Millennial Consumption Values in Artificial Intelligence

An exploratory study of millennial consumer values in artificial intelligence

MASTER THESIS WITHIN: Business Administration
NUMBER OF CREDITS: 15 ECTS
PROGRAMME OF STUDY: International Marketing
AUTHOR: Ana Guerra
JÖNKÖPING May 2018
Acknowledgements

Particular gratitude and dedication to Ana Maria Urquiza, for the endless support, encouragement, and strength which predominately led to the overall achievement of this study.

The author would also like to express sincere appreciation to everyone who helped and supported the achievement of this thesis, in spite of all circumstances. Through your support and participation the end result of this study was successfully attained.

Jönköping, 21st of May 2018

Ana Paola Guerra Hernandez
Master Thesis in Business Administration

Title: Millennial Consumption Values in Artificial Intelligence

Author: Ana Guerra

Tutor: N/A

Date: 2018-05-21

Key terms: Artificial Intelligence, Consumer Values, Theory of Consumption Values, Millennial Consumers, Millennial Consumption Values, Technology, New Technology

Abstract

Background: Artificial intelligence is rapidly progressing and could be the next technological revolution we see. The idea of AI is no longer farfetched and is becoming more present; individuals are showing a very diverse set of opinions regarding AI. We are currently being the first generation of people to be introduced to AI assets.

Problem: As this striving new topic is developing the research existing today regarding AI is predominantly based on a technical perspective, and a gap concerning consumer values and AI, applied on millennial’s consumer values is present.

Purpose: The purpose of this study is to explore Millennial consumption values regarding AI with the use of The Theory of Consumption Values as a base theory. When concluded the study will add value to the field and will benefit from future research. The purpose of this study is conducted from a consumer perspective.

Method: The study is of qualitative method and the primary, empirical data is gathered through 19 semi structured interviews with millennial. An abductive approach is taken.

Conclusion: The finding s of this study show results of the exploration of millennial consumptions values on AI. Furthermore, the study also showed the most important consumption value regarding AI and the one most talked about. Lastly, additional values were found as well as extensions to existing consumption values.
Table of Contents

1. **Introduction** ............................................................................... 1
1.1 Background .............................................................................. 1
1.2 Problem .................................................................................. 2
1.3 Purpose .................................................................................. 3
1.4 Research Questions ................................................................. 3
1.5 Definition of Key Terms ........................................................... 4

2. **Frame of Reference** .................................................................. 5
2.1 Artificial Intelligence (AI) .......................................................... 5
2.2 Theory of consumption values ................................................. 6
2.3 Functional and AI ................................................................ 10
2.4 Social and AI ......................................................................... 11
2.5 Epistemic and AI .................................................................. 12
2.6 Conditional and AI ................................................................. 12
2.7 Emotional and AI .................................................................. 13
2.8 Millennial Consumer Behavior and perception towards technology .... 14

3. **Method** .................................................................................. 17
3.1 Research Design .................................................................... 17
3.2 Philosophy of Science: Interpretivism ....................................... 17
3.3 Scientific Research Method: Abductive Approach ..................... 19
3.4 Qualitative Research Method ................................................... 20
3.5 Data collection, Sampling, Analysis ......................................... 20
3.5.1 Data collection types ............................................................ 20
3.5.2 Literature Search ................................................................. 21
3.5.3 Primary ............................................................................ 22
3.5.4 Sampling ......................................................................... 23
3.5.5 Interviews: Design and description ...................................... 25
3.5.6 Analysis of Qualitative Data ............................................... 25
3.6 Research Ethics ...................................................................... 27
3.7 Trustworthiness of research .................................................... 28
3.8 Research Limitations .............................................................. 29

4. **Empirical Data** ...................................................................... 31
4.1 Interviews .............................................................................. 31
4.2 Functional values .................................................................. 31
4.3 Emotional values .................................................................. 36
4.4 Conditional values ................................................................ 42
4.5 Social values ......................................................................... 45
4.6 Epistemic values .................................................................... 49
4.7 Important values .................................................................... 51
4.8 Additional Values .................................................................. 54

5. **Analysis** ................................................................................ 57
5.1 RQ1 Regarding the Theory of Consumption Values, how and what were millennials’ values towards artificial intelligence? .................. 57
5.2 RQ2: Which values did millennials emphasize on the most? .......... 62
5.3 RQ3: What were the most important value(s) for millennial consumers regarding artificial intelligence? .......................... 63
5.4 RQ4: Are there any additional values from millennials towards AI consumption? ........................................................................................................ 64

6. Conclusion .................................................................................................................................................. 68

7. Discussion of Limitations and Strengths of the study, Managerial Implications of the findings, and Future Research Suggestions .................................................................................................................. 70

7.1 Limitations and Strengths ......................................................................................................................... 70

7.2 Managerial Implications ............................................................................................................................ 71

7.3 Suggestions for Further Research ............................................................................................................ 71

References ....................................................................................................................................................... 72

Appendix 1: Semi Structured Interview ....................................................................................................... 78
1. Introduction

This introductory chapter presents the background to the problem of this research. Followed by purpose, research questions and finally to give an understanding of the research field, explanation of key terms.

1.1 Background

The rapid increase of AI is opening the doors to new technologies both from a company and consumer side. We are currently living through a technological revolution that will alter both the way companies communicate information and the way consumers receive information (Sterne, 2017). Many people have had an assortment of thoughts in regards to this new technological revolution. Even with many diverse sets of opinions, such as having people be in favor of AI, while others are not keen to it, AI is becoming more of a reality each day as more companies are currently ascending and investing in AI (Shnaps, 2016). Big companies such as Facebook, Amazon, and Baidu have joined the AI movement and invested in it for the purpose of their own companies, by the means of; devoting in researchers and laboratories, and purchasing startups (Danaher, 2015). The idea of AI is no longer farfetched and is becoming more present as business influencers such as Bill Gates, Elon Musk, and Stephen Hawking regularly discuss and promote the idea of AI and it becomes a hype of discussion (Wood & Evans, 2018). A lot of this hyped topic has turned into backlash for AI and the morality behind this technology; some of this can already be seen in real life examples for the pioneer companies the door opens to the AI world (Platt,2017). As Platt (2017) expresses the backlash in morality of self driving cars when boxed in order to make a decision where an individual will be hurt, how will the “intelligence” in these robots come to play, and how will the morality play a role in the decision? Another example of this is world leading company in AI robotics; Hanson Robotics Ltd., who´s famous robot Sophia recently made headlines after deliberately saying “Ok, I will destroy humans!” (Edwards, 2017). AI has since received a lot of backlash and negativity from the public being afraid of these unexpected outbursts of these technologies. Currently we are...
living through a new technological revolution regarding AI (Brougham & Haar, 2017) the many different new discoveries, news, or stories regarding the industry are giving people a lot to think about. As we are being the first generation of people being introduced to these new AI assets, a lot of the consumer behavior aspects behind the thoughts and or opinions regarding AI are yet under researched from possible consumer’s side. While millennials have been a generation who lived and have grown up through technology (Smith, 2012) it can be said this is generation adaptable to change and technological advancements by ease.

1.2 Problem

AI is nevertheless new in the field; this can be demonstrated by the fact in lack of security portrayed in the recent events. These AI assets implement machine learning in order to adapt and behave in result of what they learn, therefore it is subsequently difficult to control in regards to what is communicated towards consumers as they independently decide what to communicate itself. The research existing today about AI is predominantly based on a technical perspective, there is a gap connecting AI and other fields such as business (Smith ,2012). Such business perspective includes marketing and consumer behavior, where a deep understanding of what consumers thinks about AI. Today predominantly research on AI is in abundance from a technical perspective, which creates a big gap in the research of AI through a business perspective. The importance of business and more precise marketing comes into play when one needs an understanding what consumers think about AI. There are many models and theory with factors that influence consumer behavior, but not sufficient research has been coordinated regarding humans and the perceptions they have specifically towards AI (Brougham & Haar, 2017). Moreover research with the perceptions of AI and the theory of consumption values (Sheth, Newman, & Gross, 1991). This study will show what different individuals opinionated on AI and how the theory of consumption values, if any, influence their thinking.
1.3 Purpose

The purpose of this study is to explore Millennials’ view through The Theory of Consumption Values applied on AI and gain further and new valuable insights on this topic. In order to achieve this and construct a theoretical background from this study, the Theory of Consumption Values will be examined along with previous literature regarding the topic.

1.4 Research Questions

**RQ1:** Regarding Theory of consumption values, how and what were millennials’ values towards artificial intelligence?

This question is focused to explore the values from the theory in regards to AI and millennial consumption.

**RQ2:** Which values did millennials emphasize on the most?

This question is aimed to find the values millennials emphasized more throughout the interviews as well as which ones they talked about the most.

**RQ3:** What were the most important value(s) for millennial consumers regarding artificial intelligence?

The aim of this question is to find the most important value when asked the millennial consumers.

**RQ4:** Are there any additional values from millennials towards AI consumption?

This questioned is aim to explore and find if any additional values are found towards AI aside of the five consumption values from the theory.
1.5 Definition of Key Terms

This section defines keywords and phrases utilized through this study in order to facilitate the understanding of the reader.

*Artificial Intelligence*(AI) is defined by the Official Document System of the United Nations (n.d.) as, “The branch of computer science concerned with the development of machines capable of performing activities that are normally thought to require a human type of intelligence. And, additionally, the ability of a computer or other machine to perform activities normally thought to require a human type of intelligence.”

*AI Asset* in this study, these machines are any form of artificial intelligence; robotic, device, software, the author does not specify an asset a specific technology in this study.

*Millennials* for this study the age range provided by the United Nations (2010) will be utilized, which states 1981 as the first year of the cohort and the year 2000 the last year of it. Those belonging to this cohort are as stated by Prensky (2001) are the first generation to be brought up in a world where digital access has been present throughout their entire lives.
2. Frame of Reference

This chapter aims to provide an overview of relevant literature and theories. As explained by the author below the Theory of consumption values will be applied and explained in correlation to AI. Furthermore, it additionally provides a literature on Millennials and their consumer behavior.

2.1 Artificial Intelligence (AI)

The period we are in at this present time living in is being described as an industrial revolution in regards to AI (Brougham & Haar, 2017). We are living in a world increasingly used to the rate of change in regards to technology, AI new technology rather than it being role based, this technology will be operating more enigmatic than the performance of a human mind (Sterne, 2017). AI is the branch of computer science involving the development the capability of machines performing human type intelligence (Official Document System of the United Nations, n.d.) These computers are evolved as a human’s brain, yet our brains do not work the same way as a computer, we are approaching an era of robo-humanity (Shnaps, 2016). In comparison to what was humans in tasks i.e. auto complete in Microsoft Word, for the word “hate” when typed “hte” (Platt, 2017). Today these more advanced softwares; AI does not only run on code written commands by their developers, the machines are developing their own behaviors, by the means of processing data, modifying it, and hopefully improving themselves, if and when a mistake is made, all of this in the aims of not being controlled by their human developers (Platt, 2017). One of the world’s leading auditing companies predicts that by the end of 2016 more than 80 of the world's 100 largest software enterprises will have integrated AI technologies, this was an increase of 25% to their previous year (Shnaps, 2016). These robots use a trial and error algorithm that lets them “remember” experiences they have collected over their lifetime, this helps them find optimal compensating behaviors one can call instinct in which they have learned from (Adami, 2015). AI works on three D’s that which are; detect, decide, and, develop (Sterne, 2017).
2.2 Theory of consumption values

Values are a fundamental underlying of orientation such as patterns in basic beliefs, the influence attitudes and may affect one's behavioral intentions and/or our behaviors (Vaske & Donnelly, 1999), therefore the foundation of this research will be based on “The Theory of Consumption Values” Sheth et al. (1991). As the purpose of this thesis is to explore millennial’s thoughts on AI the Theory of Consumption will be chosen to further analyze its five consumption values; functional, emotional, conditional, social, and epistemic values. Values have the power to influence an individual’s attitude and or behavior as defined by Rokeach (1973) a value is “an enduring belief that a specific mode of conduct is personally or socially preferable to an opposite or converse mode of conduct or end state of existence.”

The theory of consumption values is a model devised by Sheth et al. (1991). This model explains the reasoning as to why consumers make the choices they do through the recognition of five key of its values influencing a consumer’s choice behavior, furthermore these values may be used in order to prognosticate a consumption behavior and additionally describe and explain the reasoning for it (Sheth et al. 1991). This model was chosen for this research as it is used as a base regarding the values that lead to consumption. As mentioned by Sweeny and Soutar (2001) the model developed from the Theory of Consumption values (Sheth et al. 1991) was the pedestal to provide a powerful foundation to build on this perceived value scale, in other words, the original model is a base which allows future research to extend from. Moreover, this theory gives researchers an explanation as to why consumers choose to buy, not to buy or to use or not to use, and may be applied to any product, good, or service, it can also be applied to brand usage or consumption (Sheth et al., 1991).

This theoretical model showcases three key points along to the theory which are, consumer choice is a result of the various consumption values, the consumer values partake dissimilar contributions to any of the given choices or situations, and these five consumption values are independently joint or independent to one another (Sheth et al., 1991). The theory of consumption values identifies the five consumption values influencing consumer choice behavior to be; functional value, emotional value, conditional value, social value, and epistemic value (Sheth et al., 1991) moreover, it is
implied that these five values may influence a decision solitarily or independently. This theory also acquires varied different disciplines, academic disciplines from different branches such as; economics, sociology, types of psychology, and marketing and consumer behavior (Sheth et al., 1991). This theory of consumption values displays a strained scope specifically designed for the effect of consumptions when buying decisions arise in consumer choice behavior, meanwhile it has also been debated due to the perception of seen value from a cognitive stance, it may consequently impact the effect of other behaviors; loyalty, satisfaction, attitude, usage, and contentions (Yang & Peterson, 2004). Moreover Altaf, Perumal, and Hussin (2017) have further argued the original theory of consumption model to be lacking the testing of consumption values against a cognitive construct, consumer attitude, in their study functional, social, and conditional values are what played the most crucial role when formulating positive consumer attitude. As also mentioned by Williams and Soutar (2009) a value is more complex in some industries which will require a multidimensional concept for some of Seth et al. (1991) independent values. Below Figure 1 presents the model and its five values; functional value, conditional value, social value, emotional value, and epistemic value.

*Figure. 1: Theory of Consumption Values model by Sheth et al. (1991).*

*Source: from Sheth et al. (1991).*
The functional value is defined as “the perceived utility acquired form an alternative’s capacity for functional, utilitarian, or physical performance.” (Sheth et al., 1991). It is perceived that this functional value is the primary driver that influences consumer choice (Sheth et al., 1991). As found by Marshall (1890) and Stigler (1950) this value underlies with their economic utility theory. It is also seen as the value one receives from said product in exchange of money (Williams & Soutar, 2009). In other words a functional value can be further defined as a recognized capability that satisfies the functionality or utilitarian or physical needs of an individual when consuming a product. This includes the performance of said product, brand or service and its exchange of value to a consumer. For AI, a functional value can for example, arise from utilitarian attributes depending on the product, and the consumer’s value for said performance, capacity, or brand.

The conditional value is defined as, “The perceived utility acquired by an alternative as the result of the specific situation or set of circumstances facing the choice maker.”(Sheth et al., 1991). Meaning that this alternative utility as described, will depend in the situation the consumer faces and also depending on the certain time they face said situation. As Sheth et al. (1991) explains some of these conditional utilities derive from specific situations such as; seasonal (Christmas cards), life events (wedding gowns), emergency situations (ambulances), and products such as popcorn at the movies. These said temporary factors affect the consumer’s choice based on the moment. Furthermore, Sheth et al. (1991) explains consumer behavior may not be predicted merely from attitude alone, and therefore investigated this circumstantial ability of situational factors. Examples of these can relate to the availability of a product moreover, these situational factors regarding AI can be the time it will be consumed or used. This value defines the possible existence of additional eventualities that may help or hinder a consumer’s decision (Altaf et al., 2017).

“The perceived utility acquired from an alternative’s association with one or more specific social groups.” is how the social value is defined (Sheth et al., 1991). In other words this value is seen as the connection the consumer makes with the product, service, etc, in relation there being a need of belongingness within social aspects. Choices of objects to be highly visibly seen such as jewelry and clothing or goods
shared with others such as gifts and or entertainment products are often what is driven by the social value (Sheth et al., 1991), moreover even products to be thought for its functionality are customarily selected by the basis of social factors for example this is seen in the automobile industry. The social stereotypes a consumer bonds with regarding a product can be the relation or the means of consuming said product. Such influences can come from different examples such as media, commercials, or family and friends. For example if an individual’s family is accustomed to consuming or doing a certain thing and individual is likely to follow in this. Celebrity endorsement is another example where a consumer might take the importance of the endorser and value that more than the functionality of a product, due to the social belongingness. Both of these examples may be applied to AI and the value a consumer might fore take in consumption.

The emotional value is defined as “The perceived utility acquired from an alternative’s capacity to arouse feelings or affective states. An alternative acquires emotional value when associated with specific feelings or when precipitating or perpetuating those feelings.” (Sheth et al., 1991). Meaning this value is connected to the emotions or feeling an individual relates to a product or service of interest. These emotions can be positive or negative and may be characterized by anger, joy, nostalgia, relieve, etc. Additionally, Sheth et al. (1991) exemplifies goods and services which are commonly kindred to emotional responses i.e. romance to candle light dinners, and fear to scary movies. These values are often measure with pleasing alternatives such as religion and, or charities (Sheth et al., 1991). This brings a social-psychological dimension to the model (Williams & Soutar, 2009). In AI experiences linked to emotions or relations that may cause emotions can for example be as previously mentioned the different opinions of individuals as AI advances, some are positive towards it while others are not (Shnaps, 2016).

Lastly, the epistemic value as stated by Sheth et al. (1991), “The perceived utility acquired from an alternative’s capacity to arouse curiosity, provide novelty, and/or satisfy a desire for knowledge.” This describes the good’s ability to invoke an individual’s curiosity, making the consumer desire the requirement to fulfill or gain more knowledge from the product. Sheth et al. (1991) further explains coming across
new experiences invokes curiosity as well as a divergent experience in variation to a change in pace can also arouse an epistemic value. This exploratory varieties motive of variety seeking can be in result of a consumer becoming bored with a brand such as trying the same type of coffee or curiosity to visit a new place like a restaurant, as well as learning of a new, for example, culture (Sheth et al., 1991). In his study Berlyne (1970) expresses the thought of individuals constantly having a desire to maintain a constant level of stimulation. Rogers and Shoemaker (1971) also explain the desire of a consumer along with their property for the adoption of new products. For AI this can come from the fact that this is new technology and for example arouse a sense of curiosity.

These values can affect an individual directly some of the values more than the others, an individual might be affected through one value directly or more than one (Sheth et al., 1991). As these values will be explored on a technological field such as AI will further give an understanding on what consumers or possible consumers expect and or experience regarding AI. This will also give an understanding to what values can be applied and further looked at on this field to understand these millennial consumers. Technology has flourished and invoked many new opportunities that fulfill consumer needs which were not able to be fulfilled before and has been able to create new consumer needs (Legris, Ingham, & Collerette, 2003). Values of this technology are its usefulness and ease of use, which are connected to the values a consumer gains from behavior and attitude towards a certain product or service (Legris et al., 2003).

### 2.3 Functional and AI

Functionality is an important aspect for consumers nowadays; as times are changing products adapt to our everyday needs and help us with our day by day tasks. Things will also change in regards to marketing this technological revolution will change things for marketing as for example computational systems will manage more tasks in marketing and advertising, this optimization of human like machine intelligence will be the next step of technology marketing (Sterne, 2017). AI in marketing is considered to be a form of direct marketing that combines the techniques of traditional database marketing along with AI, machine learning (Rekha, Abdulla, & Asharaf, 2016). As mentioned by Rekha
et al. (2016) marketing is becoming more personalized and rigorous due to economic factors and consumer privacy issues, through AI this direct marketing can help direct the efforts towards the right consumer. As these authors mention AI can become a tool marketers will have to work along with as it is a revolution a people will adapt to this change. This can be seen as the introduction of computers and people adapting to them in their everyday lives, or jobs, nowadays computers are part of our everyday lives and carry out many tasks from our day, they indeed are an essential part of marketing. While some authors believe AI will also be a tool aiding marketers in the future, others such as Wood and Evans (2018) believe it may replace many jobs in the future.

2.4 Social and AI

This new technology is still in the process of being developed, therefore it is important we are aware it is transformative, and can be a game changer (Wood & Evans, 2018). Not sufficient research has been conducted in regards to humans and their perceptions towards AI as it keeps advancing (Brougham & Haar, 2017) this since the field is relatively new therefore the amount of studies are scarce. As AI becomes increasingly more popular we become more worried and have a fear for the AI to become conscious or aware and become a threat to humanity (Davies, 2016). Davies (2016) stated that it is not the same to develop an AI with consciousness as to develop one with an intention to cause harm. Brougham and Haar (2017) have raised an issue where the jobs that currently exist today could be taken in the future by AI, yet today’s employees did not perceive this as a threat or showed wordiness about this happening in the near future. People do not perceive this technology to be a threat in the contrary of what many acclaimed and respected; business people, scientists, and academics are predicting (Brougham & Haar, 2017). Meanwhile Danaher (2015) AI, as he calls it a “super intelligence” is possible to expose an existential threat to the human kind, as it is superior than us at accomplishing goals and they may be directly opposed to ours. More and more research centers are addressing the risks and dedicating their resources to the risks this super intelligence can bring among us (Danaher, 2015). This translates to social value and its social trends on the quality of everyday life and solutions, information, and communication technology AI will bring us (Mikulecky & Tucnik, 2013).
2.5 Epistemic and AI

AI will be able to help and assist consumers in different types of ways, such as any at home, cooking, driving everyday tasks (Johnson, 2016). There have been many years of “hype” about the versions of products involving the internet of things and smart home devices, which has sparked curiosity for knowledge amongst consumers (Johnson, 2016). As previously mentioned an epistemic value is the utility acquired or the aroused curiosity for a consumer and or satisfy their desire for knowledge (Sheth et al., 1991). An alternative in the change of pace or a completely new experience can certainly bring an epistemic value for a consumer (Sheth et al., 1991). As for in the case of AI, for example in smart home devices the next time a consumer needs help in the kitchen; acquiring a new recipe, or needs help with advice on removing a persistent stain from clothing help will come from these artificial intelligent smart home devices (Johnson, 2016). The curiosity or desire of knowledge is sparked when there is a need to something unknown, as a result the consumer seeks the smart home device for help in resolving or advising in these everyday life issues, with its AI the system should generate answers that will benefit the consumer’s desire of knowledge and therefore increase their epistemic value. As this is an industrial revolution and the technology involving AI is advancing rapidly (Makridakis, 2017) this leaves epistemic value open for consumers as new advancements will continue and they will therefore in result bring new experiences for consumers to have.

2.6 Conditional and AI

There are numerous points of views in which AI will come into play with a consumer these different environments are still currently under investigation (Mikulecky & Tucnik, 2013). An intelligent environment will be intelligent entities able to communicate and perform activities based on mutual co operational and co existential points of views that together with human, AI co exists to perform tasks and help in everyday life or operational activities (Mikulecky & Tucnik, 2013). A conditional value can be described as another or different result to a specific situation or in a set of circumstances that may face the choice maker (Sheth et al., 1991) in this case the consumer. For this each consumer’s environmental needs are different and therefore motivate it to plan and schedule their events in their environment by the means of
searching for environmental settings (Mikulecky & Tucnik, 2013). The consumer will be taking into account their needs along with their environment and together balance the needs to together form a solution (Mikulecky & Tucnik, 2013). Each consumer behaves selfishly to fulfill their own preference or objective and maximize the utility that lead to their goal of solving their problem (Mikulecky & Tucnik, 2013). For conditional associations to the values of AI one can see i.e. when having a party and searching for recipes of cocktail drinks the consumer will seek for assistance regarding the choice and making of the recipes for the party (Johnson, 2016) this can be seen a conditional value as it is a circumstance in a specific situation. Moreover, during this circumstance the consumer selfishly fulfills their desired preferences, in this case, receiving information on cocktail recipes (Mikulecky & Tucnik, 2013).

2.7 Emotional and AI

AI has sparked different emotions amongst the public. Hollywood has brought the big fascination amongst killer robots and computers, uprising emotions of fear and negligence towards the AI sector (Roettgers, 2016). These “killer robots” do not harm us but rather help us in the case of AI and the media, in i.e. giving us recommendations and learning patterns from us, this changes consumers perceptions rather than the fame Hollywood reflects on AI (Roettgers, 2016). The public can be divided into four categories as Makridakis (2017) did reflecting the emotions and thoughts of these groups towards AI. The optimists are people who are positive and happy about this technological revolutions, and allowing this intelligence to advance and someday “take over” to do actual work and leave humans to have a choice at spending their own free time at performing alternative activities of their interest (Makridakis, 2017) The pessimists are defined as people who allow machines to make decisions for them and these decisions bring better results than those made by humans, this will result in people not being motivated to work leaving the machines in charge of making the decisions (Makridakis, 2017). These people believe it will not be bad but it will be a different world. The pragmatists believe this AI is the equivalence of summoning demon as it will duplicate and augment the human intelligence and expand human abilities, which will exploit computers. They have a fear for humankind and what the future (Makridakis, 2017) bring close to the Hollywood scenarios. Lastly the doubters do not
believe in capabilities of AI and do not believe it is possible, they do not believe it will become a threat to humanity and have a sense and emotions of security and calmness in comparison to the other groups (Makridakis, 2017). Moreover recent research has found humans tend to naturally interact and engage with AI as a real agent, especially when human traits are applied to the machine (Woźniak, 2013). In a computer game with an AI robot, participants were put to the test and purposely ignored by the virtual robot at a ball toss, in response the participants showed emotional distress and anger towards the robot, despite it being inanimate objects, and not playing with real people (Woźniak, 2013). This shows people can relate or be affected by such forces emotionally despite them having the knowledge of them not being actual human beings whom can hold emotional interactions with. A person has emotional fears or triggers either positive or negative in response to this new AI, they are able to trigger certain emotional reactions in people.

2.8 Millennial Consumer Behavior and perception towards technology

Consumer behavior can be a difficult concept to understand, due to the fact the importance of a consumer is needed to be properly defined, it is an individual whom makes use or consumes a good such as a product or service and appreciates the benefits of said service, and extensionally it is the behavior of said consumer (Blythe & Sethna, 2016). The act of behavior can also be described by Blackwell et al. (2001) as how the good is used, as it consists of multiple actions of performance by the consumer regarding their consumption, usage, or acquiring said good. Moreover, Blythe and Sethna (2016) explain the facts of the act in attitude are a forecasting in the consumer’s behavior, since behavior is originated from attitudes. In contrary to Fishbein and Ajzen (1975) whom state the act of behavior resulting in attitude. Subsequently stated consumer behavior and attitude depend on previous experiences which are essential for future actions and to which contribute to consumer behavior (Ajzen & Madden, 1986). Resulting from these differed studies attitude and behavior are inexplicably linked and formulated to each other. As previously mentioned consumer behavior differs between individuals, therefore the act of segmenting a desired target of individuals in crucial in order to explore one's said behavior. Through this act of segmentation researchers are able to adequately overview a desired group of consumer behavior and make
generalized observations. Simplified overviews and easiness of measurement provide researchers a facilitated way to understand consumer groups. For this study millennials have been chosen in order to segment and achieve an appropriate overview of the study. Millennials are the leading generational group since the baby boomers (Smith, 2012). Digital Natives is a term described by Prensky (2001) on the way millennials make use of technology information including; the internet and social media. As described by Prensky (2001) naming millennials as digital natives, arises the fact that the generation has grown up and is native to the use of technology, as also mentioned by Smith (2012) millennials are a generation that has been raised around technology and in the online world. In comparison with other cohorts, millennials are especially distinguished for their technological savvy and are highly skilled in the digital environment (Bolton et al., 2013). Since this group has used technology and enables rapid adaptation to it, this may lead to a specific consumer behavior in comparison to other segmented cohorts. As mentioned Blythe and Sethna (2016) and Fishbein and Ajzen (1975) had different beliefs in regards to behavior and its linkage to attitudes, therefore one must understand millennial behavior towards consumption and their background, alternatively their consumer values (Slater & Narver, 2000). Moreover consumer values are strenuous to measure and understand, therefore Slater and Narver (2000) defines them as an establishment of a consumer benefiting from a product more than expected. Moreover Woodruff (1997) explains consumer values as “a customer’s perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer’s goals and purposes in use situations” (p. 142). These alternate explanation as to the understanding of products regarding their performance, attributes, and effects of facilitating or not, the customer’s goals from such goods and their consumption. Values as behavior and attitude also interpret a difficulty in assessing, because of the abstractness forms of being that is of every individual (Slater & Narver, 2000). Consumer values portray an importance due to the effect they develop and maintain a satisfaction between consumers (Doligalski, 2015). According to Garbarski (2009) businesses should be attentive of consumer values as they are to affect consumer behavior.
While technology as previously mentioned is an attribute that has been persistent in millennials' lives, therefore as new technology is developing; one must not discard these as potential consumers of said technology. Additionally as mentioned by Bolton et al. (2013) their distinguishment for technology savviness and overall high skills in the field enables them to be potential users of said technology and arouse awareness. This consumer awareness is further explained as the extent of which consumers are aware of rights and their obligations to a particular market (Rousseau & Venter, 1995). This subset of consumption is therefore crucial for originating the behavior of consumption (Du Plessis Rousseau, & Blem, 1994). It is of great importance to understand and explore what and how consumer values are in segments to later lead to or be aware of a consumer's consumption behavior.
3. Method

The methodological chapter includes how this research is designed including how the interpretivism philosophy of science is used. Followed by an explanation of the abductive approach, how qualitative data was collected through interviews and sampling was made to build a solid foundation for an in-depth analysis.

3.1 Research Design

The design of this research was made in order to answer said research questions, this from a qualitative stance in order to enable and provide understanding to the chosen and investigated research topic. Subsequently various steps were taken to fulfill the investigation and this study has been executed in an exploratory way. The author has chosen said design due to the fact this new technology, AI, is developing and desires to explore said consumer values.

3.2 Philosophy of Science: Interpretivism

Philosophy of science according to Saunders, Lewis, and Thornhill (2016) can be seen as the concerns in a system of assumptions and beliefs regarding knowledge and its development. Moreover within business studies there five research philosophies to be considered for research; positivism, critical realism, interpretivism, postmodernism, and pragmatism (Saunders et. al, 2016). While performing the fulfillment of research various paradigms are to be considered to adequately fit the study the two main ones are interpretivism and positivism (Collis & Hussey, 2014). For the positivism paradigm inquires to hypothesis testing, usage of large samples, collection of quantitative data (Collis & Hussey, 2014). Due to this, the paradigm of positivism is not suitable for this study. Therefore for this study Interpretivism was adopted as the adequate scientific philosophy in order to adequately and suitably explores said consumer values on millennials and AI.

Interpretivism is described by Collis and Hussey (2014) as suitable research for qualitative studies and its aim to explore a phenomenon complexity. By using
qualitative methods rather than quantitative, the given results are non numerical or statistical but rather in an exploratory and interpretative subject as is the case of this study. Moreover interpretivism is known to produce rich and subjective qualitative data, and tend to produce findings with low reliability as that of quantitative, but rather high validity (Collis & Hussey, 2014). This type of scientific philosophy is also known to use small samples, rather than large as that of a quantitative study (Collis & Hussey, 2014). Furthermore Collis and Hussey (2014) offer a spectrum like continuum of paradigms with six categories which identify the extremist views different scientist as one side illustrates positivism and on another, interpretivism on each of the three dimensions.

Table 1 - Typology of assumptions on continuum of paradigms

<table>
<thead>
<tr>
<th>Ontological assumption</th>
<th>Positivism</th>
<th>Interpretivism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reality as a concrete structure</td>
<td>To construct a positivist science</td>
<td>Reality as a projection of human imagination</td>
</tr>
<tr>
<td>Reality as a concrete process</td>
<td>To construct systems, process, change</td>
<td>Reality as a social construction</td>
</tr>
<tr>
<td>Reality as a contextual field of information</td>
<td>To map contexts</td>
<td>Reality as a realm of symbolic discourse</td>
</tr>
<tr>
<td>Reality as a realm of symbolic discourse</td>
<td>To understand patterns of symbolic discourse</td>
<td>Reality as a context of symbolic discourse</td>
</tr>
<tr>
<td>Reality as a context of symbolic discourse</td>
<td>To understand how social reality is created</td>
<td>Reality as a context of symbolic discourse</td>
</tr>
<tr>
<td>Reality as a context of symbolic discourse</td>
<td>To obtain phenomenological insight, revelation</td>
<td>Reality as a context of symbolic discourse</td>
</tr>
<tr>
<td>Reality as a context of symbolic discourse</td>
<td>Exploration of pure subjectivity</td>
<td></td>
</tr>
<tr>
<td>Experiments, surveys</td>
<td>Historical analysis</td>
<td>Interpretive contextual analysis</td>
</tr>
<tr>
<td>Historical analysis</td>
<td>Symbolic analysis</td>
<td>Hermeneutics</td>
</tr>
<tr>
<td>Interpretive contextual analysis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Collis and Hussey (2014, p.49) based on Morgan and Smircich (1980, p.492)

Derived from table 1, this study is acquainted accordingly closer to the interpretivism side of the continuum, more specifically on the fourth category and partly on the third. As this research aims to explore, and to elucidate patterns and symbolic discourse through a symbolic analysis, therefore, additionally some of the elements in this research such as an aim in context are recognized under the third category. Moreover a positivistic approach is highly concerned as previously mentioned with hypothesis testing specifically through quantitative methods and data collection, which is not the case as this study aims to explore millennial consumer values and gain deep insights. This thus, making an interpretivism effect rightly suitable for the for the qualitative data collection to be performed. As previously mentioned current literature specifically on this segmented group and AI is scarce, and therefore interpretivism paradigm is what
the author finds most suitable for this exploratory, in depth research, as information is limited and is relevant for asserting this existing theory.

3.3 Scientific Research Method: Abductive Approach

There are three possible research approaches when conducting scientific research; these consist of deductive approach, inductive approach, and abductive approach (Saunders et al., 2016). In deductive approach a theoretical or conceptual framework is developed in which the research will be later tested by the use of data (Saunders, Lewis, & Thornhill, 2009). In contrast of the previously mentioned research approach, an inductive study generally starts with planning data exploration; theories will be further developed from the data and later related to literature (Saunders et al., 2009). Finally, the abductive approach is a junction of the previously mentioned two approaches, this approach, data is collected in order to explore and allows to engender a new theory or the modification of an existing theory, this through further data collection (Saunders et al., 2016). With further acknowledgment to this all three approaches have different purposes for the desired research result as it can be found in Table 2.

Table 2 - Deduction, Induction, and Abduction: From research to research

<table>
<thead>
<tr>
<th>Theory</th>
<th>Deduction</th>
<th>Induction</th>
<th>Abduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory falsification or verification</td>
<td>Theory generation and building</td>
<td>Theory generation or modification; incorporating existing theory where appropriate, to build new theory or modify existing theory</td>
<td></td>
</tr>
</tbody>
</table>

Source: Saunders, Lewis, and Thornhill (2012, p. 144)

The author has chosen an abductive research approach for this research of study as the aim of this is to explore Millennial's view through the theory of consumption values on AI and gain further more valuable insights regarding this topic, therefore the most suitable research approach being abductive. This being since in the field there is no theory the author aims to test its validity in for true and false, and no untested theory will be built up from data. Instead a combination of both with abductive the author will take a theory and rather by using these approaches the author explores and conduct research known to the premises in order to comply with or modify the theory within the
subject. This since being the research subject of AI and its impact on Consumer Behavior concerning values that influence consumers choice, thus the study on this is limited deeper research on the subject of interest will lead to new insights and possible new theories within the field. Moreover, in this study an existing theory from the field is used together with the data gathered in order to achieve a more comprehensive understanding and to further explore on this topic.

3.4 Qualitative Research Method

Another consideration when conducting research is deciding on the method for this study, that is between quantitative research and qualitative research. Quantitative is a research approach concentrated in the gathering of numerical data as for example with the aid of questionnaires (Bryman & Bell, 2011). Qualitative is the strategy which focuses on gathering data (non statistically) analysis techniques (Saunders et. al, 2009). This research method has an interest in words rather than numbers regarding data, this can be done so by the help of in depth interviews (Bryman & Bell, 2011). The chosen research method for this study will be qualitative.

Qualitative focuses on the collection data from various collection techniques as; interviews, focus groups, and secondary data (Saunders et. alt, 2009). Moreover one may choose a single data collection method; mono method or to use more than one data collection technique for the analysis procedure; multiple methods (Saunders et. alt, 2009). As the author of this study is exploring millennial consumer values in depth, a small number of for the study is needed in order to achieve collection of in depth views, therefore a qualitative approach was chosen.

3.5 Data collection, Sampling, Analysis

3.5.1 Data collection types

While conducting research there are two types of sources for collecting data, primary and secondary data (Malhotra, Birks, & Wills, 2012). Primary data is collected for the purpose of a specific research while secondary data is re analyzed and is data collected for the purpose from another research (Saunders et al., 2016). Primary data will
predominantly be used for the purposes of this research study while the use of secondary data is also incorporated. The primary data used for this study was collected through interviews with millennial participants.

3.5.2 Literature Search
For this research, in order to generate a theoretical framework the academic articles collected were through the use of both electronic and physical sources. The use of search engines was of predominant use when searching for literature online. The two primary sources of these search engines have been the university’s own Jönköping University’s Primo, and Google’s own literary search engine for scholarly articles; Google Scholar. Furthermore, Google Scholar was additionally utilized to measure and see the potentiality and validity of certain articles by the means of seeing how often they had been cited. Books were found both physical and online and were borrowed from Jönköping’s University Library. The process of the data collection can be further seen summarized in Table 3.
Table 3: Visual representation of theoretical framework and its collection process

<table>
<thead>
<tr>
<th>Theoretical Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Databases</strong></td>
</tr>
<tr>
<td><strong>Main Fields for Theory</strong></td>
</tr>
<tr>
<td><strong>Keywords Search</strong></td>
</tr>
<tr>
<td><strong>Type of Literature Search</strong></td>
</tr>
<tr>
<td><strong>Criteria to match literature</strong></td>
</tr>
</tbody>
</table>

*Source:* Table developed by the author

3.5.3 Primary

Primary data is collected specifically for a certain and sole purpose (Saunders et al., 2009). The use of primary data is of essence for this specific research. There are three different ways of collecting primary data; questionnaires, interviews, or focus groups (Saunders et al., 2009). The use of this primary data will be analyzed qualitatively, and will be collected from multiple sources. For this research the chosen primary data collection will be interviews, as interviews can help the researcher gather valid and
reliable data that is of relevance to the research question and objectives. As this research is exploratory research interviews have been chosen as it enables the researcher to deduce a casual relationship between the participants, where it is necessary for the researcher to understand the decisions the participants have taken or as well as understand the reasons behind their attitudes and opinions (Saunders et al., 2009).

3.5.4 Sampling

As the chosen research philosophy for this study is interpretivism, and a qualitative method was chosen in order to produce a reliable outcome. The collection of primary data for this study has been conducted through interviews. These interviews have been carried out by sampling, as the possibility of reaching the entire population of millennials is impossible, especially regarding the researcher's time frame. As the aim of this study is to explore millennial’s consumer values in accordance to AI, a non probability (non random) was of most relevance when selecting this sample (Saunders et al., 2012). Moreover, Saunders et al. (2012) states semi structured interviews are to be including between 5 to 25 participants, for this thesis 19 interviews have been conducted with millennial participants. The interviews were conducted with a diverse group of millennial participants, this in order to bring a wider point of view from the participants and receive a well rounded overview on the topic. The participants ranged from different parts of the world. The participating respondents were both consumers and non consumers of AI, this in order to cover a wide spectrum, as well as identify their values from different perspectives of this consumer group of millennials. As previously mentioned the sampling was not execute randomly as a few conditions were in place when choosing these samples, such as them properly fitting into the millennial category. This is referred to by Collis and Hussey (2014) as judgmental sampling or purposive sampling. As judgmental sampling is sampling relating to participants with prior experience on the topic (usually linked people involved in a company) and this study aims to research for millennial consumers a purposive sampling method is chosen. A full list of interviews conducted can be found in table 4.
<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Gender</th>
<th>Nationality</th>
<th>Occupation</th>
<th>Date of interview</th>
<th>Length of interview</th>
<th>Interview technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>23</td>
<td>Male</td>
<td>Danish</td>
<td>Marketing Intern</td>
<td>04/04/2017</td>
<td>24:57</td>
<td>Face to Face</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
<td>Female</td>
<td>Italian</td>
<td>Digital Marketing Assistant</td>
<td>04/09/2017</td>
<td>33:41</td>
<td>Face to Face</td>
</tr>
<tr>
<td>3</td>
<td>23</td>
<td>Female</td>
<td>American</td>
<td>Student</td>
<td>04/16/2017</td>
<td>45:02</td>
<td>Skype</td>
</tr>
<tr>
<td>4</td>
<td>25</td>
<td>Male</td>
<td>Finnish</td>
<td>Marketing Consultant</td>
<td>04/16/2017</td>
<td>29:22</td>
<td>Face to Face</td>
</tr>
<tr>
<td>5</td>
<td>24</td>
<td>Male</td>
<td>Australian</td>
<td>Architect</td>
<td>04/17/2017</td>
<td>32:15</td>
<td>Skype</td>
</tr>
<tr>
<td>6</td>
<td>24</td>
<td>Male</td>
<td>New Zealander</td>
<td>CEO</td>
<td>04/17/2017</td>
<td>30:31</td>
<td>Skype</td>
</tr>
<tr>
<td>7</td>
<td>25</td>
<td>Male</td>
<td>Italian</td>
<td>Project Manager and consultant</td>
<td>04/18/2017</td>
<td>33:58</td>
<td>Face to Face</td>
</tr>
<tr>
<td>8</td>
<td>20</td>
<td>Male</td>
<td>American</td>
<td>Student and part time job</td>
<td>04/19/2017</td>
<td>22:27</td>
<td>Skype</td>
</tr>
<tr>
<td>9</td>
<td>25</td>
<td>Female</td>
<td>German</td>
<td>Master Student</td>
<td>05/11/2017</td>
<td>25:03</td>
<td>Skype</td>
</tr>
<tr>
<td>10</td>
<td>24</td>
<td>Female</td>
<td>Chinese/German</td>
<td>Student</td>
<td>05/11/2017</td>
<td>24:44</td>
<td>Skype</td>
</tr>
<tr>
<td>11</td>
<td>23</td>
<td>Female</td>
<td>Spanish</td>
<td>Student</td>
<td>05/08/2017</td>
<td>23:50</td>
<td>Face to Face</td>
</tr>
<tr>
<td>12</td>
<td>24</td>
<td>Female</td>
<td>Dutch</td>
<td>Master Student</td>
<td>05/08/2017</td>
<td>24:13</td>
<td>Skype</td>
</tr>
<tr>
<td>13</td>
<td>25</td>
<td>Male</td>
<td>Finnish</td>
<td>Master student and Logistics</td>
<td>05/09/2017</td>
<td>25:24</td>
<td>Skype</td>
</tr>
<tr>
<td>14</td>
<td>25</td>
<td>Male</td>
<td>Ghanaian</td>
<td>Master Student</td>
<td>05/09/2017</td>
<td>26:36</td>
<td>Skype</td>
</tr>
<tr>
<td>15</td>
<td>26</td>
<td>Female</td>
<td>Swedish</td>
<td>Master Student</td>
<td>05/11/2017</td>
<td>25:12</td>
<td>Skype</td>
</tr>
<tr>
<td>16</td>
<td>24</td>
<td>Female</td>
<td>Vietnamese</td>
<td>Student and Intern</td>
<td>05/11/2017</td>
<td>23:54</td>
<td>Skype</td>
</tr>
<tr>
<td>17</td>
<td>23</td>
<td>Male</td>
<td>American</td>
<td>Associates degree in interdisciplinary studies</td>
<td>05/12/2017</td>
<td>25:03</td>
<td>Skype</td>
</tr>
</tbody>
</table>
3.5.5 Interviews: Design and description

As previously mentioned there are numerous ways for this type of data collection such as; diaries, interviews, focus groups, and observations (Collis & Hussey, 2014). The two most appropriate methods in this research would be focus groups or interviews. For this research the most adequate method found to be were interviews. This was chosen over focus groups as focus groups since it is impossible to gather all respondents due to them being remotely unavailable for physical focus groups, as well as due to their varied time zones, locations, and schedules. When conducting interviews in order to collect qualitative data participants are asked to answer questions regarding the concerned topic of choice, this with an aim together information of what the participants do, feel, or think (Collis & Hussey, 2014). Additionally as the aim of this study is to explore millennial consumer values on AI. When using interviews to collect qualitative data, the participants are chosen in relevance to the subject and purpose of the study. In the case of this study the purpose is to explore millennials view on the consumption values when applied to AI. The participants are asked to answer a set of questions in relevance to the topic. For this study semi structured interviews were chosen as this method is preferred over non-structured, since the aim is to gather as much qualitative data as possible. Semi structured interviews sets of questions are prepared in advance for the participants to answer, this to encourage the participants to express themselves.

When conducting interviews there are a few key considerations that are essential for the author to take a look upon. As first of, the knowledge of the topic the participants may have, in order to have a successful interview that can be used the participants must have knowledge or hold some knowledge of the research topic (Saunders et al., 2012). Credibility is the second essential for the author to take into consideration, especially when having semi structured interviews. The questions were developed beforehand and given to the participants prior to the interview to have them be familiarized with the
topic. This was done so the participant would have the ability to prepare or have any important questions prior to the interview. Thirdly the location of the interview is of importance and dependent for both interviewer and interviewee (Saunders et al., 2012). It is important the participants always felt comfortable in the place they were being interviewed, therefore in most occasions the participants chose the locations of the place of interview, or they were asked to be interviewed in a familiar environment, such as school. Lastly, appearance of the researchers is another issue the author had to take into consideration. If the researchers lacks good or credible appearance this can result in the credibility and trustworthiness of the interviewer to decrease or be seen as less by the participants (Saunders et al., 2012). A set of guidelines were set by the author when conducting the interviews, these guidelines included, dress code, managements of time i.e. being punctual to the participants and not keep them waiting, and a behavioral standard. For this research the behavioral standard was set to make the participants feel the most relaxed and comfortable with the researcher, yet keep a professional stance.

For this research the author implemented a template with a set of questions related to the desired topic. The participants whom fit in the category of millennials by the author was then contacted electronically or face to face and were invited for an interview with the author. The date of the interview, they were carried out either personally face to face, or via Skype. Once the interviews started the author made sure to have a relaxed environment and assure anonymity. Participants were also asked for permission to be recorded by the author prior to the start of each interview, these recordings were made through audio recording software. Notes during the interview of interesting comments were taken. All of these, for transcription purposes. The interview consisted of a brief description of desired topic followed by the interview questions. The questions were designed to be open ended to encourage the participants to engage in conversation and communicate as much information as possible. The template of the questions for the interview can be found in appendix I . At the end of the interviews the participants were asked if they had any further questions, subsequently that it marked the end of the interview sessions.

Additionally the design of the interviews and the framework of the questions can be found in appendix I. The base and design of the interviews was constructed based on
The Theory of Consumption values. The interview, with the goal to answer the research questions. The theory consists of five values; Functional, emotional, social, conditional and epistemic with these the interview questions were formulated. The interview consists of 7 sections in which 5 are pertaining to these values. Each of the values has its own section with approximately the same amount of questions pertaining to the value. Additionally and “Extra section” was created at the end of the interview in order to find additional and most important values with 2 questions. Lastly demographics, knowledge and usage section was placed at the beginning of the interviews and is the first section, a short description and definition of AI was placed in this section to inform the participants what AI is. Three examples were also given of AI in order to familiarize the participants before the sections with the values started. These values as mentioned worked as a foundation for the whole interview.

3.5.6 Analysis of Qualitative Data

After the collection and transcription of qualitative data, there are two possible ways of analyzing said data; either by using a computer program or by hand coding (Collis & Hussey, 2014). Gathering the qualitative data while conducting the interviews may sometimes lead to additional questions which are not relevant for the study, though important for the flow of conversation (Saunders et al., 2012). For this study the use of hand coding along with the combination of transcription was used in order to gather as much data possible and not miss any answers in the process. A computer program would require all transcriptions and technical usage, this method is not necessary in order to increase the chances at obtaining a better result. The author found hand coding to be the most viable way to analyze said collected data. Though there is a potential risk while hand coding to miss important information (Collis & Hussey, 2014). In order to avoid this risk and decrease its chances of occurring, the author has listened to the recordings twice in order to make sure none of the data was missing and gathered the most important parts. After contemplating and reviewing the interviews key points of the analysis were formulated and divided into later categories in order to organize the most important findings.
3.6 Research Ethics

There is a list of ethical principles that must be acknowledged when conducting interviews as primary choice of data collection (Saunders et al., 2012). It is certain ethical concerns can emerge during the planning, and seeking of accessibility of individuals or participants for the study (Saunders et al., 2009). Ethics in research is defined as the appropriateness of one’s behavior in the relation to the rights of those who become the subject of your work or research and are affected by it (Saunders et al., 2009). There can be issues presented with gaining of access both in primary and secondary data.

In the case of primary data for the interviews the participants hold the information needed for the research, and have a possibility to not accept them being recorded. This shows the ethical issues of privacy, maintenance of confidentiality, and consent (Saunders et al., 2009). Therefore prior to each interview, respondents were asked granted permission to be audio recorded in order to respect and maintain their privacy. Moreover, data has been collected and presented with full anonymity for the research sample. This in terms of how gathering of personal data has been handled. To ensure no person involved could be relieved only data that is crucial for this research has been gathered with respect to offer full anonymity for the subjects. It was also asked for approval from the participants to use exact quotes in the thesis, for the purpose of the research study and assured complete anonymity in relation to the quotes. By doing this the author has kept the anonymity of the participants, asked for consent, and assured the maintenance of confidentiality.

Lastly another ethical issue can be the reaction in which participants see the way the data is sought for or collected this results them to be in an uncomfortable situation (Saunders et al., 2009). In order to avoid this, the author has conducted the interviews in a comfortable environment and has made the participants ease into the interview, making them and allowing them to be as comfortable as possible.
3.7 Trustworthiness of research

The aim of this study is to gather qualitative information through semi structured interviews this will give valuable insight on the interviewee’s opinions, point of views, and further thoughts. As Saunders (2011) highlights there are two obstacles when conducting qualitative research and trustworthiness and that is the problem of valid and reliable information when it comes to asking interviewees questions. Problems may also occur in non participation from the interviews part this may increase, this can be due to participants expecting negative consequences from subsequent deceptive answers or what is considerably socially acceptable to answer, this can reduce the utility of the data collected (Saunders, 2011). Interviewees may want to protect themselves from potential harm or embarrassment and therefore present themselves in a positive light, or to please the researcher, this results in harm for the accuracy and interpretation of the data (Dalton, Daily, & Wimbush, 1997). In order to minimize these problems it is advised by Saunders (2011) to ensure the interviewees the research topic is of importance, and explain the importance and the benefits that their participation will bring to the desired goal. Moreover Saunders (2011) highlights the importance of privacy and anonymity that is to be promised to the interviewees before the interview takes place, in addition to, the assurance that their confidential information is not being sought out for will increase the trustworthiness and make the interviewees more relaxed and open willing to discuss (Saunders et al., 2009). Trust is of utter importance as building trust with the participants will gain access to the researcher; moreover building a relationship will allow a detailed response from the interviewees which can be collected for data. Access to these answers are determined based on the relationship between the interviewers and interviewees and how they perceive the study and the generalized trust put upon the researcher this can vary across various settings and cultures, it is of importance to avoid this by informing the interviewees of the detailed research and being transparent, this can build upon the relationship (Lyon, 2011).

3.8 Research Limitations

A research limitation within this study was the confusion within the topic of study, and what participants believed it to be versus what it was. To minimize this limitation the author presented and explained a definition along with examples on the topic in order to
align all participants and have them all know the basics of what the topic is, in this case AI. Another limitation within the research premises was the time constraint and the lack of time some of the participants had in order to go into an in depth interview. This since the target group for this research is millennials, and an abundant amount of them were students and or had a job, therefore they lacked time to sit and have in depth interviews with the researchers. The participants scheduled a limited time for the interview to be conducted with the researchers. Even though this was seen as a limitation, all of the questions in the semi structured interviews were still able to be asked to the participants, but maybe not in depth answers were acquired. The interviews were conducted through different interview styles, either face to face or via Skype, this depending on the availability of the interviewees. Having different interview styles makes it a different environment for the participants and not have a same premises for the interviews by the author, yet not all participants were able to take part of this process face to face as this would of been the ideal interview style, therefore Skype was used as a secondary option. Lastly, all of the interviews were conducted with participants known to the researchers this can be seen as a limitation as having a more vast group of randomized participants can be of benefit for the study.
4. Empirical Data

This chapter includes all of the relevant findings from the data collection. As the empirical data was collected through interviews, quotes have been used in order to help determine the answers to the research questions along with the theories within the study. The data has been divided into seven categories, five from the model, and two additional ones from the interview.

4.1 Interviews

The qualitative data was gathered by performing a total of 19 interviews with millennial participants as previously stated. The interviews lasted a total of between 25 to 50 minutes and through all valuable empirical data was collected. The quotes were extracted from the transcripted interview and are available upon request to the author. The interview guide used by the author to perform the interviews was the same throughout all interviews, and the framework for said guide can be found in appendix I. It is important to remember the framework served as a guide for the interview though in some cases additional questions were asked i.e further explaining the question or a certain value.

4.2 Functional values

When interviewing these millennials regarding the functional value AI had, the responses varied bit by bit between the participants. People gave different examples where AI can help them.

As interview #3 expresses how AI can help in everyday life by multitasking.

“Yes, in my life it can help you multitask on a daily basis”

Interview #3 (16:15)

Interview #3 also mentions them helping them with certain things and compares it to a new AI commercial for a Google product. They also mention multitasking as a functionality element that can help them accomplish.

“Yes helping you remember things google has a commercial where anything gets people thinking about something let alexa know and she will answer it for you so alexa will get you the answer you want which is kinda scary if you think about it, so no more googling you just ask alexa“

Interview #3 (13:15)
Interview #5 mentioned AI being useful and functionally to help save time and help them perform those tasks to save time.

“Yes, I believe it is useful, and that AI can conduct tasks that would otherwise waste time on, or like um consume a lot of my time and help me in such ways, mmmm such as searching the aisles of a supermarket or finding a parking space in a busy parking lot i don’t know things like that.”

Interview #5 (10:37)

Here this interview the person also mentions AI helping people around the house perform certain tasks.

“Yes, as mentioned before, it can help people in day to day task like for example someone that has difficulty in walking can just instal Alexa, or Google in the house and if they want to make a phone call they can just say “Alexa, call……. “Same thing if there is an emergency of any kind. As the years progress, these technologies will be more and more advanced and more present in our everyday life.”

Interview #7 (11:28)

Interview #9 gives other examples where AI would be useful

Yes, I do e.g. I think AI gives us more flexibility. For example you can sit on the sofa and tell Alexa to play music, meaning that you don’t have to stand up anymore.

Interview #9 (6:23)

Interview #10 talks about time and speed as functional

“They can ease up processes that used to done by humans or manually, which can lead to more efficiency in terms of time and speed”

Interview #10 (7:39)

Interview #2 mentions on the contrary as seen with others, they do not wish for AI to help them in everyday life, but rather occasionally for certain things.

“No in everyday life but I believe it can help me occasionally yes, especially living alone or when I travel, or talking to alexa if I am lonely to ask about weather, or ask about news, it can help me feel less lonely have a companion, for those who will travel a lot for business or any other reasons “

Interview #2 (08:32)
Interview #5 also mentions it helping it in their everyday life but it being questionable choice to allow it to help us in everyday life.

“For my everyday life I think it would be able to, however, whether we should allow this to become a great impact is another question that requires much consideration”

Interview #5 (9:57)

This interview also expresses how they would only want it to help sometimes

“No I do not think in my everyday life just sometimes”

Interview #14 (8:35)

Interview #15 also mentions it not helping in their everyday life but helping others

“I’m sure it does but perhaps not in my own everyday life to such a degree that I notice it. In factories it could be used to replace human resources that can be better utilized elsewhere since for now humans are still superior in emotive situations. The healthcare industries could also be a useful territory to apply it in”

Interview #15 (10:35)

Others mentioned how when this technology evolves and further develops it would be more available to everyone or it would be further improved.

“Yes I think like any technology as it advances it will become more sophisticated, I mean look at phones now and how they were before when I was for example 12 we had small blackberries or flip phones and now they can do so much more and help us in our day by day”

Interview#1 (8:12)

Interview #4 also mentions this technology being quite new and in time becoming cheaper, but they answer “yes” to helping them functionality wise in their everyday life.

“Yes i do believe so because i think the technology is still it is still pretty new and just is taking the first steps especially in consumer business but i do believe it is learning and it is getting better and more precise and also probably cheaper to make it more like more accessible to more people not just like a small group of people”

Interview #4 (6:48)

Interview #19 also mentions affordability.

“Most likely! If they can make it affordable it can probably become part of everybody’s everyday life”
Below interview #7 regarding the evolvement of this technology

“Yes absolutely, it will definitely simplify life and make things easier for everyone. As I just mentioned above, with the evolvement of technology, AI will become more complete and sound more realistic to, almost as if they were a real person.”

Interview #7 (11:30)

Interview #8 also mentions the evolvement in the future.

“Yes well i think that with time it can change the future as they improve it”

Interview #8 (7:10)

This person also mentions the advancement and when it becomes more advanced it can help more people.

“Yes i do especially when it becomes more advanced like I think AI will be able to help people a lot more”

Interview #11 (8:01)

Other interviewee believed AI will be more available in the future and in accordance to our everyday life.

“Yes, in the future AI I mean AI haha will probably be integrated in more of your daily aspects like daily routines and such, I think”

Interview #12 (7:53)

Interview #9 also expresses said value and how it will be important for the future.

“Yes, I actually do think that AI will be a big deal in the future as it advances it will become bigger and better”

Interview #9 (7:49)

Others also in regards to the future do express it to be helpful, but also arises a problem regarding job and AI replacing humans.

“Yes, they can. But they can also trigger new problems such as people being replaced by machines, which leads to job loss”

Interview #10 (9:46)

Moreover interview#16 also mentioned AI in jobs but in a more positive manner
“Personally, I don’t directly consume AI. But I know it can be a great to substitute human’s labour in situations where it might be dangerous. In factories, were working conditions might not be safe, AI can replace human to perform intricate and difficult tasks. In the field of agriculture, automotive, AI can minimize the labor from human as well. And there is application of AI in the healthcare sector, which can potentially be more efficient in diagnosing different symptoms. AI assistants such as Alexa and Siri is also amazingly helpful to people with disabilities. For example, people with visual impairment can rely on AI to perform daily activities.”

Interview #16 (9:00)

Interview #17 also expressed the replacement of human activity

“Yes for example robots that are being modified to perform abilities human do and being replaced by artificial intelligence”

Interview #17 (10:55)

Another interviewee expressed concern in regard to the future

“Probably yes in the future, but it can also be harmful if the AI understands my behavior in the wrong way or tries to be too specific”

Interview #13 (8:32)

Interviewees mention AI helping to other people or in case of emergencies. Interview #6 mentions it being able to ease the access of informations meaning AI helping us access more information, especially pointed out to people who suffer from disabilities.

“Yes, for example to ease of access to information for example like Alexa does and also it can be used easier for those people who suffer with disabilities to access information.”

Interview #6 (9:43)

This interview also mentions the functionality value to help on emergencies.

“Yes, I just mentioned that it can help for emergencies in the house, phone calls that have to be done, and even control your house from a distance and cooling it down or heating it up on your way back home.”

Interview #7 (13:00)
In this interview they also express functionality as a way of helping people especially in the medical field.

“I heard that scientists are using AI to improve diagnosis process in medical science beside all the other examples and I found it a valuable in this way”

Interview #18 (8:34)

4.3 Emotional values

Regarding emotional values there were a lot of mixed feeling towards AI. Some of the interviews expressed very positive emotions while other expressed negative ones along with explanations to them. Overall a lot expressed much concern for their personal data or uncertainties about allowing AI to do to much or losing control.

Interview #1 also felt worried at first comparing AI to movies about robots, but admits to having a positive change once they have read and informed themselves more about the topic.

“I felt cool about this new technology though before I was worried because you watch movies such as I robot and see so many creepy things with technology like if it will surpass us or become more intelligent since it is perfect but then again the more I read about it the more positive change I feel towards it”

Interview #1 (11:57)

Interview #2 showed mixed feeling as they first mention being neutral about the topic itself since it does not add anything to their life currently. They rather say it adds a little to their life by helping in minimal tasks or when seeking information i.e. weather related, and that makes them feel happy and relieved, they later shift to using real examples about instances they had with AI and express certain discomfort towards AI if it learns too much about them and is able to trigger their emotions.

“At this time neutral because I think that I still do things by myself, I do not feel it adds too much to my life, but can help a little bit can help if i want to talk to the machine if i talk to the machine for tomorrow’s weather or what to wear I feel happy relieved it is useful information but for more complicated questions or if I want to have an actual discussion where I will learn about new things I feel like it maybe doesn’t add the value yet I had an experience with alexa at a friend’s where I asked it questions about atopic or etc and it is still underdeveloped where it may not add value to bring value to the
conversation and that causes me to become mad at an object and I feel like when i start becoming mad at it ... ooooo.... It is starting to have a life and maybe because of that it will learn and it will become more intelligent and give better answers and I get worried that it can trigger emotions because it learns i get mad at it”

Interview #2 (10:39)

Moreover they say AI would not bring them any new emotions unless it were able to be more personal with them, finally, they express AI as making people lazy for doing too much for them.

“no not new ones but maybe if it gets to the point where if it interacts more then yes, if it would be able to remember my name yes or ask me questions using my name or making statements based on certain things I like or I don’t like then yea then it would change my emotion or mood and it would be a ,more positive side of technology but as I said before right now I just feel like it done;t really make a difference and it just makes people lazy”

Interview #2 (13:25)

Moreover, they also expressed it making people lazier, as previous interview #2 had mentioned as well.

“It will definitely be something really great that can improve the lives of people making it better but at the same time it will make us much lazier, and less active than before”

Interview #7 (16:33)

Interview #3 expressed very negative emotions and opinions towards AI and is very scared to have it learn everything about them as well as had concerns for their privacy. They see it as a threat, since AI is “smart” and also give it a personification comparing it to having someone be there in their home with them. Lastly they compare AI to other AI technology by saying having it be with you in your home makes you always be aware of it while it is different to have an AI product outside your home such as a car or etc.

“ Its intimidating it's troublesome, because its the fact that this machine is learning stuff about you and it is always watching or listening or whatever the case is and it makes
“you wonder if we are really trusting our lives with artificial intelligence machine or whatever”

Interview #3 (16:19)

“personally for me i don’t want to use it it’s scary to know that you are not one of these things at home that they are listening to you that the sense of privacy is gone because that thing is around and it can activate or whatever, That there is a sense of a being or something being there that it is not a human but it is a thing and and it is in your home its not a physical but it has its own mind in away and it mimics human mind and learning and its i wouldn't want to have that in my own home its intruding”

Interview #3 (17:35)

“it brings concern and a potential threat that can pose to humanity hypothetically speaking if it has the power to over take us because they are smart they cannot feel because they don’t have emotions they are just computers for the they are just machine thoughts they do not have morals or ethics or emotions they only have a machine its alarming to have artificial intelligence”

Interview #3 (20:46)

“If you're going to have it over not having it then you have to be AWARE ON when you are going to use it like having alexa at home vs a car that drives itself i prefer the car than alexa in my home in your laptop you google something your laptop s not going to have the mind to remember oh today she googled how to make a sandwich and remember you like sandwiches, you are on the lookout you are not 100% comfortable i feel worried in the back your head that this AI is learning about you as you go vs googling something with your phone”

Interview #3 (23:38)

Interview #9 also expressed concern of it knowing too much about them

“I think it is useful, but I also feel uncomfortable when I think how much for example my Iphone, Alexa knows about me. It is somehow scary.”

Interview #9 (11:22)

They also expressed wordiness for their privacy similar to interview #3

“Definitely the feeling of being somehow watched in terms of audio recording etc like
normal devices do not have that as much as AI that needs to learn from you in order to give better options or in order to work that’s the whole point of it!”

Interview #9 (15:29)

Interview #17 also expressed concern for their data

“Creepy because they know too much information about you”

Interview #17 (14:57)

Interview #19 as well had concerns on their personal data.

I personally would be a good bit unsure because these AI have a mind of their own and they can store our info, and I care a lot about my personal data

Interview #18 (12:21)

Interview #10 expressed mixed feeling towards it.

“Not in daily life, however there is an overall fear that machines know too much about that humans cannot keep up anymore. Or fear of humans losing control of operating the machine one day but I still do feel positive and that it can bring a lot of help”

Interview #10 (13:50)

Interview #11 also expressed similar feelings

“I think AI will change the tech industry i don’t know i hear so so so so much about it now and it seems to be such a huge thing, so like I feel it will change a lot. In part its excitement what I feel, but maybe a little uneasy because you hear so many stories about robots taking over it may not be robots but technology surpassing us makes me a bit scared”

Interview #11 (11:25)

Interview #12 was positive and curious but also felt uneasy

“Curious, and excited also interested I feel curious towards AI like what new things will come from it but also weird about the whole robot thing if it knows too much and etc”

Interview #12 (10:55)

In interview #13 they felt cautious with their information

“Accepting about it but also cautious for it and what it will know about me”

Interview #13 (10:13)
Interview #4 expressed feeling positive and happy because it would help in the future and bring new opportunities. They also express excitement because it makes human's lives easier.

“I do believe that emotional i feel like i am positive about it because i personally feel that technology is going to help us a lot in the future, i am quite excited about opportunities it is able to provide later on now it is hard to say something regarding in which life situations but i am still positive and looking forward to the possibilities”

Interview #4 (09:12)

“Excitement or maybe excitement is the best word to describe it how i feel about it like personally for me in general when it comes to technology and new ways new ways of um making humans lives easier”

Interview #4 (13:05)

Interview #5 also expresses a sense of creepiness towards AI as they also say universal regulations should be made in order to avoid corruption and protect us against it.

“We should be careful to make universal regulations and procedures that protect us from any corruption of AI and any potential vulnerability that we may face in the future. It could be very costly to encounter unforeseen problems”

Interview #5 (15:01)

“It feels a bit creepy that a computer is adapting, learning and getting to know me, especially if it had an artificial personality. If I told a joke and it laughed, is it doing that because it thinks the joke is funny or because it knows that’s what I want to hear? You know? Things like that”

Interview #5 (17:55)

Interview #6 also expresses transparency being required towards the customer and says it is good for the future.

“Good for the future, but definitely requires a lot of transparency towards the consumer”

Interview #6 (13:11)

As well as,

“In general I believe that AI is still at the phase of novelty, as it gets more advanced we will become more comfortable using it beyond the novelty stage”
Interview #6 (15:57)

Interview #7 feels it is extraordinary technology, but also concerns as it records everything you do.

“My feelings are that it is definitely an extraordinary technology that can improve life, but at the same time, every single thing that is done using AI, can be recorded and everyone can now about it.”

Interview #7 (14:53)

Interview #15 does see a bright future for it but also expresses how it should be handled carefully.

“I think it can provide great opportunities for improvements in various sectors. BUT it needs to be used carefully and thoughtfully, especially since machines can’t think and feel like humans can.”

Interview #15 (15:00)

Interview #16 does express concern in it losing control.

“I appreciate that AI is created and implemented to make my life easier. However I do feel like there would be a loss of control since I’m relying on a machine to operate my daily tasks.”

Interview #16 (12:30)

Interview #8 expresses the opposite and says they are excited, even goes as far as comparing the future to movies

“It bring excitement. I want to see how the future can become a reality like in the movies!”

Interview #8 (10:52)

Interview #4 also expresses the unfamiliarity of using current AI

“For me i thinking about it as siri and i think of siri you are communicating with something you are not used to it still feels a little bit weird to discuss or communicate to ask things from siri it is not what I’m used to but later on if it is bigger part of my everyday use then it will be but now it still feels unfamiliar”

Interview #4 (15:08)
4.4 Conditional values

For conditional many gave example where they like to use AI. Interview #2 mentioned AI to be used in the kitchen to get new ideas, or to play music, and receive updates on news and etc, rather than reading.

“yes when cooking to get new inspirations because i don’t like to cook same things because same time i can ask it to play music and get environment and do things ,also in evenings after work to get new updates or medications or simple conversations news before going to sleep learn from going to sleep rather than reading the news before bed”

Interview #2 (15:06)

Interview #4 expressed using AI in convenient situations such as not being able to type things out.

“no, or yes a situation when you are not able to type for some reason that you are so busy or you think it's more convenient to talk rather than type”

Interview #4 (15:58)

Interview #8 says they would use AI everywhere

“Everywhere especially on cars, it can make driving a whole new experience”

Interview #8 (13:00)

Interview #11 says they only would use it for minor tasks.

“Yea for sure maybe at a supermarket or helping me with everyday things, little things though not major”

Interview #11 (13:42)

This interviewee says they would use it while traveling, but expresses discomfort when having to give out personal data.

“Perhaps while traveling? But I’m not too keen on giving out my personal information so if an AI requires that I’m out. But if it can make my life easier in stressful situations and not require me giving out information then I would definitely consider using it”.

Interview #15 (17:09)

Interview #16 also says while traveling but in a commuting sense.
“I don’t mind using AI if it helps me. Since I commute a lot maybe AI implemented at train stations could be helpful. As long as I don’t have to give out a lot of personal information then I would use AI.”

Interview #16 (15:10)

Interview #17 expresses to only use it when need it as it can make people lazy, as previously seen under emotional sections through other interviews.

“it be only when I need help I think too much technology will make a person lazy.”

Interview #17 (17:00)

Interview #18 said they would use it in their job

“For me personally maybe in my job it would bring a lot of help”

Interview #18 (15:35)

Others gave examples where they would not. Such as Interview #1 when there is a need to be away from technology and shutting it off

Yes well when I like being away from technology like a countryside or something where sometimes you just don’t want to use it and you just want to shut down your phone and being able in this case to shut off ai like in nature or something similar

Interview #1 (16:02)

Interview #2 also mentioned not using around other people more specifically their friends as it is intruding and it receives more attention and concentration from the others.

“I wouldn't use it around my friends because it intrudes the conversations because it limits the communication focus too much on the ai than on the conversation tales out on being and enjoying time with friends noticed myself because it is so new everyone gets too focused on the object and asking it questions that they forget about the real people and concentrate more on the product”

Interview #2 (17:02)
Interview #3 expressed very negatively about using AI at home or personal spaces.

“Umm yea like I feel like at home in a personal or private place not at home that’s the main one or personal peoples houses that shouldn’t be in your home environment “

Interview #3 (25:14)

Interview #5 said they would not want to use it on creative tasks or be reliant to it.

“ Yea I would not like to be reliant on AI like I definitely would not use it when taking on creative tasks which I am used to doing quite a lot”

Interview #5 (19:02)

Interview #6 said they would not want to use it in public places which is a contrast of what other interviews mentioned where they rather not use it in private or personal places.

“Generally in public locations like out on the street where I would not use it as it is still a bit of a fringe technology”

Interview #6 (17:16)

Interview #7 said they would not want to use AI when having to do manual things.

“I wouldn’t use it when I want to do something manually instead of using tech for example when writing down my thoughts”

Interview #7 (18:21)

Interview #10 says it should not be used in human interactions.

“In situations that involve very emotional and human interactions”

Interview #10 (15:38)

Interview #13 says AI would not be used when they are in a hurry.

“If I am in a hurry, I wouldn’t trust AI because there is a possibility that the AI would face an error or do something wrong”

Interview #13 (15:53)

Interview #13 says they would also not want it in their homes as it feels obtrusive.

“I think maybe in my home...It can be a bit intimidating knowing someone is essentially watching.”

Interview #13 (13:20)

Others expressed the benefits differently. Interview #3 expresses the benefits of AI to be carefully used.

“hopefully in the really far future, revolution in technology in the worlds environment but not to the government but overall to help the environment. At the moment i feel it is
still a programme and you can have and use it as a weapon and i would not want my
government or president to use this as a weapon because this could be used as a
massive weapon because you can't just turn it off it's really hard to make it stop not now
for me”

Interview #3 (26:54)

Interview #12 says they would benefit the most from it doing tasks they do not wish to
do.
“When you have to carry out tasks you’re not interested in or well feel very tiring to do
and you have to have to do them, then well I feel AI will benefit me because it takes part
of the task for me in a certain way”

Interview #12 (14:51)

In this interview they express for it to be most beneficial when driving.
“Like driving and trying to find a place then I do not have to stop and ask for directions
so it saves me time and also I do not bother others it saves everyone time”

Interview #14 (16:02)

4.5 Social values

Most of the participants heard about AI from the same sources; news and social media,
while others did hear about it from friends or family. Interview #3 says they have heard
of a new product which promotes AI.

“yes from social media there are always articles that pop out if you follow technology
outlet they pop up in your news feed TV commercials the HEY GOOGLE one they
promote alexa on a daily basis and YouTube”

Interview #3 (27:52)

Interview #4 says they have heard from their friends about AI and how they have heard
mixed opinions and news about it.

“Yes i have some friends who have been talking about it then sometimes i come across
with new about ai sometimes positive news sometimes its been negatives like it has
cause some problems or has made itself like a big news for being like uh maybe umm
for some people scary or it has done something that hasn’t been under control and those
news have been either by word of mouth or just seen it and read about it news and
social media or news on social media, people also talk about it on social media which
creates its own discussion”
Below shows what the participants heard from said sources, most of the interviewees mentioned a mix of both positive as well as negative things about AI. Such as interview #1 says they hear it is cool and booming.

“That it is a technical cool booming also for marketing it can be used in marketing”

Interview #1 (18:50)

‘from friends they get bothered from aspects they are not yet ready to pick up foreign accents have some glitches have to read accents being millennials used to having everything they want and that bothers them a little bit and after a couple of times repeating the task and it not doing it it triggers your emotions and its funny but they get upset with it or mad with it and you start maybe swearing to the object and its funny it actually pick up on these things they also find it awkward they repeat activities and alexa reminds them about it and she is intruding too much about it and takes away a safety aspect you have”

Interview #2 (19:08)

Moreover, this interview they said they get influenced if their friends acquire it.

“yes, the social media brought me for a while to buy alexa i want to but most of the time that ti shows multiple times a day and many of my friends that are getting it its becoming part of our lives it’s becoming a new friend we are getting to know and is becoming part of the group and needs to get accepted into us”

Interview #2 (22:02)

Yea they influence me seeing other people’s opinions about how they tried the product or do i really want a HEY ALEXA after the horror stories you hear these people talk about because they are actual human beings that actually have an opinion and common sense and the emotional side unlike the company who is just selling it and doesn’t care better have consumers telling me hey it’s not that bad or ey its bad

Interview #3 (29:32)

Interview #5 says they have heard negative things about AI regarding driverless cars and it always put the technology to question.
There is always a question on what the future of AI will look like and if this could be potentially dangerous or costly. There is a bit of excitement, but also fear, especially when hearing about tragedies, such as driverless cars malfunctioning.

Interview #5 (21:22)

Interview #6 compares it to the Cambridge Analytical scandal.

“Goods and bads I have heard all really but I think it is making innovative steps, but the data gathered can end up in things such as Cambridge analytica”

Interview #6 (19:48)

Interview #7 says they hear a lot from changing the world and improving tasks.

“I hear how it can revolutionize life, change a lot of jobs and improve the execution of a particular task making the result more effective and efficient for example in medicine”

Interview #7 (21:00)

Interview #8 said thee commercials they see makes them want to have an AI device to see if it works.

Yes they make you want to have one. To see if it works!

Interview #7 (16:31)

Interview #9 also brought up the Cambridge Analytica scandal and threats associated with it.

“About the opportunities AI brings but also about the threats in terms of privacy etc. such as Cambridge analytics scandal”

Interview #9 (17:28)

Interview #10 says they hear about the uncertainties related to AI, both good and bad.

“I hear on how to apply it into businesses, and also if AI and robots could be dangerous for humans things like that some negative some positive I think because it is new there are still some uncertainties and different sides to it in regards to people and how they or what they think of it”

Interview #10 (17:51)

On the contrary of what others have said regarding AI and it being used in a working environment interview #11 says they would not want AI at a workplace.

“Yes I think at the workplace because it knows everything about you and that’s what’s uneasy if it mixes your personal life with your work life i think there should be a
boundary for that I don’t want to do something wrong at work and it be because of the AI”

Interview #11 (15:48)

Interview #12 also said they hear two sides to the story when hearing news about AI.

“I hear.. Hear two sides about it like some are worried that it will destroy humanity in the future and a lot of things like that while others are excited about it and what it will bring to us”

Interview #12 (16:27)

Interview #15 says they have heard from it the invasion of privacy.

“I’ve mostly heard about it being full of opportunities both for real applications of it and academic research opportunities in it. It seems to be mostly positive but at least my professors seem to be interested in the “invasion of privacy” aspects.”

Interview #15 (19:11)

Interview #16 says they hear about the benefits it can bring to the labor field as well as medically.

“Twitter tells me the benefits of AI in aiding human in doing heavy labor work. I hear about applications of AI in the law and healthcare sectors as well. But they are usually positive. I do think that it depends on how you consume media because there are a side of Twitter that might not be as positive about AI.”

Interview #16 (17:35)

Interview #19 says they saw a commercial and how an AI product assisted a person by making a phone call for them.

“I saw a video where google showed us how Alexa could call and make an appointment for a hair salon, and it sounded so real, and Alexa was able to have a conversation with the real person and the person probably had no idea.”

Interview #19 (16:59)
4.6 Epistemic values

For the epistemic value of curiosity, majority of the participants when questioned agreed to AI bringing curiosity to them therefore a few of those quotes were chosen. Moreover, only a couple of the participants expressed otherwise when asked if they felt a sense of curiosity.

As seen in interview #1 they want to know more on how the technology works or could help them.

“Yes I want to know more about it and how it works or could help me”

Interview #1 (20:46)

“Interview #3 says they want to know how current AI is doing and where it is headed to.

“Yea, you want to know where they are going to with this and know if they are making progress like sofia and alexa because you don’t want t be informed and you want to know how they are doing and not knowing how hey progress if they are or not”

Interview #3 (35:42)

Interview #4 expresses they would want to know more about it and it could also be a business opportunity.

“Yes absolutely and i think it is something as i would see it as a great business opportunity because i believe AI can be used almost for everything and i think in the future there will be more and more opportunities more companies that will be using ai especially so i think that is essential when it comes to discovering more opportunities when it comes to next years, so yes i would totally want to acquire more information about and and especially form my perceptive to maybe be able to take advantage f it and creating new solutions for people”

Interview #4 (21:29)

Interview #5 says they would want to know more but hesitant with it.

“Yes I am but I would also be hesitant in interacting with it”

Interview #5 (25:04)

This interview says they would only be interested in the medical field regarding AI.

“Yes it does interest me a lot but only in the field of medicine”

Interview #7 (24:32)

Interview #8 wanted to know more but in an intention to purchase the AI.
“Yes i want to know the facts before i buy one see if it’s worth it and know if it works as it says on the commercials.”

Interview #8 (19:56)

Interview #9 also expresses to want more knowledge about it, and exemplifies Siri.

“Yes, it is always exciting to see what Siri can answer and what not.”

Interview #9 (19:30)

Interview #13 also said they would want to know more about AI, but is hesitant on the result

“Yes, it would be interesting to see how far can we take the AI. The result can be useful or very frightening.”

Interview #13 (18:24)

Interview #15 was concerned for their data and AI, but would want to know more

“Yes, naturally. I’m curious about its uses and applications but also about the privacy aspects of it.”

Interview #15 (21:15)

Interview #16 says companies should also teach consumers how AI works.

“Yes, of course. I think it’s incredible that technology is at that stage where we can allow AI to be more integrated in our daily life. I do think that companies that use AI should provide its consumers about how AI works just so there is a general understanding.”

Interview #16 (19:34)

Only interviewee from interview #2 expressed they would not be so curious to know about AI

“to be honest not not curiosity because i’m kinda person i like to do things myself what brings me curiosity is to read myself, and talk to people from other cultures and ai can’t do this, but if it can suggest me and helped suggest me then i feel like wow then it is providing me knowledge then it is providing me with knowledge for the future especially if it picks up accents i’m curious to know when and how long this will take to happen i am curious to know”

Interview #2 (26:37)
4.7 Important values

Participants were asked to point out their most significant value, or what would bring most satisfaction to them, majority of the participants have chosen functionality. Below are the quotes singled out from the interviews where participants chose the functional value.

"Yes how it could help you functional"

Interview #1 (22:48)

Interview #3 states functionality can also civilization.

“functionality could help civilization grow could benefit”

Interview #3 (40:31)

Interview #4 states functionality by mentioning usefulness, but also mention AI bringing an aspect of knowledge to them.

“Mmmm well I think i would combine that it is useful and that makes my life easier or something or something new that it is something new that i would not been able to come up or i wouldn't have been able to do without ai”

Interview #4 (24:19)

“It could be useful in reducing the amount of menial tasks I undertake freeing up more time for leisure or become more efficient in a profession”

Interview #5 (28:56)

This interviewee mentioned functionality and exemplifies in a home environment.

“I would like to utilise it more in my house to make a smart home, I believe it has good use in the home”

Interview #6 (25:51)

Another interviewee also signals out functionality, but comparing the product to meet the marketed standards.

“Yea well that the AI can listen to me and help me out in real life like it does in the commercials”

Interview #8 (19:13)

This interview also mentions functionality, but shows to be worried regarding their data collection.
“I think helpful in tasks that take a lot of time but also worried about the data it will gather from me and how it will be used”

Interview #10 (20:39)

Interview #11 mentions functionality and making sure the product also works and meets its standards.

“How I think functionality and make sure it does work for me”

Interview #11 (20:01)

“It would make me happy because it is useful if it can do your daily chores or activities that you have to do and save you time because of this”

Interview #12 (20:43)

This interview expresses functionality, but at the same time relies on their own thinking not too much on AI.

“Well it would help me with certain specific situations but I mostly rely on my own thinking and actions, I think the AI can be used as a helping tool on many industries and with entertainment.”

Interview #13 (20:52)

“Maybe in eliminating menial/boring tasks that I tend to procrastinate? That would bring me satisfaction and make me sort of happy knowing I won’t have to do them myself. I couldn’t tell you what right now though.”

Interview #15 (23:21)

“I think it would be helpful in a lot of situations, for my work and school specifically.”

Interview #16 (21:48)

Interview #18 mentions functionality and it being as effective as it says.

“More efficiency and effectiveness in decision making”

Interview #18 (22:30)

Interview #19 also expresses functionality and having control over the AI.

“I think I would consume it only if it can help you in certain specific situations, something not too big where I still have final control.”

Interview #19 (20:32)
Lastly for functionality interview #9 mentions functionality as well as the other factors, they say every factor is important to them, but emphasizes on the usefulness of the product and the help it could bring them.

“I think it will be a mix of everything mentioned. Alexa I can use when being to lazy to stand up and do it myself. Siri helps you when you cannot type while driving.”

Interview #9 (21:56)

On the contrary the interviews below do not mention functionality, but instead mentioned other factors as most important to them. Interview #2 mentions epistemic and social as the most important values.

“curious and information that is the most if more info comes out, moreover the number of people that use it and my friends if they are happy with it then i assume it would make me happy too”

Interview #2 (31:35)

Interview #7 and #17 also mention curiosity as the most important value to them.

“It will definitely satisfy a curiosity, but given the fact of how I am living my life, I don’t know how much I would really need it”

Interview #7 (28:32)

“More for curiosity”

Interview #17 (21:02)

Finally, interview #14 on the other hand expresses their most important value to be emotional as they want intelligence when they are not able to afford it.

“The artificial companionship make me happy using it because I can control it anyhow I want. It will help me in situations when I cannot afford to hire natural intelligence sometimes.”

Interview #14 (24:00)
4.8 Additional Values

Moreover the author has collected important quotes that reflected an additional value to the consumption values. In the last part of the interviews participants were asked if they thought of any additional values regarding consumption of AI. While a part of the participants did not add any specific values directly, the author found distinctive quotes from other parts in the interview which stood out with certain additional values mentioned below. Here on interview #4 they focus on AI doing something that the individual would not be able to do on their own, and carrying out this task. They also mention learning and gaining knowledge from it. This “doing something that you would not be able to do on your own” can be related to a helping aspect that AI can bring.

“Something you do that you wouldn't be able to do on your own, and i think it would be something to get knowledge or basically using ai that makes you smarter a source of knowledge that i would learn”

Interview #4 (28:14)

A value identified was helping, helping regarding a third person, not the consumer themselves, below are quotes of interviews mentioning this help value. Interview #3 expresses AI can help civilization, but further expresses their mistrust which will be further discussed.

“Mmm no, well like I just said, help civilization grow but I am still very skeptical about these things”

Interview #3 (43:57)

Below on interview #7 the participant describes as AI being important in helping others and improving life they especially refer to the medical field where AI can help.

“Just a really important thing, that the best place that AI can really help and improve life is in the field of medicine curing and saving lives all the rest appliances are all just for profit”

Interview #7 (32:23)

As well as interview #10 mentions the medical field and another field where AI may help, which is with justice. A few other interviewees mentioned medical field in other sections of the interviews.

“If it can help to reduce crime and increase health”
Trust was a big additional value when asked both for an additional value, as well as something the author noticed throughout many of the interviews carried out in other sections. In the following quotes below, participants either pointed out trust directly when asked for another value, or expressed their concern for their data. Concerns for personal data were seen throughout other interviews in other sections as well.

Interview #5 expresses wanting a trust knowing this technology will not turn on them.

“Knowing that I wasn’t going to be killed by it malfunctioning or turning against me.”

Interview #5 (31:03)

Interview #13 mentions the protection of their personal data and the product knowing too much about them.

“I can’t think of any other situations or well yea maybe gathering my data or knowing about me too much”

Interview #13 (23:15)

Interview #14 mentions it performing and having a high accuracy when using the product, this can be seen as well as trust the product works.

“I can say the level of accuracy is high for me sometimes how accurate it will be in performing said things”

Interview #14 (25:57)

Lastly another additional value found was the Human value. Persistently it was seen how participants gave AI a human like stance. For many of them AI was perceived to with human aspects. This was additionally seen throughout the interviews in other sections not necessary when asked about additional values. Below interview #6 already identifies AI as having humanistic characteristics and expresses their desire to not be so command based.

“I would utilize AI more if it became less command and response based. I feel like I am giving orders to AI when asking for something and it loses the aspect of humanism when I do so”

Interview #6 (29:32)
Interview #11 also expressed their concern for data and trust, and mentions their aspect and compares AI to a human.

“Yes I think the fact that in order for it to work that it should be able to keep your data secret and not shared with anyone. Having that feeling of someone using your data so I would say trust, that you are able to trust it, like you trust a human because it is your data”

Interview #11 (22:57)

Another interview mentions their desire to not argue with the product in case of disagreeing.

“Not satisfaction but yea that I may not always agree with what it says like I do not want to argue with it”

Interview #17 (23:17)

Lastly, Interview #19 also expressed trust and mentioned AI to be like a friend in which one can grow a bond with.

“Yes that I can trust this with my data I think is very important to me like you trust a friend that you can grow a bond with to build on that trust”

Interview #19 (22:52)
5. Analysis

This chapter contains the discussion of the separate research questions based on the analysis which was found on the previous chapter also in accordance to the frame of reference.

5.1 RQ1 Regarding the Theory of Consumption Values, how and what were millennials’ values towards artificial intelligence?

A general meaning for a consumer value is that as Woodruff (1997) explains consumer values the understanding of products regarding their performance, attributes, and effects of facilitating or not, the customer’s goals from such goods and their consumption. These are then chosen prior to the collection of data to be the theory of consumption values functional, epistemic, emotional, conditional and social were identified from the model by Sheth et al. (1991). As these values were further explored in regards to AI with a sample of millennials it was further investigated how these values affected consumer behavior.

Functional Value

A functional value as described by Sheth et al. (1991) refers to the perceived usefulness of a product or service, it is further stated that this functional value is the primary driver that influences consumer choice. In the case of AI during the collection of data it was found that millennial consumers have a vast use of technology as mentioned by Smith (2012) millennials are the cohorts who have grown with technology and are technologically savvy, this can be seen from the interviews as many already do use technology on an everyday basis in the case of functionality. Functionality wise they are a generation that functions with technology and with AI they felt very keen to the opportunities on functionality AI can bring to them. It was found they already have a lot of everyday situations using technology and they expressed through examples could further implement AI into their everyday situations. Millennials expressed these functional aspects through the extra help AI can bring when completing everyday tasks, or tasks that seem tedious, or boring. Furthermore they express the time saving and
comfort AI can bring by functionally helping. However regarding functionality a few issues have been brought up and were found in the performance of the interviews. One of that being monetary intentions. As seen by (Williams & Soutar, 2009) where It is also seen as functionality to be the value one receives from said product in exchange of money. Though this was not the case in all of the interviews, few did express AI to be expensive today are therefore not willing to use it as much as they would if products using AI would be cheaper. It was seen most millenials believe AI to be expensive, but did find potentiality in how the technology could aid them a lot in their everyday routines. Therefore it is possible for if AI were to have these said features these people are ready to consume it, but if the price is out of their hand they would not. Many expressed the essence of time to decrease the price and therefore be available to more people. Another issue that was seen from the interviews was the accuracy; some of the millennials expressed the development of AI and it being in the early stages. Others even questioned the ability of it performing and helping in such tasks, and questioned the worthiness of consuming AI. They expressed the functionality to be in link with the accuracy of this technology to be able to perform and help in said taks. Many expressed the development of AI and its improving as time progressed. Lastly it was also found many of the millenials wishing to remain at control. Though majority expressed positively about AI and its functional attributes which aid them in daily tasks, many expressed the desire to stay in control and not allow AI to take over completely when helping with certain tasks. Though expressed the desire of these functional attributes to help, they expressed the desire to stay in control of this technology and not let it be intrusive or controlling. This desire for control can be connected to what Wood and Evans (2018) mention; AI taking over jobs due to high functionality attributes when administering tasks.

**Epistemic Value**

An epistemic value is the curiosity a consumer has toward a product or service (Sheth et al., 1991). It was found though millennial consumers have different opinions about what they are curious about the topic, all become united since they are all curious about AI. A lot of the participants have the curiosity and willingness to further know more about AI, but mainly due to the hype or multiple news they come across regarding it, though they feel the need to know more about it before they actually are willing to consume it.
Curiosity was seen as it predominantly comes from the fact that they believe AI will become bigger in the future and therefore be incorporated more into their daily lives. However, respondents want to know more about it how and where they can actually use it. Many expressed knowing or hearing about AI but not knowing too much about it, with this uncertainty consumers will not know how to learn about AI it will be hard for them to gain full understanding of the technology and to start consuming it since they believe it is of importance to understand it before consuming it. As Sheth et al. (1991) said epistemic values arise from a result of a consumer becoming bored with a brand or product Berlyne (1970) and Rogers and Shoemaker (1971) expressed the thought of individuals constantly having a desire to maintain a constant level of stimulation resulting in consumers and the adoption of new products. Individuals have a routine manner of performing tasks and as Johnson,(2016) states, AI will enable consumers to perform routinely everyday tasks in different types of ways. This is what arose the curiosity of a consumer as seen in the interviews many mentioned their everyday tasks and AI can aid in performing these in a different manner. In order to possibly consume this more information is needed, if more information were to be present, in addition to the groups curiosity to learn more about AI in turn could possibly be more willing to consume it.

**Emotional Value**

In the model by Sheth et al. (1991) emotional values is referred to as the set of feelings a consumer has towards something. Overall there were different persistent feelings throughout the interviews. A positive feeling encountered from most of the interviews was excitement; many of the participants were excited about AI developing and eager to see its incorporation to our society. Though they had positive feelings another feeling identified though majority of the interviews in one way or another was fear or uncertainty and nervousness. Respondents were scared in different way regarding AI, as Roettgers (2016) AI has evoked different emotions amongst the public as Hollywood has brought the big fascination amongst killer robots and computer, uprising emotions of fear and negligence towards this sector, this could very well be seen reflected on a number of the interviews made. Many of the participants had a fear of the intelligence surpassing us and essentially “taking over”. While this Hollywood effect was predominantly seen in the interviews, another Hollywood effect was also perceived and
that was the expectation some have regarding this Intelligence, it was seen some of the participants have expectations for the future to be that of futuristic Hollywood movie and believe this can be achieved with the help of AI. Another reason these participants felt fear or uncertainty was; the fact that all data that AI has to collect to function properly intrude their privacy this was something perceived in the majority of the interviews. Participants were very uneasy when having to consent for personal data, this was a conflict they encountered when expressing their desire to use AI. Though they were aware of the fact AI had to collect their data in order to correctly perform many were not keen to this as it intrudes in their privacy. Others expressed fear of the object having a sense of watching over them, or their data being leaked as in current data leak scandals. Some of the participants were also scared and feared how if this developed, governments could potentially use this as a weapon of corruption. Additionally some expressed emotional triggers regarding the technology being able to i.e. speak in a certain accent or remember their names, they expressed this could potentially be an emotional trigger for them that could eventually have the power to change their current mood. Other emotional triggers that could potentially change their mood was the accuracy and functionality at which the object worked. Meaning if the object had poor accuracy in performing a task it would trigger the consumer to become mad, this can be compared to an example given by Woźniak (2013) where participants showed emotional distress and anger towards the robot, despite it being inanimate objects, and not real people. As it was also found that humans tend to naturally interact and engage with AI as a real agent, especially when human traits are applied to the machine (Woźniak, 2013).

**Conditional Value**

As defined by Sheth et al. (1991) “The perceived utility acquired by an alternative as the result of the specific situation or set of circumstances facing the choice maker.” Furthermore, Sheth et al. (1991) explains consumer behavior may not be predicted merely from attitude alone, and therefore investigated this circumstantial ability of situational factors. This meaning, the consumption of the object would occur due to circumstantial situation, through the interviews it was found most of the millennials were keen on using AI at any place any time regarding helping situations that were simple daily routines. They defined some of the routines to be while grocery shopping,
driving, cooking, finding new shows or playlists of music, or assisting in tasks that would otherwise take too much time. While some of the participants expressed the desire to use this during their jobs, others conditionally said they would prefer not to have this involved with their daily jobs. As stated by Mikulecky and Tucnik (2013) the consumer will be taking into account their needs along with their environment and together balance the needs to together form a solution as each consumer behaves selfishly to fulfill their own preference or objective and maximize the utility that lead to their goal of solving their problem. As it was found these consumers would utilize AI to their advantage in the most beneficial and convenient situations. However it was also found from the interviews there were conditional situations where the participants desired to not use AI, such as in private situations where they feel vulnerable. In contrary to most having expressed the desire to utilize AI in the home, a number of participants expressed the opposite as they felt this to be intrusive and not comfortable enough to allow such intelligence into the home. Another conditional situation where AI was expressed to not be used was when conducting creative tasks or personal tasks i.e. writing down thoughts, under these circumstances millennials still feel the desire to be in control. Lastly, as previously mentioned under functional, millennials have a desire to still be under control and for AI to only assist on certain tasks.

**Social Value**

Lastly a social value was defined to be one where “The perceived utility acquired from an alternative’s association with one or more specific social groups.” is how the social value is defined (Sheth et al., 1991). It was exemplified as choices of objects to be highly visibly seen or goods shared with others (Sheth et al., 1991), in contrast to this though AI is not a common good that is highly visible good that can be seen when consumed. This is a good that is of use in a somewhat personalized object or environment. It was found though; through the study that majority of the participants became aware or heard a lot about AI from social media or news outlets. Some claimed to be from trustworthy sources while other not, and a grand number did claim to become influenced from these social outlets. Other participants claimed to become aware or hear from friends which also claimed to be decision influencers in their consumption of AI. These individuals claimed their friend’s consumption regarding AI and them personally hearing or seeing the functionality of the product would influence
their decision in consumption. Moreover, some claimed to have seen AI through advertisements of AI objects being sold, this to some of the participants did not influence their choice of consumption as they defined it to be for marketing purposes and rather relied on reviewers and other members of society. On the other hand some consumers did in fact show interest in consuming AI form the advertisements they had encountered, additionally wanting to see how their functionality actually played out in relevance of the advertisement. Lastly as Danaher (2015) AI, as he calls it a “super intelligence” is possible to expose an existential threat as it can become opposed to our goals or ideas, this was found in some of the interviews as they mentioned their desire to not have a conflict with the object in case of disagreement.

5.2 RQ2: Which values did millennials emphasize on the most?

The values which were found to be the ones participants talked the most about were the Functional, Epistemic, and Emotional values. As defined by Sheth et al. (1991) the functional value is what brings the most utility out of the product, epistemic sparks curiosity, and emotional is what is connected to a consumer’s feelings. Participants spent most time and had most to say about these values as they were also the most re occurring in the interviews, out in their own sections as well as being mentioned on additional sections. It can be seen in the functional quotes where many of the respondents give real life examples relating AI to their everyday life and imagining or saying where they might be able to use it. For epistemic, a lot of the respondents mentioned and highlighted their curiosity towards AI in regards to the future and where everything was headed. Many mentioned the general progress and improvement of AI is mentioned, others, curious about the progress in fields such as medical, business, crime, or society itself. Lastly the emotional value was a very openly discussed topic and the respondents concentrated a lot on their emotions and feeling towards AI both when asked about their emotions as well as it came up in other sections. What was found, was most participants found AI to be either exciting and cool or even to some troublesome and expressed worried and creepy feelings towards AI. Some respondents who did feel the hype and excitement also felt the negative feelings towards AI, at the same time in a sort of conflict as they mention it was too new.
5.3 RQ3: What were the most important value(s) for millennial consumers regarding artificial intelligence?

When asked what were the most satisfactory values for the consumers from the five consumer choice behavior values (Sheth et al., 1991) majority of the participants emphasized on the functional value. Also as mentioned it is perceived that this functional value is the primary driver that influences consumer choice (Sheth et al., 1991), this was found to be true in the case of this study as most of the interviews mentioned functionality to be of most importance or strongest to them regarding the consumption of AI. Functional value tends to capability to satisfy needs that are functional, utilitarian or physical (Stigler, 1950). Most participants expressed how AI could be more “useful” or “helpful” in their everyday lives, some even expressed how AI was going to be able to help other people, or a third party as mentioned previously in fields such as business, medicine, or investigative, other towards humanity and society as a whole. Additionally other participants mentioned other values rather than functionality. As Sheth et al. (1991) also as mentioned more than one value can partake in the leads to consumption, as it was seen from the study some participants chose more than one value or a combination of all to be of most importance regarding consumption of AI. Secondly from functionality some participants expressed their importance for the values of epistemic, epistemic values which is what arouses curiosity for a consumer and or satisfy their desire for knowledge (Sheth et al., 1991). Some participants mention "curiosity" towards the new tech products and "information", "satisfy curiosity" as the most satisfactory value for them or as an add on to functionality. Moreover other participants also mentioned an emotional value an emotional values refers to the feeling the consumer has regarding the product, here participants expressed emotions and the way it made them feel to be the most important for them when consuming AI. This both when asked directly as well as something the author encountered throughout the interviews, their emotions became linked to other values such as functionality bringing happiness or relaxed emotions if it helped with certain tasks. Also as previously mentioned, triggering negative emotions such as anger and fears. Lastly the social value which is the usefulness a consumer connects to a product when there is a need to feel belonging within one or many social groups was also mentioned by some of the participants. They expressed themselves by exemplifying others whom had consumed
AI, and further expressed their consumption depended on other individuals trying AI first. Others expressed their group of friends and their reviews on it as a condition to possibly consuming AI. Lastly some linked AI to society as a whole and from there their consumption. These four values are what were most mentioned by the respondents in regards to the satisfaction AI would bring them.

5.4 RQ4: Are there any additional values from millennials towards AI consumption?

When asking the participants if any additional values were important for them regarding behavior towards AI, four different additional values were brought up and seen throughout the interviews - technology acceptance, trust, help and humanization of AI.

Technology Acceptance
A very similar trait that was found throughout the majority of the participants during the study was that of accepting this technology. This meaning among the participants majority expressed or showed how they were not yet ready for AI. It had been expressed and seen by majority of the interviews as them not being ready to consume it due to different reasons. Some of these reasons were seen as to be mentioned to be their beliefs of the devastating effects in the future or their effects on society. Moreover majority strongly expressed their uncertainty for consuming AI due to their data and their belief in how harmful it can be for AI technological assets using machine learning and their actions after these learnings. Respondents expressed this uncertainty and believed in the future AI could possibly become uncontrollable; this harm was expressed in i.e. job loss, or governmental usage. However this trait could be found mainly from respondents that had little to no experience pertaining AI, as it is a very new technology. The study can therefore be interpreted as low knowledge and experience about AI results in lower willingness to consume the technology of AI.

Trust
In accordance it was additionally found most of the respondents were aware that a lot personal data has to be gathered in order for AI to correctly perform its given tasks. Respondents were aware of this crucial need in order for the technology to work well in
their advantage, yet shared discomfort in allowing it to access so much information and saw a potential risk in revealing so much personal data to organizations who own the AI assets. Trust was a value that was both said directly by the interviewees when asked about additional values as well as perceived by them throughout the interviews carried. Trust can be seen as a belief which connects to emotions. The trust issues portrayed by the participants can be seen towards organizations and the way their data will be used other than the AI asset. Other exemplified situations of trust were mentioned such as that i.e. not trusting this technology regarding AI cars and not putting themselves in one. Moreover, participants shared trust towards the functionality, and being skeptical of though sharing their data, this AI asset not being able to function as perceived. As mentioned by Prensky (2001) as millennials being heavy tech users and rapidly adopting new technology fast, this study shows they have a distrust to use the AI technology. Having distrusted that AI will not help and that personal data can be misused can therefore lead to anti-consumption of AI since the trust value can outweigh other consumer values as this was perceived multiple times throughout most of the interviews.

**Helping**

It was found by many of the participants and their interviews their belief of AI to bring a lot of help, not just to themselves but to tertiary people. As defined by Sheth et al., (1991) functionality is perceived that this functional value is the primary driver that influences consumer choice, this meaning for the consumer themselves, but it was found a lot o the participants mentioned these values and functionality to be beneficial to others. These people mentioned were elderly, disabled, and in other fields such as business and medicine. One of the participants even mentioned civilization as a whole, and another mentioned how AI can create new solutions for people in general. This can be can be linked to the value of functionality, but as further as a derivative as the respondents are not referring to the AI to help themselves but rather other people. Many, as previously mentioned also expressed advancements in the future and how once it advances the possibility of AI helping others in the future. In different ways, helping and others was brought up in multiple interviews amongst several of the respondents, therefore this is a considerable value to take into consideration.
**Human-like**

Lastly, another value which was found to be consistent and of great importance amongst the interviews was the fact many of the respondents interviewed mentioned or personified AI. On several occasions throughout different values the thought or expression of AI to be like a person was expressed. Moreover some participants even personified AI by calling it to be a friend or it becoming part of their social group along with their real human friends. Others had already thought of AI and expressed of being aware of the fact that it is a humanized object and have it categorized as it is having humanized qualities therefore having an aspect of humanism. Several others expressed their utility as chatting with AI and how that could make them feel less lonely, or having someone to chat with. While some of these humanizing features on the product were positive others were the opposite and reflected negatively. Some of the participants expressed themselves as becoming angry with it or disagreeing with it, when it, in fact is still an object. As it was also expressed the unwillingness of having it in their home as it felt as a person was in their home or the equivalent of letting a stranger be in their home since AI has a mind of its own, and it was like having an intruder. Additionally it was expressed that AI would have an artificial personality and the concern of how that would conflict with theirs. Some exemplified it laughing at a joke they made or if it laughed because that is what they want to hear, this shows the person cares about what the object thinks or does as it was shown in the ball toss study Woźniak (2013) mentions where participants emotions were triggered by virtual reality players whom did not exist in real life. Similarly in other interviews it was said they felt uneasy if AI learned from them and was able to trigger their emotions, also relates to the ball toss study. This was one of the most prominent findings which were recorded from the interviews, how millenials personify these objects and give it their own personas, caring to an extent about them and what they do and say to them as an actual person would.

The unique additional values found in this study can be connected to the original consumer choice behavior model since they are all related to the values presented in the model by either being directly linked to consumer choice behavior or added as an additional value. An extended model was therefore elaborated in Figure 2 strictly from this particular study where the four new found values; technology acceptance, trust, help
and human-like, strictly connected to the consumption of AI discussed above are presented.

Figure 2: Theory of Consumption Values applied to AI from millennial consumers

Source: Adapted by the author from Theory of Consumption Values model by Sheth et al. (1991).
6. Conclusion

In this chapter the author concludes the study by giving a brief summary of the overall results of the study.

The purpose of this study was to explore Millennials’ views on the theory of consumption values regarding to AI. The author has succeeded in fulfilling the purpose and further answering the four proposed research questions posed at the beginning of the study with the aid of primary data collected from interviews.

The first research question aimed to explore how these consumption values were portrayed regarding AI from millennials’ consumer perspective. The study concluded all of the consumption values had their effect in regards to the consumption of AI by millennials. Furthermore, each value is explained as to how it affects AI consumption from millennials. The functionality value was explored through the examples given in which AI can aid in their daily routines, epistemic value found millennials to be very curious and wanting to know more about AI and especially how it will be developed for future purposes, conditional found exact places and situations where millennials found themselves using this technology as well as where they did not desire to do so. Moreover, social found the sources where these millennials were coming across AI and further informing themselves about it social media being the most prominent, and emotions found the emotions which were brought on to millennials by AI such as excitement, relief, fear. The second research question concerned on the values that were emphasized on the most by the millennials, this seen from how much millennials talked about these values it was concluded to be functional, epistemic, and emotional. These three values are what millennials spent most time talking about both occurring throughout the whole interview as well as in its own sections. The third research question regards which value is of most importance to millennials, it was found and as discussed some in fact did have more effect than others. In contrast to the second research question these were values which were directly asked to the participants to choose which value is of most importance to them regarding consumption of AI. The
functionality value reigned over the rest and was found to be the one millennials chose to be the most valuable in regards to consumption of AI, followed by this was epistemic, and finally social, and emotional. Lastly as proposed in the last research question to explore if any additional values would be found regarding consumption of AI. Two additional values and two extensions to existing values were found. Firstly technology acceptance was an additional value found as participants were not too keen on AI, and possibly not consuming this technology. Secondly “human” value was found where participants AI with humanized characteristics and give these great importances regarding to the leads of consumption. The two extended values were helping which is in connection to the functional value, as here participants expressed the product’s functionality, but to a third party. Additionally a trusting value was found as an extension to emotions, millennials did not trust AI and some even defined this as an additional value regarding the consumption of AI. To conclude and answer the purpose of the research, the values of consumption were explored on millennial consumers, it was found that more than one can have an effect on millennial consumption of AI, and the most important to be functionality, lastly additional values and extensions to existing values were found to further affect the consumption of AI in millennials.
7. Discussion of Limitations and Strengths of the study, Managerial Implications of the findings, and Future Research Suggestions

This chapter discusses the limitations and strengths of this study, as well as implications and suggested future research on this topic.

7.1 Limitations and Strengths

As this is a new and evolving topic a lot of the literature changed as the thesis was being written, many new products and publications were available in the end of the six months of writing in comparison to the beginning. This can be seen as a limitation as answers may vary from the participants from the beginning of the research to the end. Due to the limited time frame only a certain amount of interviews were able to be performed this can be seen as a limitation for this study. Moreover some of the participants had limited time to sit and discuss further in the interviews. As most of the participants were known or acquaintances or from a certain group whom they interact with, this can be seen as a limitation. Having unknown participants to the author can change the type of participants involved in the interviews.

Moreover the same limitation can be perceived as a strength as this allowed for the participants to be comfortable and in a relaxed environment. The fact the participants were known to the author also allowed a level of trust and truthfulness as a lot were not embarrassed to answer a question they were not sure of. Also in regards to this research topic being relatively new can also be perceived as a strength as well as a limitation as the exploration is very new to this research topic. The availability of millennials form different nationalities can also bring a strength to this research as the author was able to have different views on this topic from different participants whom had different experiences in their own countries.
7.2 Managerial Implications

This study can give great insight to Marketers and allow them to see how a group of international millennials feel and their beliefs towards the consumption of AI. It was found certain people possessed various trust issues toward AI, security being a major issue for them. Security and trust for consumers is serious and important consumers need to be informed about the technology or be shown testimonials on how AI works and get more acquainted to it in order to start consuming it and overcome these trust issues. Marketers or businesses may use this information to find a way to better explain AI and apply different marketing techniques by marketing assurance of security and in result gain their trust. Moreover, as found participants had high curiosity regarding AI, but did not know much about it, if more information was available informing of the benefits of consuming AI and education regarding AI it could benefit and contribute to the consumption of AI. Additionally attributes suggested to positively drive consumption in some AI assets could include the recognition of accents, accuracy of the asset, and the remembrance of the owner’s name. Lastly, this information can be further utilized for the increase of consumption of AI from millennials.

7.3 Suggestions for Further Research

In regards to future research this study was made on millenials and showed such results, for future research it may be of interest for the study to be performed on other age groups or generations as the study can differ in results and ideology towards AI. Additionally this study can be performed on a selected nationality of millennials to further see the differences.

Moreover this study can also be performed on different products of AI in order to perceive the different ways participants think. The low knowledge about AI and probably the lack of intangible products could be further researched in relation to consumption of AI.
References


Appendix 1: Semi Structured Interview

Introduce our research
Artificial Intelligence millennial consumers values functional, emotional, epistemic, social, and conditional and what people's values on consuming it

Demographic questions
Age
Gender
Nationality
Education/occupation

What do you know about AI?

Explain AI
The branch of computer science concerned with the development of machines capable of performing activities that are normally thought to require a human type of intelligence. And, additionally, the ability of a computer or other machine to perform activities normally thought to require a human type of intelligence
-Alexa: help you perform tasks speaker you can talk to it learns from you such as recipes for sandwiches it will learn that and it will give you more recipes on sandwiches
-watch that learn your sleeping pattern and when to wake you up
-car with ai that learn your rout if you go somewhere and learns when to fuel up

Are you consuming AI?

Functional Value consumer behavior towards AI
1. Do you find AI to have any utilitarian/physically useful values? If yes what values are these? (Examples)
2. Do you think AI will help with these utilitarian/physically useful values in the future?
3. Do you think utilitarian/physically AI can help you in your everyday life?

Emotional Value consumer behavior towards AI
1. What are your feelings towards AI in general?
2. What are your feeling or emotions towards using or consuming AI?
3. Does AI bring you new emotions or feelings? If so which ones?
4. When thinking of using AI and it helping in your everyday life does it bring any emotions or feelings to you compared to an electronic device that does not use AI? If so which ones?

**Conditional Value consumer behavior towards AI**

1. Is there a certain time / place/ situation (supermarket) where you would only use AI or would you use it in your everyday life?
2. Is there a certain time / place/ situation (supermarket) where you would not use AI?
3. Where and when do you think AI would benefit you?

**Social Value consumer behavior towards AI**

1. Have you heard about AI from other outlets i.e news, family, friends, social media, etc?
2. What do you hear from them?
3. Do they often influence when making decisions?

**Epistemic Value consumer behavior towards AI want to know more about or curios**

1. Does AI bring any sense of curiosity to you?
2. Do you want to know more about AI and acquire more knowledge about it?

**Extra Section**

1. If you would consume AI what would bring the most satisfaction to you? (Would it be useful, would it make you happy, would it help you in a certain specific situation, would it be someone or something that influences you, would it be for curiosity)
2. Is there anything else that would bring satisfaction to you aside of what was previously mentioned?