il me reste juste des petites questions sur toi. Ton âge ?
- Répondant 2 : 22 ans.
- Interviewer : Ton genre ?
- Répondant 2 : Féminin.
- Interviewer : Ta nationalité ?
- Répondant 2 : Française.
- Interviewer : Ton pays de résidence ?
- Répondant 2 : France.

- Interviewer : Un grand merci à toi d'avoir participé. Je vais du coup arrêter l'enregistrement si c'est bon pour toi ?
- Répondant 2 : Avec plaisir.

7.6. Grid analysis

	Interview 1	Interview 2	Interview 3	Interview 4	Interview 5
Travel habits	<ul style="list-style-type: none"> - 1-2 times a month - Mainly business purpose - Majority of the time alone - A few leisure travels in family - Last trip was in Belgium for leisure purpose 	<ul style="list-style-type: none"> - 4-5 times a year - Last time was in February 2023 - Mostly by car - Personal purpose - Always in groups (friends and family) 	<ul style="list-style-type: none"> - Many times a year - Last time at the start of March 2023 - Mostly by car and trains - Personal and family purpose - Most of the time alone 	<ul style="list-style-type: none"> - 2-3 trips per year - Last time was visiting her family in Vietnam - Mostly by plane and public transports - Personal, family and scholar purpose - Usually with friends or boyfriend 	<ul style="list-style-type: none"> - 2-3 times per year - Main purpose is to visit family or diving trips - Usually leisure purpose - Usually with her boyfriend
Technology usage	<ul style="list-style-type: none"> - Laptop (business purpose) with emails, teams conferences - Phone and tablet (personal purpose) with emails, chats - Voice assistant to write messages 	<ul style="list-style-type: none"> - Laptop (business purpose) - Phone (personal purpose) - Very connected person - AI such as ChatGPT (business purpose) 	<ul style="list-style-type: none"> - Laptop (business purpose) - Phone (personal purpose) - Very connected person (social networks) 	<ul style="list-style-type: none"> - Phone with a lot of social media (personal purpose) - Laptop (business and study purpose) with Microsoft Office, analytical tools 	<ul style="list-style-type: none"> - Limited phone usage (personal purpose) - Limited laptop usage (business purpose) - Does not consider herself as a connected person
AI knowledge	<ul style="list-style-type: none"> - A form of intelligence obtained by digital tools and data using many technologies, to ease several business and personal aspects 	<ul style="list-style-type: none"> - Machine learning - Surpass human intelligence - Examples: Chatbots, digital twins 	<ul style="list-style-type: none"> - Vague term - Technologies that develop and no longer need human intervention to operate - ChatGPT example 	<ul style="list-style-type: none"> - Popular term - Brings benefits in our lives - ChatGPT example - Machine that tries to train using cognitive ability to get data and make a prediction model from it 	<ul style="list-style-type: none"> - Limited knowledge on AI, knows about it for content creation (business purpose) - No specific attraction towards this topic
Chatbots knowledge	<ul style="list-style-type: none"> - Chatbot knowledge - He has not yet seen the usefulness of 	<ul style="list-style-type: none"> - Chatbot knowledge - AI-based 	<ul style="list-style-type: none"> - Regular usage (Twitter chatbot) - Practical but limited 	<ul style="list-style-type: none"> - Limited knowledge 	<ul style="list-style-type: none"> - She has very limited knowledge toward chatbots

	chatbots because the few times he has interacted with them, it did not go well.	<ul style="list-style-type: none"> - Helpful for companies as initial contact and for recurring issues, way to relieve employees 		<ul style="list-style-type: none"> - Able to answer general questions thanks to AI - Practical to answer similar questions, first touchpoint - Lack of personalization 	<ul style="list-style-type: none"> - No specific interest in such interactions
Chatbot interactions in tourism	<ul style="list-style-type: none"> - 2-3 interactions in tourism - Last one was with Voyages Léonard looking for a trip - Experiences were in total more negative 	<ul style="list-style-type: none"> - About 10 interactions - Main purpose: booking terms and insurances - Average appreciation of interactions: negative scope - Rapidity plus - Impersonal, cold feeling - Lack of transparency 	<ul style="list-style-type: none"> - 20-30 times - Main purpose: booking terms, general information, complaints - Average appreciation of interactions: 6/10 - She sees it as a step forward and with a rather positive eye. However, she already had many problems with chatbots 	<ul style="list-style-type: none"> - Rare interaction with chatbots in tourism, only in the case of a search for specific information or a claim - Experiences were neutral except for one that was negative 	<ul style="list-style-type: none"> - She interacted once with a chatbot in this area (most negative experience) - Rather negative vision of chatbots since her only interaction was negative
Most negative experience	<p><u>Context:</u> He was looking for a trip on Voyages Léonard and the chatbot appeared on the website. He then decided to use it to see if the chatbot could help him searching for a trip. However, the chatbot immediately tried to ask him for personal information to continue the conversation but he did</p>	<p><u>Context:</u> 2 years ago, she took a train (SNCF) that was 5 hours late and arrived at 1am in Brussels (no more public transports to go back home). She contacted the SNCF because she met the conditions for a partial refund.</p> <p>She contacted their WhatsApp chatbot, had a few interactions with it</p>	<p><u>Context:</u> Last September, her TGV Max subscription was suspended due to a payment default. She first tried to reach to a real person but failed and then decided to use the chatbot to get an answer on how to get her subscription back.</p> <p>The problem was that the chatbot tried to put her case in a certain box, but</p>	<p><u>Context:</u> She bought a ticket with Ryanair in November 2022 (flight from Belgium back to Finland). Normally, there are discounts for Erasmus students but the website could not identify the Erasmus account.</p> <p>She therefore decided to contact the chatbot to gain some time since she knew contacting the</p>	<p><u>Context:</u> A few months ago, she wanted to find humanitarian trips focused on diving. She found the website of Volunteer World and therefore decided to use it to find such trips.</p> <p>The chatbot asked if she had questions and she explained the key words that interested her. Then the chat immediately</p>

	<p>not want to give away his personal information.</p> <p>He finally could continue chatting with the bot. He asked the chatbot what it could propose for a trip in Austria. The chatbot did not understand the question. After a few minutes, he reformulated his request and the answer was the same “I do not understand your question.”.</p> <ul style="list-style-type: none"> - Unsuitable answer - Basic chat box on the website with a green colour (no name or face) 	<p>but after a moment, it stopped answering. At first, there was a confusion it was a bot and not a human. Since it took too much time, she could not get the refund.</p> <ul style="list-style-type: none"> - Failed interaction and unsuitable answer - WhatsApp chatbot with a human name (lack of transparency at first she thought it was a bot and not a human) 	<p>her case was too specific. The chatbot led her to wrong answers, it was going in circle. It took her many trials and weeks to finally have an employee to talk to.</p> <ul style="list-style-type: none"> - Unsuitable answer and waste of time - Discussion space, no particular appearance or name 	<p>customer service would take a lot of time.</p> <p>She explained her situation but the chatbot tried to categorize her question. The problem was that her case was too specific and no category fitted it.</p> <ul style="list-style-type: none"> - Unsuitable answer since it did not fit the case and waste of time - Chat appearance in a box, no name or icon 	<p>asked for her personal information (email, full name) while she was just trying to find information on travels.</p> <p>She was disappointed because she was looking for a fast experience and she did not want to give her personal info. She had the feeling that some questions were understood because they did not fit the categories (too specific)</p> <ul style="list-style-type: none"> - Failed interaction - Chat box appearance named “bot”
Previous interactions with the brand	<ul style="list-style-type: none"> - He never travelled with them before - He knows them well because they have a very good reputation in Wallonia 	<ul style="list-style-type: none"> - Cordial relationship - No direct interactions (only online booking) 	<ul style="list-style-type: none"> - Negative image - Since it is a monopoly, she believes that you have no other choice than working with the SNCF. If she had such experiences with other companies (not in a monopoly) she would have stopped working with them. 	<ul style="list-style-type: none"> - Already had previous interactions but 10 years ago - Travelled a lot for a year with Ryanair for a year - Mixed feelings toward Ryanair because it is cheap (not great quality) but their customer service is efficient 	<ul style="list-style-type: none"> - She never had previous interactions with Volunteer World but already saw advertising. However, she found their concept really nice at first.
Expectations of the chatbot	He expected the chatbot to give him some	She was waiting for the chatbot to give her the	Expected the chatbot to direct her to a qualified	Expected the chatbot to direct her to a staff	Expected the chatbot to provide fast information

	propositions of trips in Austria.	procedure to follow to get a refund or to be redirected to an employee. She expected the chatbot to successfully answer her request.	contact person (e-mail address or phone number) to address her problem.	member that could answer her request (expectations met at the end of the interaction) but did not expect much from it.	about interesting trips. She did not want to interact with a human for her request.
Treatment from/to the chatbot	<ul style="list-style-type: none"> - The chatbot was very neutral. It was useless as it did not understand the very simple question. A human could have easily answered it. - He says it is annoying to have to wait when you expect an instantaneous response. He also tried to formulate his request with key words. 	<ul style="list-style-type: none"> - Friendly bot with many smileys in the message - She was friendly too, never rude 	<ul style="list-style-type: none"> - Very neutral conversation, robotic - She was neutral, knowing she as interacting with a bot but still cordial (“Hello” “Thank you”) 	<ul style="list-style-type: none"> - Neutral tone of voice from the chatbot, basic - She knew she was chatting with a bot and tried to get to the request process quickly 	<ul style="list-style-type: none"> - Pretty friendly chatbot with emojis but still clear it was a chatbot interacting - She did not treat the chatbot in a certain way
Feelings resulting from interaction	<ul style="list-style-type: none"> - Disappointed because he thought it was an easy question - Angry because he had to wait - Frustrated not to be able to receive an answer - Feelings toward the chatbot: He does not make a direct link between that 	<ul style="list-style-type: none"> - Frustration - Feelings direct toward the SNCF not the bot because she knows it is only technology 	<ul style="list-style-type: none"> - Frustration and anger (for not being directed to an employee) - Feelings directed toward the SNCF not the bot because she knows it is only technology, and therefore limited 	<ul style="list-style-type: none"> - Her expectations were very low at the start of the interaction, so she was prepared for it 	<ul style="list-style-type: none"> - Disappointed because she was expecting more from the chatbot. She thought the chatbot would adapt itself more during the interaction - Feelings toward the chatbot because she now has the feeling that her next

	chatbot that is not effective and the brand since the brand has a very good reputation				experiences will also be negative - Feelings also directed toward volunteer world because she thought they would implement a more evolved chatbot.
Opinion about chatbot implementation by the brand	If it is to implement a chatbot just to be able to display it, he does not see the point. for him, it can have a negative impact on a company, he would prefer a company that has a chatbot that works	She believes it can be helpful but only for some cases (basic and general).	She thinks it is useful to gather information on trains for example but not as good for specific questions. It should be easier to reach human employees because it is normal that bots cannot answer all cases.	She thinks that chatting directly with the staff would be more helpful. The categories the chatbot provided were already on the website. It is helpful for people who do not know where to search for information	She thinks it can be a useful tool for specific questions but less for vague questions, information.
Reaction to the interaction	He did not communicate his frustration on the chat. Then, he went to check on other websites to get an answer to that same request.	She first waited for an answer. Afterwards nothing special happened.	She had the occasion to rate her interaction with the chatbot and gave it a 0. She also sent a message to complain about her experience.	She did not react in a specific way, she only tried to get the answer for her request as fast as possible.	She tried to reformulate her questions and finally abandoned the interaction.
Experience complain	He did not complain to the company about the chatbot experience. This negative experience does not change really change his vision about that company good reputation. He still has not talked about it but it might happen if the subject was discussed.	When she finally had an employee on the phone, she had the chance to explain the situation. The SNCF did nothing about that experience. She would have appreciated the employee to report her experience to improve the chatbot in the future. She would also have	She complained about her experience while rating it, sent them a message on their Twitter. She finally had a number (saturated) to call thanks to her Twitter message. She would have preferred to have her subscription back, but she did not expect much of this interaction. She would	She had the chance to talk to the staff and was trying to have her answer as fast as possible, so she did to take the time to complain about it. She did not talk about this specific case to her relatives but talked about her general disappointment of chatbots.	She did not have the opportunity to complain about her experience to a staff member. She thinks it could be a clever idea to have the possibility to rate the interaction at the end of it. However, she talked about it to her boyfriend the same night, explaining that she was

		<p>preferred the SNCF to be more transparent about the fact that it was a bot behind that conversation (and not a human).</p> <p>She did talk about it at that time with her relatives.</p>	<p>also have preferred that employees would answer on twitter such problems, not to wait 3 hours on the phone.</p> <p>She talked about the negative experience in general but not especially about the chatbot.</p>		<p>disappointed since she could not find her dream travel.</p>
Future relation with chatbots	<ul style="list-style-type: none"> - It is a technology that is evolving. He is open to its use in the situation where he would receive a quick response that would simplify his life or reorient him later 	<ul style="list-style-type: none"> - She will further interact with a chatbot because it is the future, and it can be helpful → 7/10 - She is neutral in terms of trust regarding chatbots → 5/10 	<ul style="list-style-type: none"> - She will further interact with a chatbot because she thinks it is useful for basic questions → 9/10 - She trusts chatbots in general because of previous positive experiences → 8/10. 	<ul style="list-style-type: none"> - She is not really looking to use chatbots → 4/10, because she prefers a personalized experience - She is however opened to the technology if it is improved - She trusts chatbots regarding the privacy but not always the quality of the answers → 8/10 	<ul style="list-style-type: none"> - 9/10 because she thinks it could be a real time saver for her and for the employees if it was improved - Mitigated regarding her trust and her personal data → 5/10
Future relation with the brand	<ul style="list-style-type: none"> - In the short term his attitude towards the company has not changed because he is not going to hold them responsible for one bad interaction - However, later on he would prefer to interact with a human and in that 	<ul style="list-style-type: none"> - She will further interact with the SNCF because it is a monopoly. She evaluates it at 5/10 for an interaction with a human and 2/10 with their chatbot 	<ul style="list-style-type: none"> - If she had the choice to stop working with them, she would terminate the relationship. A new Italian trainline will open soon in Paris and she plans to try it instead of the SNCF - She is neutral in terms of trust 	<ul style="list-style-type: none"> - She will continue interacting with Ryanair, she does not see why she would terminate the relationship → 8/10 - 7/10 she trusts Ryanair but they are not really flexible with their conditions. 	<ul style="list-style-type: none"> - She still wants to continue to go on a travel with them but she will try to talk with humans and not the chatbot anymore → 8/10 - 6/10 she still never travelled with them and wonders if she

	case, he would mention the problem with the chatbot.	- She trusts in general the SNCF (usually on time, clean) → 7/10	regarding the SNCF because of past experiences → 5/10		can trust them about her destination
Relationship termination	/	/	If she had the opportunity to have the choice, such as for a clothing brand for example, she would have stopped the relationship. She thinks it is not normal that it is that complicated to have an answer to her request.	/	/
Additional comments	When it comes to new technologies, he thinks it is important that the technology is well advanced, and that the user finds a use for it quickly. Otherwise, he might close himself off to this new type of technology. It is necessary to put a real emphasis on the user-friendly side. We must not give the impression of being in communication with a human without giving the impression of talking with a robot to make the user more comfortable.	She believes that the fact the chatbot was humanized (because of its name) can have some unhealthy consequences. She also believes that AI technologies are the future of our world. However, she is quite scared that it would take over on human intelligence (gave the example of ChatGPT). She also thinks that it could replace her current job. Finally, she believes that there is a lack of education on AI technologies and that it would be interesting to	She gave the example of “Vick Asthme” as a good practice for chatbots. She thinks it can really be a gain of time when done correctly.	She is glad to see the technology in the tourism industry, but she is still waiting to see improvements. She would find it nice to feel more like a real person.	/

		include it in the educational process.			
	Interview 6	Interview 7	Interview 8	Interview 9	Interview 10
Travel habits	<ul style="list-style-type: none"> - 3-4 times a year - Last time was in January 2023 to ski - Mostly travel by plane - The purpose is usually for her leisure and sometimes for humanitarian purpose - Always travel with other people 	<ul style="list-style-type: none"> - Usually travels in family (pleasure purpose) - Last trip was in December in Dublin - She made all the reservations online (everything was computerized) - She works in a tourism agency 	<ul style="list-style-type: none"> - Does not travel a lot (1 time a year), usually near her home - Last time was in the south of France - Leisure purpose - She travels with friends 	<ul style="list-style-type: none"> - Erasmus in Austria, double degree in Italy and internship in the USA (scholar purpose) - Many trips made when she is abroad (personal and self-surpassing purpose) - Usually travels alone but then meet people there 	<ul style="list-style-type: none"> - 2-3 times a year usually in Europe - Travels with Booking, Ryanair (always online) and usually books it by himself - Last trip was in October - Leisure purpose - Always with someone or in a group
Technology usage	<ul style="list-style-type: none"> - Always use her phone (leisure purpose) - Laptop (business and personal purpose) - Very connected person 	<ul style="list-style-type: none"> - Technology is essential in her daily life but especially in her work since almost everything is done online or via an online platform - Paperless mindset in the company - Her phone is also always on (personal and professional purpose) - Many online trainings and webinars 	<ul style="list-style-type: none"> - She plays a lot video games (laptop and gaming console) - Phone for her social life but she does not use it a lot 	<ul style="list-style-type: none"> - She considers herself as a connected person - Social networks on a daily basis on her phone (personal purpose) - Emails and so on her laptop (business purpose) 	<ul style="list-style-type: none"> - Since he worked in the telephone industry, he checks everything with his phone and has his online banking synchronized on his phone - Phone also as work tool - Laptop for his leisure (to see friends and to play video games)
AI knowledge	<ul style="list-style-type: none"> - The first thing that comes to her mind is ChatGPT 	<ul style="list-style-type: none"> - This allows exponential reactivity and this is important since 	<ul style="list-style-type: none"> - Concept not very concrete to her - Examples that come to her mind: Content 	<ul style="list-style-type: none"> - She also realizes her thesis on AI - Technology supposed to 	<ul style="list-style-type: none"> - Conceived by the human to gain as much data as possible on internet

	<ul style="list-style-type: none"> - Ease life, work and the objective is to gather data - She thinks it can be touchy in the business world for the private data and GDPR - Could be a way to easily find trips and flight according to specific criteria 	<p>humans want a response as quickly as possible</p> <ul style="list-style-type: none"> - Field that is evolving very quickly but is becoming essential 	<p>creation, household appliances, Alexa and Siri</p> <ul style="list-style-type: none"> - She has the feeling she knows it because of what she hears but does not really know a lot about it 	<p>replicate human thinking and to be able to learn based on its own experience</p>	<p>to accelerate in searching</p> <ul style="list-style-type: none"> - He believes it is the future and essential - However, he is scared that it might go beyond the human
Chatbots knowledge	<ul style="list-style-type: none"> - She thinks it is a nice tool when it is well working (example of online order and travel) - However, some work better than other 	<ul style="list-style-type: none"> - Good knowledge - It is a predefined answer box 	<ul style="list-style-type: none"> - She knows about ChatGPT - She is optimistic regarding the use of chatbots, but she is scared that chatbots are devoid of feelings and sensitivity which might cause some problems 	<ul style="list-style-type: none"> - Chatbots are based on AI and supposed to replicate, through platforms, human behaviour to help people - She believes it is not yet perfected, still a lot of improvement to do 	<ul style="list-style-type: none"> - Chatbots are important as a first contact on a website to focus on a special need - He thinks it is a very good first tool that is quick (positive about it)
Chatbot interactions in tourism	<ul style="list-style-type: none"> - A few times in case of issue or specific questions - The interactions in general were more positive because she knows it is only technology 	<ul style="list-style-type: none"> - She interacts with chatbots usually one time per month with most of the time business purpose - Since it is a tool, she believes it is still positive even if it is sometimes to have a negative result 	<ul style="list-style-type: none"> - She interacted twice with chatbots - She would say her interactions were mitigated (4/10) (first one was positive since she got the desired answer and second one was negative) 	<ul style="list-style-type: none"> - She interacted a few times with a chatbot to get information for holidays - She always asks for the cheapest option, and she has the feeling chatbot does not take this criterion into account - The interactions were in total more negative because she never found the 	<ul style="list-style-type: none"> - 6-7 times - He has the habit to rent cars online and usually uses the chatbot as first contact - More positive interactions overall

				suggestions to be advantageous in relation to her criteria	
Most negative experience	<p><u>Context:</u> She booked flight tickets for Peru before the pandemic and the tickets have been cancelled. She tried to reach the chatbot but every time there were some issues: it could not find the booking number, always asked to log in (even it was already the case). This happened with Expedia. Her goal was to have a quicker answer and to have the steps to follow to obtain the refund, but she could not obtain this information.</p> <ul style="list-style-type: none"> - Failed interaction - It was a discussion window on their site and a generic name like "virtual agent" 	<p><u>Context:</u> In December 2023, she had a significant flight delay with Eurowings. Since her flight was delayed more than 4 hours, she was supposed to be entitled to a compensation. The problem is that she found herself being sent from form to form without ever getting a result, so she tried to get an answer via the chatbot. However, 4 months later, the chatbot has not yet been able to answer the question and no customer compensation has yet been paid.</p> <p>To date, she has never received a satisfactory response from the chatbot to her requests despite numerous attempts. There is also a problem with the chatbot in terms of the language barrier with since the whole website is in German.</p> <ul style="list-style-type: none"> - Unsuitable answer 	<p><u>Context:</u> she received a bongo for 2 people and decided to go to south of France. The problem is that she normally had the route between the hostel and the airport, but the chauffeur never came, and they had to take a taxi (cost a lot). When they arrived, they had a room booked for only one person and had to change the reservation for a room for two.</p> <p>She wanted to contact a staff of Bongo and contacted the chat on their website. She soon realized she was chatting with a chatbot. She tried to reformulate but the chatbot tried to redirect her to question categories that did not match. As a result, she was unable to get her answer.</p> <ul style="list-style-type: none"> - Unsuitable answer - Discussion window on the website, clear 	<p><u>Context:</u> she contacted a Messenger chatbot that she found on an influencer Instagram account. She asked for many types of travels (on the cheaper side) but the chatbot suggested very expensive trips. She thinks that the chatbot did not understand her persona (young student).</p> <p>The problem is that she also checked by herself the prices of the travel the chatbot suggested her and she realized that the total price of the trip was 300€ cheaper.</p> <p>The chatbot was exclusively a Messenger chatbot not directly linked to a company.</p> <ul style="list-style-type: none"> - Unsuitable answer - Chatbot on Messenger with a bot name, clear it was a chatbot 	<p><u>Context:</u> for his last trip in October in Spain he needed a car. He booked a car on Rental cars and finds the desired car. He asked the general conditions (payment methods, deposit) and the chatbot answered his questions without a problem. When he arrived In Spain, they told him he did not have the right payment card. The information the chatbot gave him were not complete enough. The only solution was to cancel the already paid booking, to contact the agency to have another car.</p> <p>He lost a lot of time and money. He realized he had to check by himself the information the chatbot gave him because he could not trust him on detailed information.</p>

			it was a chatbot, it was very neutral in its way of speaking		The interaction was positive on the moment but realized it was not afterwards. <ul style="list-style-type: none"> - Unsuitable answer (lack of precision) - It was a chat window, no specific appearance, no memories if it had a name or not
Previous interactions with the brand	She already booked flights with Expedia but never had issues. She trusted them because it is a well-known site. However, following this failed interaction, she has a less positive vision of them (at least in case of problems).	There were no previous interactions with Eurowings but what attracted them was an extremely attractive price from Germany. This flight was chosen because it had the best schedule.	She already had offered a bongo and since that person had a pleasant experience, she thought this experience would go well.	/	He already booked cars with his mom and never had any troubles during the interactions. He had a positive attitude toward the brand beforehand.
Expectations of the chatbot	She expected the chatbot to make her gain some time and to have the steps to follow to get the refund.	She was waiting for the chatbot to give her the department to which she should submit her request, to know if her request had been registered.	She soon realized the chatbot would not be able to solve her case. She however would have wanted to get the contact of a staff member easily.	No real expectations since it was only curiosity.	He expected the chatbot to answer completely to his request and he thought he should not check it by himself. He expected the chatbot to give the complete terms and conditions.
Treatment from/to the chatbot	<ul style="list-style-type: none"> - The chatbot was friendly and cordial - She stayed cordial because she knew it was only technology 	<ul style="list-style-type: none"> - The chatbot did not know how to answer the question and was going in circles 	<ul style="list-style-type: none"> - The chatbot was very neutral (going from point A to B), feeling of having a chat with a robot 	<ul style="list-style-type: none"> - Very friendly chatbot - She closed the conversation after the negative experience 	<ul style="list-style-type: none"> - Very robotic chatbot. Very polite, steps to follow

	and not a real person behind		- She got angry a bit but then thought it would not help to get her answer (since the bot could not feel her anger)		
Feelings resulting from interaction	<ul style="list-style-type: none"> - She was angry because she could not have the desired information (a lot of money was at stake) - She was also lost because she did not know how to proceed - She also felt stressed on what to do because the chatbot could not answer her request - These feelings were directed toward Expedia (she knew the chatbot was only technology) - Now she went over it, she thinks they may have improved the technology 	<ul style="list-style-type: none"> - Frustration that the chatbot has not yet provided an answer - There was hope through the implementation of the chatbot to get a response that ended in failure 	<ul style="list-style-type: none"> - She was angry when she started the interaction - She was very frustrated since she could not obtain an answer to what she thought were easy questions - Sadness and injustice because she was disappointed of that experience while she thought it would go well - Feelings direct toward the chatbot on the moment since she was interacting with however on the long term her feelings were towards Bongo 	<ul style="list-style-type: none"> - She was very disappointed because she found the concept very interesting - The feelings were directed toward the technology and what was behind it, not directly toward the chatbot 	<ul style="list-style-type: none"> - Frustrated because he could not have a car at the price he booked it - Angry because he thought he would not have troubles, he did not speak well Spanish so it was very difficult on site. - Feelings directed toward Rental Cars, it was their fault to him
Opinion about chatbot implementation by the brand	She thinks it is useful that it can be nice for easy request but not for more complex and touchy situations.	In her opinion the chatbot was a backdoor to discourage the customer from making a request and getting a response.	She thinks it is a good tool for basic questions/requests but when it is a very specific case, a real person would be more useful.	The chatbot implementation could really be improved since it was not really adapted to the customer's need. She finds the concept	It can be useful for regular customers. It is essential to get a quick answer and access to information. He has a positive opinion but it is still not optimal.

				very nice in many areas if it was if it was improved.	
Reaction to the interaction	<ul style="list-style-type: none"> - She talked about it with her relatives and the other people that also booked their flight there. She will not book very expensive flights with them in the future in case another problem happens. 	<ul style="list-style-type: none"> - She had no particular reaction to the interaction because she finds her case difficult and quite atypical. - However, she was able to ask those around her if other people had already been in the case to have a potential way forward 	<ul style="list-style-type: none"> - Got angry and frustrated already during her trip but still tried to enjoy her trip as much as possible 	<ul style="list-style-type: none"> - She was only looking for it because she was just curious so she did not pursue her research further 	<ul style="list-style-type: none"> - After the annulation, he received an email to get a feedback about the customer service. He told them that the agent reacted well but that the problem came from the chatbot and to pay attention for other customers.
Experience complain	<ul style="list-style-type: none"> - She had the opportunity to talk about her case to a staff member. She hopes that they were able to feed back this information to improve the chatbot. - The staff member did not propose something to repair but still apologize about it. The reaction was enough to her. - Talked about it with her relatives at that time 	<ul style="list-style-type: none"> - She is trying to get someone from Eurowings on the phone but has not yet succeeded. She has not yet had the opportunity to complain but will do so when she has the chance - She has talked to people around her, and no one she knows has ever been in the case 	<ul style="list-style-type: none"> - She tends to give up quickly. Since she had planned a good budget, she preferred not to insist. - She talked about it with her relatives. Usually talks about it when the subject comes up in a discussion 	<ul style="list-style-type: none"> - She did not have the opportunity to complain about it - However, if the topic was in a discussion, she would definitely talk about it 	<ul style="list-style-type: none"> - After filling the satisfaction form, he did not receive any feedback from the company. - However, they still reacted well to the situation - If he had not received all his money back he would have further insisted about the chatbot. - He talked about it with his family. He still recommends this platform
Future relation with chatbots	<ul style="list-style-type: none"> - She will continue using them and if she sees that it does not work, she will find another way to get 	<ul style="list-style-type: none"> - She does not see much use for chatbots in her daily life. For her work however it is a plus 	<ul style="list-style-type: none"> - She was frustrated by this interaction. She thinks that chatbots will have a hard time answering 	<ul style="list-style-type: none"> - She has the feeling that a chatbot will never really be able to answer her request when she is 	<ul style="list-style-type: none"> - He is a bit more reluctant than before regarding the payment details. He would make further

	<p>her information → 9/10 (for easy requests)</p> <ul style="list-style-type: none"> - She does not really trust chatbots for her personal data (she does not know what this information is used for) → 6/10 	<p>to have a chatbot to be able to go into more detail</p> <ul style="list-style-type: none"> - She will continue using chatbots (Misterfly) and some are well made while others are side-tracks - She thinks that there is a lot of hacking via online chatbots, as for example to make a visa for the United States. She therefore thinks that one should be very careful when using them 	<p>her question because of this experience. It is very rare that she uses them → 4/10</p> <ul style="list-style-type: none"> - Her trust level is very low toward AI because she does not like giving her personal data → 2/10 	<p>on a website for example</p> <ul style="list-style-type: none"> - She thinks AI is beneficial to society and it can be really advantageous. If the technology is improved, she will continue using them → 6.5/10 for now but if the problems are solved → 8.5/10 because she thinks the concept is amazing - She thinks it is really controlled in terms of data and she does not see a problem with it as long as it is only the data provided in the conversation. But if the chatbot can also collect cookie data, she would stop using it → 6/10 	<p>research on his own → 8/10 but it is still a very useful tool</p> <ul style="list-style-type: none"> - 6/10 for the trust for the general questions but not very trustful for the payment part
Future relation with the brand	<ul style="list-style-type: none"> - She will still book flights with them but only short ones and not a lot of money at stake. She would no longer interact with the chatbot but with a real person directly → 10/10 	<ul style="list-style-type: none"> - She strongly advises against Eurowings especially in her professional life - However, it remains low cost with the service that goes with it. For her it is almost inhuman to 	<ul style="list-style-type: none"> - She will not buy Bongo and will no longer recommend it to others → 3/10 - She considers her trust level is in the same category → 3/10 	/	<ul style="list-style-type: none"> - 10/10 because he always had very good experiences and he thinks the customer service on the phone was very effective - 8/10 he had a lot of chance with the staff

	- She still trusts them because she obtained her refund → 8/10	sell tickets at this price so it is difficult to blame them for a delay			member he had on the phone
Relationship termination	/	With that negative experience, she will probably not travel again with that company but it remains very cheap prices.	She tries to stay away from this company as much as possible. If someone ever gifted one, she would go on principle but would not buy any more on her own. She thinks we should never say never, and it might happen again, but she really doubts it.	She thinks that chatbots can be useful in many fields. For example, if she wanted to find a specific object in a big city, a chatbot could tell her where to find it. She believes that her negative experiences are related to the tourism industry.	/
Additional comments	/	When you are on a trip, there are many things that need to be confirmed such as cabs for example. These WhatsApp chatbots can be useful to confirm this information.	/	/	Chatbots are very useful for the tourism industry and are a time saving. It is a good duo. He is a bit suspicious when money is at stake.
	Interview 11	Interview 12	Interview 13	Interview 14	Interview 15
Travel habits	<ul style="list-style-type: none"> - Usually makes city trips and travels 4-5 times a year - Last time was in February 2023 in Portugal - Leisure, party and discovery purpose - Usually travels with friends but 	<ul style="list-style-type: none"> - Usually travels 4-5 times a year with a car or with a plane - Last time was in December 2022 in Spain - She really enjoys city trips - Always eisure purpose 	<ul style="list-style-type: none"> - Last time was in February 2023 - He travels a lot on a daily basis, usually once a month - Lives abroad - Travels both for his leisure and for business purpose 	<ul style="list-style-type: none"> - She really enjoys travelling (city trips) - She always makes the reservations online - Usually travels for personal purpose but her last trip was in March 2023 for business purpose 	<ul style="list-style-type: none"> - 2-4 times per year - Last time was in March 2023 in Amsterdam - Leisure purpose - Usually travels alone with friends and family

	sometimes on his own	<ul style="list-style-type: none"> - Usually travels with her boyfriend or in family 	<ul style="list-style-type: none"> - Usually travels on his own to go to see someone 	<ul style="list-style-type: none"> - She always travels with friends or family 	
Technology usage	<ul style="list-style-type: none"> - Very connected person - Phone because he can do everything with it (leisure purpose) - Laptop (business purpose) 	<ul style="list-style-type: none"> - She does not consider herself as a connected person - She prefers real human contact - Open to new technologies 	<ul style="list-style-type: none"> - Laptop (business purpose) - Photoshop and video editing software (business purpose) - Connected watch, smartphone, apps (personal purpose) 	<ul style="list-style-type: none"> - Very connected person - Phone (personal purpose) - Laptop (professional purpose) 	<ul style="list-style-type: none"> - Connected person - Phone, tablet and laptop - Not addicted to technology - A lot of leisure for technology
AI knowledge	<ul style="list-style-type: none"> - Technology that tries to be more humanized - He uses a lot of voice assistant in his daily life 	<ul style="list-style-type: none"> - She did an internship on AI - Ease interactions between humans and technology 	<ul style="list-style-type: none"> - Algorithm that can be used in all fields - Learns by itself 	<ul style="list-style-type: none"> - AI is different from ML - She directly thinks of chatbots and ChatGPT 	<ul style="list-style-type: none"> - Connected to technology, no need of human behind the technology - Fast reaction to request

<p>Chatbots knowledge</p>	<ul style="list-style-type: none"> - Useful to answer very specific questions - Work on key word system 	<ul style="list-style-type: none"> - She created a chatbot for the company she made her internship at - Technology behind the chatbot makes it relevant or not - She thinks it is really useful when it is well-made but you can easily lose a lot of time if the chatbot does not get the request 	<ul style="list-style-type: none"> - A few years ago, he was really reluctant for its usage - Nowadays, it is something he uses more and more often, more open to this new technology - Usually a gain on time 	<ul style="list-style-type: none"> - She tries to have the first contact with a chatbot but if it is not conclusive she will try to call someone - She likes to have a personalized approach. - She uses it a lot on clothing sites. - She is very open about the use of chatbots on the principle - She uses a lot ChatGPT even for her work life 	<ul style="list-style-type: none"> - No special knowledge on chatbots - Limited - Neutral/negative vision on it, hard to talk with them
<p>Chatbot interactions in tourism</p>	<ul style="list-style-type: none"> - He already interacted a few times with chatbots in tourism - The interactions were in total more positive 	<ul style="list-style-type: none"> - She interacted twice with a chatbot in tourism - In total, her opinion remains mixed because they did not fully respond to the request 	<ul style="list-style-type: none"> - He interacted 4-5 times with a chatbot in tourism such as at the check-in at the airport - Otherwise, it happened on an airline app - In total, more or less positive interactions 	<ul style="list-style-type: none"> - She interacted a few times with chatbots in tourism but it did not make a particular impression on her (neither positively nor negatively) 	<ul style="list-style-type: none"> - 1 time for sure (very limited)
<p>Most negative experience</p>	<p><u>Context:</u> He booked a car in Italy in June 2020. After a year, he saw that the car rental agency had withdrawn a large amount from his bank</p>	<p><u>Context:</u> She interacted more than one year ago with Flybot to ask for a trip in Spain by curiosity. The chatbot appeared on Messenger through an</p>	<p><u>Context:</u> When he returned from his Erasmus in Chile, he had booked his return plane ticket. He had bought his ticket on Iberia, but he</p>	<p><u>Context:</u> In March 2023, she made a business trip to Paris. To get there, she had to take a Thalys train, but there was a huge strike on the Thalys lines.</p>	<p><u>Context:</u> She had a contact with Airbnb in July 2022, and she decided to cancel a reservation and asked to get a refund. She</p>

	<p>account. There was no description, so he did not understand what happened. He contacted the chatbot of Rental Cars and when he tried to understand what happened, the chatbot did not understand the question and was not answering it correctly.</p> <ul style="list-style-type: none"> - Unsuitable answer - It was a popup on the website, and it said it was a virtual agent 	<p>ad. The objective of the chatbot is to find cheaper flights for a specific destination.</p> <p>The chatbot did not fulfil its mission since it redirected her on a flight comparator and she still had to choose by herself what was the most interesting. If the chatbot did propose some cheap flights, she did not have the possibility to ask for specific criteria.</p> <ul style="list-style-type: none"> - Unsatisfying answer since it did not respond to all criteria - Chatbot Messenger 	<p>was told that his flight was going to be made by LATAM. At first, he did not worry about it. When he opened the Iberia application to check in, he was first told that it was impossible because the flight was operated by another company. When he logged on to LATAM, he realized that his reservation number did not exist on it. The flight did exist on LATAM, but he was no longer on that flight.</p> <p>He decided to use the WhatsApp chatbot of Iberia because the chatbot removed him from the flight from what he understood of the situation. He was no longer on any of the lists. The chatbot first understood his request by explaining that he needed a new flight number. However, after that, he had no idea if he was still on the flight or not.</p> <ul style="list-style-type: none"> - Lack of clarity in the situation 	<p>When she arrived at the station, the train was still scheduled. She contacted the chatbot to know if her train was still scheduled (she doubted it) but the chatbot did not understand the request, asked her to rephrase and also sent her to a page that did not answer her problem. She thinks the problem also came from the fact that her request was based on actuality.</p> <ul style="list-style-type: none"> - Failed interaction and unsuitable answer - Very familiar chatbot on the website 	<p>contacted the chatbot to know the procedure to obtain it but after explaining the situation it asked to re-explain the situation again. The chatbot did not understand the request, the conversation was going in circle.</p> <ul style="list-style-type: none"> - Failed interaction, unsuitable answer - It was via the app in a message space
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			- WhatsApp Chatbot (very clear it was a chatbot)		
Previous interactions with the brand	<ul style="list-style-type: none"> - He never really interacted directly with them but already booked cars with them. - He had positive feelings toward the company because it is a well-known platform. 	<ul style="list-style-type: none"> - She never interacted with this chatbot (brand) before that interaction 	<ul style="list-style-type: none"> - He already interacted with Iberia and everything went well. - He had no apprehension 	<ul style="list-style-type: none"> - She never interacted with Thalys beforehand - She apprehended that her train might be cancelled the day of the trip 	<ul style="list-style-type: none"> - No previous interaction with the customer service - However, she had positive feelings towards the platform since she already booked many times with them
Expectations of the chatbot	He thought that the chatbot could at least explain to him what the amount of money was for or give him the number of a contact person	She would have liked it to be more personal, there was a lack of emotions. Lack of nuances in the choices proposed.	He was hoping to get his check-in done. If he knew the chatbot would not be able to do it for him. He would have liked to have the possibility to contact a human when the chatbot's limits were reached.	She would have liked the chatbot to be able to answer her question and to propose options to solve her problem.	She thought it would give the steps to follow to get the refund or get the contact of an employee. She thought it would be a positive interaction at first.
Treatment from/to the chatbot	<ul style="list-style-type: none"> - It had a familial language and talked very friendly with a lot of smileys - He did not interact in a specific way, he tried to reformulate the request but was not specifically kind. 	<ul style="list-style-type: none"> - Very familial language, with many smileys, very expressive - She did not treat the chatbot in a particular way 	<ul style="list-style-type: none"> - Very robotic chatbot, very neutral and procedural - He used a basic language since he understood it was a bot 	<ul style="list-style-type: none"> - No specific treatment from the bot but very familial - She tried to reformulate her request using different types of languages (more or less formal) but the chatbot still did not understand it 	<ul style="list-style-type: none"> - The chatbot was very neutral and robotic - She lost patience, she thinks it is really good when it works but when there is a problem, it is not that good anymore
Feelings resulting from interaction	<ul style="list-style-type: none"> - Frustrated because he could not get an answer to his request 	<ul style="list-style-type: none"> - She thought there could be some real potential to help 	<ul style="list-style-type: none"> - Right after the interaction he did not feel frustrated. 	<ul style="list-style-type: none"> - She felt lost on how to get her answer 	<ul style="list-style-type: none"> - Frustrated and angry because not the finality desired

	<p>and the conversation was going in circles</p> <ul style="list-style-type: none"> - Angry because he asked many times the same question without getting an answer to it - Feelings directed toward Europcars because chatbots are a time and money saver, but they should put a more effective alternative in such situation. 	<p>employees in customer service</p> <ul style="list-style-type: none"> - She did not feel confident with the answer given by the chatbot, she was not reassured 	<p>However, when he realized he had to go to the airport to get his answer he was angry</p> <ul style="list-style-type: none"> - The day of the flight he was stressed because of a lack of answer - Feelings direct toward the chatbot since he trusted the customer service of Iberia. 	<ul style="list-style-type: none"> - This feeling was directed toward Thalys because she could not get an answer - Feelings also directed toward the bot because he is humanized, the expectations towards it are higher 	<ul style="list-style-type: none"> - It is ok now, time has passed, no more opinion on it - Feelings toward Airbnb, it is only a chatbot and a technology, not its fault
Opinion about chatbot implementation by the brand	<p>He thinks it is easier to get an answer through it than through a FAQ and it is useful for users.</p>	<p>She thinks it really is a good idea, ease of access for everyone, speed of interaction. However, she thinks there can be a loss of interest for travel agencies.</p>		<p>She thinks a chatbot is rarely a bad idea as long as it can help a majority of people. It would be interesting to offer another option when the discussion starts going in circles.</p>	<p>She believes it is a good idea to solve some problems, underload employee, but more need of communication, loss of time</p>
Reaction to the interaction	<p>The interaction did not make him change his behaviour since he knows this technology can be limited.</p>	<p>She did not react in a particular way following the interaction. She only gave it a good rate for the evaluation.</p>	<p>He called the customer service in order to ask how to check-in but it was not possible online.</p>	<p>She went straight to the station to find an answer to her question.</p>	<p>No specific reaction, only tried to reexplain her situation.</p>
Experience complain	<ul style="list-style-type: none"> - He had Europcars on the phone (the amount of money was a fine). He had the opportunity to explain that the chatbot could not answer but was 	<ul style="list-style-type: none"> - At the end of the interaction, there was a possibility to rate the interaction with the chatbot. She decided not to answer it in order 	<ul style="list-style-type: none"> - When he had someone on the phone he could explain what happened with the chatbot but he does not have specific memories on what 	<ul style="list-style-type: none"> - She did not have the opportunity to complain to an employee because those she was able to talk to did not work for the Thalys 	<ul style="list-style-type: none"> - She never had someone on the phone - She thought it was a lot of problems for a "small" amount of money

	<p>comprehensive because it was a specific problem</p> <ul style="list-style-type: none"> - Since he got the answer to his request he was still satisfied at the end - He talked about this interaction with relatives of him 	<p>not to lose more time</p> <ul style="list-style-type: none"> - She said she was satisfied in general in order to not have to explain why she was not - Since it was only curiosity, she did not talk about it with her relatives 	<p>the employee reaction was</p> <ul style="list-style-type: none"> - He talked about it with his roommates a lot 	<ul style="list-style-type: none"> - She talked about it with her colleague whom she was going to Paris with 	<ul style="list-style-type: none"> - It would have been too big of a waste of time - However, she had the opportunity to talk about it with her friends when she was on the trip
Future relation with chatbots	<ul style="list-style-type: none"> - This interaction did not modify his view on chatbots so he will continue interacting with them → 8/10 - His trust level is good regarding the quality of data and personal data → 7/10 	<ul style="list-style-type: none"> - Since she programmed one, she did not really want to further interact with chatbots → 6/10 - Her trust level toward chatbot is 5/10 because she does not know where her data is going and what it is used for 	<ul style="list-style-type: none"> - He is pretty open to the usage of chatbot, he feels the algorithms are evolving. This experience did not really impact his intention to use it → 9/10 - He trusts chatbots in general -> 7/10 however he does not really trust them for data privacy → 5/10 	<ul style="list-style-type: none"> - This experience will not prevent her from using chatbots again → 10/10 - She does not trust the chatbot for confidentiality of data and data quality is fine for basic questions -> 5/10 	<ul style="list-style-type: none"> - She is not really into chatbots, she prefers to talk with humans. Good as first contact and fast but to get a human interaction afterwards → 5/10 - 3/10 → lack of human aspect, not sure that the chatbot really understood the request
Future relation with the brand	<ul style="list-style-type: none"> - He will continue interacting with them since it has a good reputation → 8/10 - Same for the trust level → 8/10 	<ul style="list-style-type: none"> - She will not use Flybot anymore because she prefers to compare it by herself → 0/10 - She however relatively trusts them and the answer they provide → 5/10 	<ul style="list-style-type: none"> - He will continue to fly with LATAM and Iberia and he still trusts them → 9/10 since the problem was solved at the end 	<ul style="list-style-type: none"> - She will continue using Thalys because it is the only way to go quickly to Paris → 10/10 - Her trust level regarding Thalys is 8/10 because they provided a solution 	<ul style="list-style-type: none"> - Definitely will go back with Airbnb, try to avoid customer service as much as possible → 6/10 - 5/10, skeptical because of previous experience

Relationship termination	/	Since it was only curiosity, she will probably never use it anymore	/	/	/
Additional comments	<p>When a chatbot is going in circle, the chatbot should propose a contact number or put an option to chat with a real person as Amazon.</p> <p>In his case, it would be interesting that when there is a fine, the chatbot is programmed to know that an amount has been deducted for a specific reservation in this case.</p>	She believes it is a field that will continue to develop. However, she still thinks human interactions are indispensable.	Even though this was one of the first interactions with a chatbot, this interaction did not discourage him from using others and he can see that the technology is evolving.	She used a few times the Zara chatbot that proposed categories to help build a question. It also proposed to chat with a real person to get an answer to a specific question.	It was an opportunity to learn more about chatbots.
	Interview 16	Interview 17	Interview 18	Interview 19	Interview 20
Travel habits	<ul style="list-style-type: none"> - Used to travel a lot (once a month) - Lived in many different countries - Always leisure or family purpose - Always in group - Always use flights comparator such as Skyscanner to choose flights - Usually travels with Ryanair because of their prices 	<ul style="list-style-type: none"> - Travels 2 times a year - Leisure purpose - Always travels in a group - Lives in Lisbon - Last time was in Madeira in March 2023 	<ul style="list-style-type: none"> - Travels mainly for personal holidays and very few for business - Last time she travelled was in Paris in November 2023 for business purpose - Usually travels with her boyfriend 	<ul style="list-style-type: none"> - Uses a lot of technology to travel - Used to travel 7 times a year but will travel 10 times next year mainly for business 	

	<ul style="list-style-type: none"> - Last trip was in the Vosges in February 2023 - Mostly by plane but sometimes by car 				
Technology usage	<ul style="list-style-type: none"> - Considers herself as a very connected person - She feels it can be tiring because everything needs to go fast - She uses it to inform herself (Digital marketing and international news) - Social networks for personal purpose - She also makes her groceries online - Digital and technology is a way to go faster in everything - Rapidity and efficiency 	<ul style="list-style-type: none"> - Considers herself as a very connected person - Uses her phone to pay, to rent bike - Laptop (business purpose) 	<ul style="list-style-type: none"> - Considers herself as a very connected person - She uses more and more her phone (instead of her laptop) for her personal life as well as for business - AI has taken a huge space in her daily life - Social networks for searching information - She uses AI as much as possible in her daily work 	<ul style="list-style-type: none"> - For his private life, he does not use social networks (except LinkedIn) - Technology is mainly used for his business life with photo (teams, mails) and laptop, digitalized company 	
AI knowledge	<ul style="list-style-type: none"> - Gain a lot of data to establish behavioural patterns to predict future behaviours 	<ul style="list-style-type: none"> - She had heard about it, and she uses ChatGPT - For her, it is a code that self-learns - It can adapt to answer specific request 	<ul style="list-style-type: none"> - AI is an algorithm that learns by itself human interactions through data and to then translate it into a conversation for example. 	<ul style="list-style-type: none"> - Very broad subject, company uses AI for statistics with ML to review scores, possibility to use AI to estimate the damage done to a vehicle, chatbot put in place in a call center 	

<p>Chatbots knowledge</p>	<ul style="list-style-type: none"> - Chatbots have been through a whole revolution thanks to AI - She is for chatbots but she also believes human presence is still essential - It can be a really good way to ease daily work for employees for boring and repetitive tasks - Human is still essential when the chatbot is not enough - Importance to collect data and to interpret it and adapt the chatbot according to it 	<ul style="list-style-type: none"> - She believes if there is a complex request, it can be difficult for the chatbot to answer it - Rapidity - Not good when too specific 	<ul style="list-style-type: none"> - Chatbots are a plugin on a website in order to answer basic questions - She does not like chatbots at all because she knows the given answers are never satisfactory 	<ul style="list-style-type: none"> - He already used some for his private life with a bank that did not work with a lot of frustration - Already used it on KLM but did not work - Negative experiences, no intention of using chatbots 	
<p>Chatbot interactions in tourism</p>	<ul style="list-style-type: none"> - She only had chatbot experience in tourism with Ryanair - She used them to complain usually - The chatbot could answer her request only once 	<ul style="list-style-type: none"> - She already had interactions with chatbots in tourism on Airbnb for example - In total 4-5 times - In total the interactions were more on the positive side 	<ul style="list-style-type: none"> - She already interacted a few times with chatbots in this industry - In total, she thinks it was neutral or positive in total since they did not really mark her 	<ul style="list-style-type: none"> - Already had one negative experience 	
<p>Most negative experience</p>	<p><u>Context:</u> 4 years ago, the plane of her parents arrived in Germany instead of Eindhoven.</p>	<p><u>Context:</u> In March 2023, they went to Madeira with friends and booked a car via CarJet but</p>	<p><u>Context:</u> It happened in March 2022 for a trip in Manchester. She bought tickets for a football</p>	<p><u>Context:</u> Experience of chatbot put in place in the company to help their call centre (2 years ago</p>	

	<p>Ryanair said that a car would be waiting for them at their arrival. When they arrived, the airport was empty, and they waited for the car for a few hours. They finally decided to take a taxi and paid 250€.</p> <p>Afterwards, she took the situation and contacted the chatbot to introduce her reclaim.</p> <p>The chatbot did not understand the request even though she tried to correctly formulate her request. When she insisted to talk to a human, the chatbot was going in circle. She felt that the objective of the chatbot was not to solve the problem but to avoid leading her to the customer service. At the end, she received an answer through a mail (never through the chatbot).</p> <ul style="list-style-type: none"> - Unsuitable answer and failed interaction - Chat box with a robotic icon, obvious it was a bot 	<p>Goldcar was the one dealing with reclamations. When they arrived, they had to pay more than announced (200€ more) and they decided to pay but to investigate it afterwards. After calling the number on the website they had to go back to the airport. They were told to go check on the Goldcar website. They understood quickly they were talking with a bot since the chatbot did not understand the situation at all. They tried to reformulate it.</p> <ul style="list-style-type: none"> - Un-useful step in the request - Unsuitable answer - “Contact us” box on the website, there was a human name on it - The two first interactions they did not see it was a bot but when they explained they immediately knew - Big loss of time 	<p>game on Live Football Tickets. The problem was that the website was not transparent about the seats and the prices. She afterwards received a message saying that the seats were not next to each other and that she had to pay an additional 400€ to have seats next to each other. She then tried to cancel her reservation and tried it via the chatbot. The chatbot was only leading her to the contact page. Afterwards she had contact with a real person that refunded her. The problem is that after this interaction, she kept receiving messages from that chatbot spamming her with automatic messages: “Take your seats”</p> <ul style="list-style-type: none"> - Failed interaction at first and unsuitable answer - WhatsApp chatbot that was very intrusive, clear it was a bot 	<p>and the experience lasted 6-9 months). Normally they had a call centre but they decided to put a chatbot in place so that people can help themselves and do not have to call the call centre to relieve the workload of employees. It was supposed to be a real help for the company, and they were trying to see if that would diminish the number of calls. There was first an analysis made on frequent asked questions and to put in place a script for the chatbot to give him the data to give the right answer. It did not have any impact on the quantity of calls, the customer behaviour did not change (no further research made on the why). What happened is that this tool required a permanent analysis to be fed with the new gathered data and they had underestimated this workload. There are two reasons why the chatbot was stopped: no quick effect could be observed</p>	
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				on the amount of work of the call centre employees, and they did not do their job to update the bot.	
Previous interactions with the brand	<ul style="list-style-type: none"> - She already had bad experiences when interacting with Ryanair - She travels with them because of their very cheap prices - She always checks for other companies if there is a limited price difference - She already knew that when there is a problem, the customer service experience will not be good 	<ul style="list-style-type: none"> - She never interacted with them before - She was very neutral toward them, did not expect anything special 	<ul style="list-style-type: none"> - She never interacted with that brand before - She did her research previously 		
Expectations of the chatbot	The objective of using chatbots is to get a solution as fast as possible. She thinks it really is important to program the chatbot to have a sense of empathy not to get frustrated.	She hoped it would redirect them to the right person, or to a useful email. She knew the bot would not solve their case.	She knew it would not answer her request. She hoped it would give her an email or steps to follow.		
Treatment from/to the chatbot	<ul style="list-style-type: none"> - Very robotic way of talking, no empathy at all, it gave the feeling that she was misunderstood 	<ul style="list-style-type: none"> - Very neutral chatbot, very human looking in its way of talking 	<ul style="list-style-type: none"> - Many spam messages - Bordering on harassment 		

	<ul style="list-style-type: none"> - She tried to reformulate her questions but it did not change a thing. 	<ul style="list-style-type: none"> - She tried to make easier sentences, but nothing worked 	<ul style="list-style-type: none"> - She did not do something in particular, she was just bothered 		
Feelings resulting from interaction	<ul style="list-style-type: none"> - Frustration because she could not get the answer of her request - Felt flouted because a lot of money and time was at stake - She did not trust them at all - The feelings were clearly directed toward Ryanair 	<ul style="list-style-type: none"> - She was very frustrated because they were losing time during their holidays on it - She was also lost because it was the only solution to get contact with them - Nowadays, she is fine with it but her friends are still angry and trying to solve their case - Feelings toward Goldcar because she knows it is only a bot 	<ul style="list-style-type: none"> - She was irritated that it did not help her - She felt overwhelmed because of her the many messages of the chatbot on a personal side - Now, she is fine with it since she received quickly her refund - The feelings were toward the chatbot since she quickly had a human interaction but the bot was still trying to interact 		
Opinion about chatbot implementation by the brand	She believes that it is implemented to relieve some workload from the employees but not to get customer satisfaction.	She believes it is to discourage people to fill in complains. She had they feeling it was not programmed to really help people	She thinks it can be good to use it before the purchase, but it is not useful for their customer service		
Reaction to the interaction	She did nothing special instead talking about it with her family since the frustration was shared.	She closed the discussion when she had enough of that conversation.	She did not react in a certain way. She only deleted the messages		
Experience complain	<ul style="list-style-type: none"> - If she had another option to complain than the chatbot, she would have used it. The problem is that 	<ul style="list-style-type: none"> - They had the opportunity to talk about it and they knew that the chatbot was not well- 	<ul style="list-style-type: none"> - She did not talk about it since she focused on getting her refund 	The call center was able to receive reviews directly from customers. The call center employees had told them	

	<p>phone calls are costly at Ryanair, she did not have the choice to do it. She was wondering if it was not a strategy from them to discourage unhappy clients to make them abandon their request.</p> <ul style="list-style-type: none"> - She was never able to reach customer service - She talked about it with her family but did not talk about it on social media 	<p>made for such situation but they still did not bring any solution to their problem</p> <ul style="list-style-type: none"> - They are conscious about it but still did anything - She would have preferred that they just solved their case and they would have been fine with their unpleasant experience with the bot - She talked about it with many people and people were not shocked about it 	<ul style="list-style-type: none"> - She did not talk about it with her relatives - However, if the topic came in a conversation, she would talk about it - She would also not recommend or at least warn them about it 	<p>that since the customers were initially going in circles with the chatbot, they ended up calling them anyway, already frustrated by their interaction with the chatbot.</p>	
Future relation with chatbots	<ul style="list-style-type: none"> - 9/10 → She will always try the chatbot before trying to contact customer service. - 8/10 but her trust does not really go to the chatbot but more to the company it is related to but she was never scared to give her information to the chatbot 	<ul style="list-style-type: none"> - Most of the time, they are pretty useful and she thinks it is a really satisfactory solution but still not as good as a human → 6/10 - She would not trust chatbots with her personal data, not a secured channel → 2/10 	<ul style="list-style-type: none"> - She prefers using chatbots with pre-programmed questions than regular chatbots → 6/10 - She does not trust them with the data and the quality of the answer given → 3/10 	<p>This business experience had an impact on his own perception of chatbots which was already bad. Indeed, this one only confirmed his negative feelings, for him this technology will never replace an operator. He does not even try to use a chatbot anymore when he sees one on the site. At the moment, putting a chatbot back in place is no longer an issue in the company. However, he thinks that with the</p>	

				modern technologies that we hear about, such as ChatGPT, that it can show new advances in these technologies that could become promising for the future.	
Future relation with the brand	<ul style="list-style-type: none"> - 2/10 → she will continue traveling with them because of the price but will avoid as much as possible to interact with them - Same, she does not trust them 	<ul style="list-style-type: none"> - She will never interact with them and really does not trust them on any point → 0/10 	<ul style="list-style-type: none"> - She would interact with a human without a problem because she had a good experience with them at the end → 7/10 - 7.5/10 because of their good reaction 		
Relationship termination	/	For her it is a definitive decision instead if they really changed their way of working but she really doubts it.	/		
Additional comments	She is for chatbots and for AI and she also prefers having a personalized experience to have a better experience.	She feels there are a lot of new things discovered thanks for AI and she is eager to discover what is next for them.	/		

7.7. Dimensions of engagement

		Affective		Cognitive		Behavioral	
		Before	After	Before	After	Before	After
C h a t b o t s	Interview 1	No perceived usefulness found in chatbots → negative emotions	Disappointment, anger and frustration.	No specific intentions of using chatbots due to previous negative experiences, quite high expectations	Still no specific intention of using chatbot but open-minded if it can give a quick response	No specific previous engagement on that dimension, only used a few times	Potential utilization of chatbots since it is a technology that is evolving, potential negative WOM
	Interview 2	Negative feelings toward chatbots due to a lack of transparency and impersonal feeling	No hard feelings toward the chatbot because it is only technology,	Believe it is a helpful tool for companies as initial contact, medium expectations	Intention of using chatbots, neutral in trust	Regular usage of chatbots	Complain to the company, continue using chatbots
	Interview 3	No affective dimension toward chatbots	No hard feelings toward the chatbot because it is only technology	Perception of practical tool but limited, medium expectations	Intention of using chatbots, trust	Regular usage of chatbots	Rated the interaction on 0/10. However, continue using chatbots regularly
	Interview 4	Negative emotions because of lack of personalization	Negative feelings because of her disappointment	No specific intention of using chatbots, low expectations	No specific intention of using chatbots, open if improvement, still trust them	Very rare interactions	Negative WOM, use chatbots if improvement
	Interview 5	No affective engagement toward chatbots	Disappointment, negative feeling	No specific intention of using chatbots, no interest, high expectations	Open to use chatbots if improvement but mitigated trust	Very rare interactions	Negative WOM, use chatbots if improvement

Interview 6	Positive feelings toward that technology	No hard feelings toward the chatbot because it is only technology	Limited intention of using chatbots, medium expectations	Intention of using chatbots, lack of trust	Few interactions	Complain to the company, continue using chatbots for easy request
Interview 7	Positive feelings even if some defaults	Frustration	Intention of using chatbots, medium expectations	Intention of using chatbots	Regular usage of chatbots	Try to complain, negative WOM, continue using chatbots
Interview 8	Scared of lack of feelings of chatbots	Frustration, sadness, injustice (short term)	Optimistic thoughts about chatbot usage, medium expectations	No specific intention of further using chatbots, low trust level	Very rare interactions	Lost of patience, negative WOM, no use of chatbots
Interview 9	Rather negative feelings because of previous negative interactions	No hard feelings toward the chatbot because it is only technology	Intention of using chatbots but room for improvement, no expectations	Intention of using chatbots if improvement, trust	Few interactions	Potential negative WOM, use chatbots if improvement
Interview 10	Positive feelings toward the technology	No hard feelings toward the chatbot because it is only technology	Perceived usefulness and intention to use chatbots, high expectations	A bit more reluctant to the use of chatbots but still intends to, lack of trust	Regular usage of chatbots	Complain to the company and negative WOM, continue using chatbots
Interview 11	Positive but limited feelings toward the technology	No hard feelings toward the chatbot because it is only technology	Intention of using chatbots, medium expectations	Intention of using chatbots, trust	Few interactions	Complain to the company, continue using chatbots
Interview 12	Mitigated feelings (useful but loss of time) but hopeful	No real negative feelings	Limited intention of using chatbots, no expectations	No real intention of using chatbots but trust, lack of emotions, impersonal	Few interactions	Choose not to complain, no more interactions with chatbots, only if needed
Interview 13	Previous negative feelings but now	Anger	Intention of using chatbots, high expectations	Intention of using chatbots, trust, stress	Regular usage of chatbots	Complain to the company and negative WOM,

		rather positive feelings					continue using chatbots
	Interview 14	Positive feelings toward chatbots in general	Lost	Intention of using chatbots as first touch point, high expectations	Intention of using chatbots, lack of trust	Regular usage of chatbots	Negative WOM, continue using chatbots
	Interview 15	Rather negative feelings	No hard feelings toward the chatbot because it is only technology	No real intention of using them, medium expectations	No real intention of using them, lack of trust	Very rare interactions	Negative WOM, continue using chatbots only if really needed, lost of patience
	Interview 16	Positive feelings toward chatbots	No hard feelings toward the chatbot because it is only technology	Strong intention of using them, medium expectations	Strong intention of using them, trust	Very often interactions	Continue using chatbots very often, negative WOM
	Interview 17	No affective engagement toward chatbots	No hard feelings toward the chatbot because it is only technology	Intention of using chatbots, low expectations	Intention of using chatbots, lack of trust	Few interactions	Complain to the company and negative WOM, continue using chatbots
	Interview 18	Negative feelings toward chatbots because of previous experiences	Irritated, overwhelmed	Intention of using chatbots, low expectations	Intention of using chatbots, no trust	Very often interactions	Possible negative WOM, continue using chatbots
		Affective		Cognitive		Behavioral	
		Before	After	Before	After	Before	After
B	Interview 1	Positive feelings toward the brand because of their good reputation.	No hard feelings directed towards the brand because of its good reputation.	Good knowledge of the company because of their reputation, curiosity to try it.	No responsibility held toward the brand for that negative interaction, trust	No previous interaction or travel realized with them	No negative complain communicated to the brand, potential negative WOM, continue interacting
r							
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Interview 2	Cordial relationship	Frustration	Intention of traveling with the company because no other option	Still intends to travel with the company and trusts them in general, lack of transparency about chatbot	Repeated travel with the company	Complained about it to the company and negative WOM, continue interacting.
Interview 3	Does not appreciate them because of their negative image	Frustration and anger	Intention of traveling with the company only because no other option	No real intends to travel with the company and is neutral in her trust toward them	Repeated travel with the company	Complain to the company and negative WOM. Would stop interacting with them if other choice
Interview 4	Mixed feelings (bad quality but good customer service)	Mixed feelings (bad quality but good customer service)	Intention of traveling with the company because cheap prices	Intention of traveling with the company Trust the company and their customer service.	Repeated travel with the company	Continue interacting with them
Interview 5	Positive feelings toward the company	Disappointment	Intention of traveling with the company	Still intends to travel with the company, mitigated trust	No previous interaction	Negative WOM, still wants to travel with the company
Interview 6	Positive feelings toward the company	Anger, lost	Intention of traveling with the company, trust, good perceived image	Intention of traveling with the company for short travels, trust (customer service), less good image, stress	Previous travel with the company	Complain to the company and negative WOM, no more expensive travel with them
Interview 7	No affective engagement toward the company	Frustration, negative feelings, believes it was a way to discourage customers	Intention of traveling with the company because of cheap prices	No intention of traveling but still attracting because of cheap prices, no trust	No previous interaction	Will complain to the company, strong negative WOM, might continue traveling with them when cheapest
Interview 8	Positive feelings of the company because of previous experience	Anger, frustration, sadness, injustice (long term)	Intention of traveling with the company and positive expectations	No intention of traveling with the company, low trust level	One previous positive travel with the company	Negative WOM, stop any kind of interaction
Interview 9	No affective engagement toward the company	Disappointment	Intention of testing the tool through curiosity	No more intention of using the tool, limited trust	No previous interaction	Potential negative WOM, no more interaction

Interview 10	Positive feelings toward the company	Frustration and anger	Intention of traveling with the company, trust	Intention of traveling with the company but more careful, trust the company	Previous positive interactions	Complain to the company, continue booking cars with the company
Interview 11	Positive feelings toward the company because of reputation	Frustration and anger	Intention of booking with the company	Intention of booking with the company, trust	Previous bookings	Complain to the company and negative WOM, continue interacting
Interview 12	No affective engagement toward the company	Lack of confidence and reassurance	Intention of testing the tool through curiosity	No more intention of using the tool, limited trust	No previous interaction	No more interactions in the future
Interview 13	Positive feelings of the company because of previous experience	No hard feelings toward the company because trusted customer service	Intention of traveling with the company, no apprehension	Intention of traveling with the company, trust	Previous positive interactions	Complain to the company, continue interacting
Interview 14	No affective engagement toward the company	Lost	Intention of traveling with the company but apprehension	Intention of traveling with the company because only option, mitigated trust	Previous booking	Negative WOM, continue traveling but no choice
Interview 15	Positive feelings of the company because of previous experience	Frustration, anger (short term)	Intention of traveling with the company	Intention of traveling with the company, trust	Previous bookings	Continue booking with them on a regular basis
Interview 16	Negative feelings toward the brand	Frustration and felt flouted	Intention of traveling with the company only because of the price	Intention of traveling with the company only because of the price, no trust	Previous interactions	Negative WOM, continue traveling with them when cheapest
Interview 17	No affective engagement toward the company	Frustration, lost, anger	Intention of booking with the company, no real expectations	No more intention of booking with the company, no trust	No previous interactions	Complain to the company and negative WOM, stop any kind of interactions
Interview 18	No affective engagement toward the company	No hard feelings toward the company because good customer service	Intention of booking with the company, no apprehension	Intention of booking with the company, limited trust	No previous interactions	Negative WOM, would interact with them again

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Executive summary

Given the increase of human-chatbot interactions in the tourism industry, as well as the gap in the existing literature on the impact of such interactions on customer engagement, there is an urgent need for brands and researchers to further investigate this phenomenon.

This thesis investigates the effect of negative chatbot interactions in the tourism industry on customer engagement with a focal brand. Through a qualitative study consisting of semi-structured interviews with 19 participants, this research identifies the drivers of negative consumer engagement and analyses the resulting affective, cognitive, and behavioral dimensions.

There are five identified causes of negative engagement: interactions with monopolistic firms, non-confirmation of promised services, perceived injustice, chatbots unsatisfaction, and negative contextual experiences. The negative outcomes include frustration and anger for the affective engagement, a lack of intention to interact with the brand and a perceived lack of trust for the cognitive engagement, and negative word-of-mouth as well as complaining for the behavioral engagement. Some forms of disengagement were also observed among the participants. The findings emphasize the need for businesses to resolve issues associated with chatbot interactions to increase customer engagement and mitigate negative effects. By understanding the causes and results of negative interactions, brands can improve customer experiences and foster positive engagement. Accordingly, managerial and theoretical implications are suggested along with recommendations for future research.

Keywords: Negative customer engagement, Chatbot interactions, Tourism industry, Disengagement, Negative engagement dimensions, Artificial intelligence interactions

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