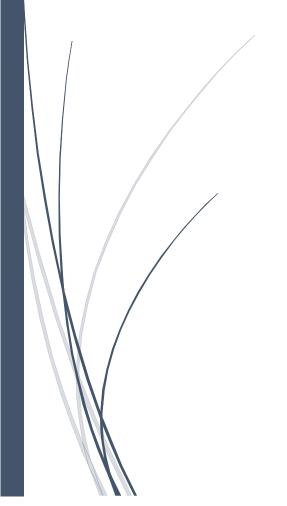17-2-2020

Too close for comfort

Exploring consumers' reactance and attitude on online personalized advertising: comparison between generations

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Abstract

Over the past decades, consumer-oriented data has been used to implement personalized online advertising. Since the phenomenon of online personalized advertisements is something from the last decades, one might wonder if every generation shares the same attitude towards those personalized advertisements or if a difference exists. This study is an exploratory one, aimed at identifying and exploring factors that might explain possible generation differences between baby-boomers and the Z-generation when it comes to attitude and reactance towards personalized advertisements.

In order to accomplish this, semi-structured interviews with both generations were conducted. A total of thirty participants, sixteen from the older generation and fourteen from the younger generation, were interviewed. The topics that were discussed can be categorized into four main themes: characteristics and online behaviour, privacy-related themes, attitude towards advertisements, and incentives.

Several factors have been explored and some interesting contradictions have been identified between the generations. For example, the privacy paradox seems to be more present within the younger generation, where they mentioned more and extensive privacy concerns but lacked actual privacy behaviour. However, the main finding of this study suggests that baby-boomers perceive personalized advertisements as quite obtrusive and unnecessary. The participants within the younger generation were quite fond of personalized advertisements. However, they state that reactance can be triggered if they feel like they are being put in a personalized bubble or if companies are too intrusive.

While no differences between the generations were found in the attitude towards regular online advertisements and some of the baby-boomers even perceived those as somewhat neutral or positive, personalization was quite negatively perceived, in comparison with the younger generation, who experience personalization quite positive. However, if the advertisement contains a more covert form of personalization, the older generation might not directly perceive that advertisement as personalized due to a possible gap in technical know-how, leading to a more nuanced opinion of the advertisement. Suggesting that the technical know-how, and the actual level of personalization and how covertly or overtly this is done, might play a key role. However, to explore to what extent the older generation perceives something as personalized requires more extensive study.

Keywords: Reactance, personalization privacy paradox, privacy concerns, personalized advertisements, baby-boomers, Z-generation

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1. Introduction

Consumers all over the globe are expressing and sharing their attitudes, values and need all over different platforms. Such attitudes, values and needs can be expressed in the form of searches, tweets or comments. As a result, consumer-orientated data is not only growing in value, but also in variety and velocity (Kietzmann, Paschen, & Treen, 2018). In the last two decades, an increasing amount of online companies are using advanced computing technologies to use such consumer-orientated data to implement online personalized advertising (Kim & Dan, 2017). Study has shown that such personalized services were perceived as more attractive and were being favoured over non-personalized service offerings. (Lambrecht & Tucker, 2013; Shareef, Dwivedi, Kumar, & Kumar, 2017). Companies, on the other hand, can create better services towards their customers, which can increase consumer satisfaction and loyalty, and gain competitive advantages (Rust & Chung, 2006; Ansari & Mela, 2003; Murthi & Sakar, 2003).

However, personalized advertisements can also cause unfavourable beliefs and attitudes. For example, retailer Urban Outfitters launched a website that was able to personalize each visitor's experience by gender. This resulted in an easy-recognizable form of personalization that gave the idea that Urban Outfitters collected their data without their awareness. The result was a "too close for comfort" attitude by consumers that eventually led to the end of the personalization campaign (Singer, 2014). The tension between the positive effects of personalization, which helps to increase service and product relevance, and the perceived privacy concerns and loss of freedom, is called the personalization privacy paradox (Chen, Feng, Liu, & Tian, 2019). If the perceived negative effects outweigh the perceived positive effects, a negative response in the form of reactance towards the advertisement can be triggered.

Several studies have been conducted regarding the concept of privacy. However, little research has ever been conducted concerning generation differences. The studies that did investigate privacy differences often showed contradicting results (Zeissig, Lidynia, Vervier, Gadeib, & Ziefle, 2017; Beak, Kim & Bea, 2014). For example, no significant difference in the level of privacy concern between younger internet users and older adults were found by Taddicken (2013) or Hoofnagle, King and Turow (2010). However, the study by Zeissig et al. (2017) did show significant differences in privacy concerns between older people and the younger generations, where the older users are significantly more active in protecting their data than younger users and they tend to have a greater awareness of their privacy issues. This protective behaviour is influenced by privacy concerns and trust, which, in turn, can be explained by previous experiences with data misuse and overall awareness (Zeissig et al., 2017). Trust, however, is also an interesting concept, where the study by Blank and Dutton (2012) did show significant differences in the level of trust between the generations, where older people are trusting the internet less than younger generations.

Research has shown that the biggest differences in privacy concern and protection behaviour are found between the Z-generation and baby boomers. For example, the study by Zeissig et al. (2017) reported the lowest mean value of privacy concerns in the age group 18-29, and the highest mean value was reported in the age group of 55-69. In the same study, the mean for protection behaviour was also found to be the lowest in the age group of 18-29 and the highest mean value was reported in the age group of 55-69. The study by Park (2015) showed that age has a significant influence on self-disclosure, seemingly to run linear with one and other. Furthermore, according to Leon et al. (2013) as the age of an individual increases, they agree less to the collection of browsing activities.

This study is an exploratory one, aimed at identifying and exploring factors, such as privacy, that might explain possible generation differences between baby-boomers and the Z-generation when it

comes to attitude and reactance towards personalized advertisements. To accomplish this, two different generations were interviewed, searching for possible differences in attitude towards personalized advertising by investigating factors such as privacy concerns, their willingness to disclose data and their attitude towards the perceived benefits of the personalization. In line with previous research, findings and personal interest, the differences between younger adults (Z-generation) and older adults (baby-boomers) will be investigated. To start off, the following section will be used to define key concepts and discuss relevant theories, followed by the main research question.

2.Theoretical framework

This section will be used to define key concepts and discuss relevant theories. First, the concept of personalization and the personalization privacy paradox will be discussed. Second, the definition and theory behind reactance will be described. The following section will be used to elaborate on factors that possibly influence ones 'attitude towards personalized advertising. Subsequently, the two different generations and their differences will be described. The last section of this chapter will propose the main research question

2.1 Personalization

Tam and Ho (2006) define personalization as a customer-oriented marketing strategy aimed at delivering the right message or content to the right individual at the right time. By doing so, the business desires to maximize not only immediate business opportunities but also maximize future endeavours. According to Montgomery and Smith (2008), the strength of this strategy is in creating maximal relevance without additional effort by the consumer. The consumer relies mostly on the marketeer to create this relevance and meet his or her needs.

Technological innovations as big data optimization, self-tuning algorithms, multimedia platforms, and social platforms enable marketers to track, follow and target individuals, and to offer more personalized service offers and advertisements (Chester, 2012; Brookman, Rouge, Alva, & Yeung, 2017). According to the dictionary of Althos (n.d.), "Personalized advertising is the communication of a message or media content to one or more potential customers that have been adapted or modified to match the interests of the recipients. Personalized advertisements may be customized with user preferences such as product types, cultural icons and dialects". Such personalized advertisements achieved greater recall, higher click-through rates, and led to more purchases, being considerably more effective as non-personalized advertisements (Tucker, 2013). Furthermore, a better preference match and relevant service can help reduce cognitive overload (Ansari & Mela, 2003).

In practice, personalized advertisements can appear in many forms. First of all, retargeting. Retargeting is one of the most common forms and uses targeting-cookies that activate when a user visits a page (e.g. products, blogs). Subsequently, advertisers can then target that user and deliver an advertisement based on the previous behaviour on the website or email. This form of personalized advertising, especially if done 'aggressively', is one of the most evident forms. Real-time bidding is another form, where generic audiences can be targeted through demographic and geographic traits. One does not have to visit a specific website or open an email to be targeted by a company. Another branch of personalization is remarketing. Remarketing is the process in which advertisements are shown to users based on their search behaviour, time of search and device type.

Besides personalized advertisements on the internet, several other forms have emerged. For one, digital television is a medium to provide users with a customized sets of advertisements per household. Secondly, is mobile advertising. Besides showing online advertisements, mobile usage can be exploited trough the means of its location and time. Nearby (local)businesses can easily provide 'relevant' advertisements to the user based on its geographical location. Other types of personalized advertisements may appear in the form of billboards, personalized videos and second screen advertising. Second screen advertising is when your tablet or mobile phone show you advertisements based on your social activity or what you are watching on your television (Davis, 2018).

While personalized online advertisements are more recent forms of personalization, it has been a service that has been around for quite some time. For example, in face-to-face encounters, companies often encourage their employees to adjust their behaviours towards each customer. This

can be done by explicitly modifying the service per consumer or by referring to a customer by name (Shen & Ball 2009). Robins (2003) proposed that an advertisement can be called relevant for a consumer if the content is customized and tailored according to the needs of the consumer.

Murthi and Sakar (2003) stated that personalization comes in three stages. Firstly, information needs to be collected and analysed to understand the needs and preferences of the consumer. Secondly, the information needs to be applied to customer experience. Lastly, an evaluation is required. In an online environment, this stage can be measured by the effectiveness of the advertisement. While personalization may come in several stages and forms, not all forms are considered to be that 'relevant' or 'desired'. The following section will focus on some of the perceived negative sides of personalization.

Personalization privacy paradox

The personalization privacy paradox can be described as a double-edged sword. On one hand, the positive effects of personalization arise, which may increase service and product relevance, and consumer adoption. On the other hand, such personalization can also decrease the consumer's sense of freedom and vulnerability and lower adoption rates (Aguirre, Mahr, Grewal, de Ruyter, & Wetzels, 2015).

According to Aguirre et al. (2015), two streams of literature explain the perceived negative consequences of personalization. First of all, personalized messages can be perceived as possible threats to the freedom of the consumer (Brehm, 1966). This threat can be explained by the fact that people want to avoid being closely observed by a firm. According to Brehm's interpretation of the psychological reactance theory, such a threat may result in an attempt to retain freedom. Fitzsimons & Lehmann, 2004). The second stream of literature mentioned by Aguirre et al. (2015) is a re-occurring cost-benefit analysis or privacy calculus. With, on one hand, the perceived benefits of personalization and, on the other hand, the possible data sharing costs.

Reactance and personalization

As stated by Bleijer and Eisenbeiss (2015), reactance can be described as a negative psychological response towards a persuasion attempt. Consumers can resist such an attempt by acting against that intended (Tucker, 2013). In line with the psychological reactance theory, consumers can change their attitude in response to anything that can be perceived as a threat to freedom (Edwards, Li & Lee, 2002). Personalization can not only be a threat to freedom because consumers want to avoid being closely observed by a firm, but the personalization can also limit the number of options that people perceive. For example, if a website is only showing you products or services based on your profile, gender or age, one might get the feeling that they are being labelled. This can lead to reactance towards the persuasion (Newell & Marabelli, 2015).

According to Brehm's psychological reactance theory, reactance towards persuasion can be categorized in three ways: cognitive, affective and/or behavioural. In the context of personalized advertising, the negative response towards personalized advertisement may lead to the consumers ignoring such advertisements (cognitive), the advertisements may be rejected in a matter that consumers find them annoying and that it raises awareness of possible data misuse (affective) or these advertisements may lead to behavioural outcomes, where consumers may be tempted to the use of an Ad Blocker (Brinson, Eastin, & Cicchirillo, 2018). The study by Chen et al. (2019) and the research by Sutanto, Palme, Tan and Phang (2013), showed that privacy concerns have a positive influence on triggering reactance. While they also found that the perceived benefits have a negative influence on triggering reactance. This is in line with the findings of Brinston et al. (2018), whose

research has shown that the perceived benefits and first-party data use positively predicted attitude towards personalized advertising. In this case, first-party data use is referred to as data that is used by a party with whom the user has an established relationship.

Research has shown several factors that possibly influence attitude towards personalized advertising and which might trigger reactance towards that advertisement. The following subsection will focus on discussing some of those factors. These factors include consumers' privacy concern and the willingness to disclose data, the perceived benefits and the matter in which data is collected.

2.2 Self-Disclosure and privacy concerns

According to Altman (1975), Petronio (2002) and Westin (1967), the concepts of privacy and self-disclosure are theoretically related. In the concept of online privacy, we can assume that consumers who are concerned about their online privacy will be less likely to freely spread their personal information on websites and social media. However, research into online privacy shows that individuals tend to be interested in their privacy and the protection of it, but that it rarely influences actual behaviour (Barth & De Jong, 2017; Joinson, Reips, Buchanan, & Schofield, 2010). According to Hallam and Zanella (2017), this privacy paradox, not to confuse with the personalization privacy paradox, is defined as the gap between a consumer's privacy concerns and their actual privacy-related behaviour. Consumers are willing to post large sets of data, while actually being aware of the possible privacy risks of that data (Tufecki, 2007).

While many discussions arise when you talk about privacy concerns and the privacy paradox, a recently discovered phenomenon attempts to 'solve' the paradox, namely privacy fatigue. This phenomenon occurs when one is growing weary of having to think about online privacy. A recent study by Choi, Park, and Jung (2018) has shown that when it comes to a users' disclosure intention and engagement, privacy fatigue had a more significant and a more intense impact than privacy concern. User's with higher levels of privacy fatigue tend to putt less effort into privacy decisions. However, privacy fatigue, or what factors might influence this phenomenon, is yet to be thoroughly and empirically investigated.

2.3 Data collection, covert or overt?

While personalization has become quite common in recent years, several organizations and laws (e.g. GDPR) aim to empower consumers to have more control over their data. Companies that collect and process consumer-oriented data for personalized advertising are required to be transparent in their ways and provide consumers with knowledge about the personalization process (Strycharz, Van Noort, Smit & Helberger, 2019).

Alongside with the transparency of data collection, is the type of data and the manner in which this is collected. This can be collected by first-party sources or third-party sources. Where first-party sources are those with whom the user has an established relationship and third-party sources are those that anonymously collect data without individual knowledge. In the case of Urban Outfitters, data was mostly covertly collected by third-party recourses, which eventually led to reactance of the persuasion attempt. Research has shown several variables that influence the intention to disclose information or data to first-party sources and on a website in general. For example, trust, website privacy concern, perceived privacy risk, perceived benefits, the affect and prior experience (Bansal et al., 2010; Li (2014); Wakefield, 2013; Li et al., 2011; Keith et al., 2013.

2.4 The effect of incentives

The perceived benefits of personalization can include financial discounts, increased convenience, or improvement of socialization (Gerber, Gerber & Volkamer, 2018). According to Warshaw et al. (2015), the possible data sharing costs can include all sort of negative consequences (e.g. identity theft, unintended third-party usage or social criticism). When it comes to information disclosure, several studies are conducted regarding the role of incentives. The perceived benefits or incentives directly correlate with the attitude towards data disclosure and data disclosing behaviour. (Koohikamali, Gerhart, & Mousavizadeh, 2015; Keith, Thompson, Hale, Lowry, & Greer, 2013; Xu Micheal, & Chen, 2013). For example, a study by Richard and Meuli (2013), investigated if users showed any intention to use permission-based location-aware mobile advertising (PBLAMA). In this study, incentives were an important factor to successful adopt PBLAMA and to give away their location.

However, when it comes to the effect of incentives, the privacy paradox seems to play a key role. A users' intentions and thoughts towards information disclosure may deviate from his or her actual behaviour, especially when certain tempting rewards are offered in exchange for their data. In line with the cost-benefit analysis or privacy calculus, if the anticipated benefits outweigh the costs, a user is expected to willingly give his/her data away (Gerber et al., 2018). However, this cost-benefit analysis is often biased by psychological processes through external circumstances as time constraints, information deficits or overload, or immediate gratification (Barth, De Jong, Junger, Hartel, & Roppelt, 2019). In short, if we talk about personalized advertisements, many factors arise which might influence ones' attitude towards personalized advertisements. The following section is aimed at discovering possible generation differences within these factors, starting with the general characteristics of both generations.

2.5 Generation differences

First, the Z-generation will be discussed. Throughout the literature, many names appear when searching for the Z-generation (e.g. digital natives, net generation, mobile prodigies or generation c), also the exact birth years of the Z-generation are arguable. Some has defined them as being born from 1995 to 2010 (Bassiouni & Hackley, 2014; Matson, 2016; Seemiller & Grace, 2016), others describe the Z-generation as anyone who is born after 1990 (Friedrich, Peterson, Koster, & Blum, 2010; Williams, Crittenden, Keo, & McCarty, 2012). Within the context of this study and in line with the studies by Friedrich et al. (2010), and Williams et al. (2012), the Z-generation is any individual that is born after 1990 till 2010.

However, according to Smith (2017), Z-generation is more distinguished by their behaviour rather than their age. More precise, their behaviour in how they share, create and manage digital content. This behaviour is driven by the technologies they grew up with and use on almost a daily basis, especially with the diffusion of smartphones. These young adults are the first generation that was born in a digital world and are heavy users of digital technology (Priporas, Stylos & Fotiadis, 2017). Members of the Z generation tend to behave and consume differently and are more focused on innovation. The study by Priporas et al. (2017) showed that innovative and smart technologies have a significant influence on the consumer's overall experience of the Z-generation. In addition, individuals from this generation have a certain expectation towards technology and how this technology can enable them to make considered consumer choices.

Schlossberg (2016) states that this generation has higher retail-wise expectations, lack brand loyalty and tend to care more about the overall experience. Furthermore, due to their excessive internet use

and self-disclosure on social networks, this generation is often perceived as vulnerable (Steijn, 2014). However, research also points out that this generation has much knowledge regarding protective measures (Miltgen & Peyrat-Guillard, 2014; Maaß, 2011).

Second, let's discuss the baby-boomer generation. As goes for the Z-generation, many names appear when searching for the baby-boomer generation. Baby boomers are often referred to as boomers, Me generation and the love generation (Williams, Page, Petrosky & Hernandez, 2010). In the context of this research, baby boomers represent adults who are born between 1945 and 1965. This generation is defined as self-assured, resourceful and mentally focused. Compared to younger generations, the attention span enables them to stay better on track when performing tasks (Pappas, 2016). Baby boomers have defined themselves by their careers and many consider themselves workaholics. According to Williams et al. (2010), boomers are eager to learn new skills, set new goals for life and have experienced high incomes and a dual-career household. However, this generation is also described as busy people with time poverty, who are often overloaded and overworked (Coleman, Hladikova & Savelyeva, 2006).

In comparison with the Z-generation, this group tends to be more cautious in adopting new technology and are often less experienced (Lee & Coughlin, 2014). Ironically, these technological developments also tend to be designed for younger generations rather than older ones. This often results in less confidence when confronted with the online environment or their privacy protection (Zeissig et al., 2017). Nonetheless, this generation is catching up with the usage of new media but still lags behind the younger generations. The new technologies help them to connect with those that they have not seen in decades or help them to meet new people that share the same interests (Schreurs et al., 2017). Unfortunately, as is with new technologies, most of the research on privacy attitudes and personalization focusses on the younger generations, instead of the older ones.

Generation gap?

The previous section identified possible factors that might influence one's attitude towards personalized advertising and summarized some of the characteristics of the different generations. This section will be used to elaborate on generation differences within these factors.

Regarding the impact of age on privacy concerns, research has shown that age on itself does not affect the level of online privacy concerns (Taddicken, 2013; Hoofnagle, King, & Turow, 2010). However, according to Zeissig et al. (2017), there are significant differences in privacy concerns between older people and the younger generations. If we consider privacy concerns, factors as privacy experience, perceived control and industry self-regulation are considered predicting variables (Xu, Teo, Tan, & Agarwal, 2012). A users' previous privacy experience applies to what level someone has been exposed or been the victim of personal information abuse. While age on itself was not taken into account in the study by Xu et al. (2012), one can assume that someone who has been around for 55+ years, statistically had more chance to have been a victim of personal information abuse in general. However, when we talk about online privacy abuse, several other factors may arise, as internet literacy, amount of time spent online, etc.

If we consider the difference in the willingness to disclose data, research in the context of social media has found that adolescents' attitude towards self-disclosure is one of the strongest predictors of the intention to disclose data. This might suggest that adolescents and older adults are more likely to follow their own subjective evaluations concerning the disclosure of data (Van Gool, Van Ouytsel, Ponnet, & Walrave, 2015). In the context of social media, data disclosure can be triggered by social influence. According to Brown, Eicher and Petrie (1986), adults seem to experience less social

pressure during later stages of their life, suggesting that the social pressure to actively engage in social media and thus disclosing personal information becomes less during adulthood. Regarding the impact of age on self-disclosure in general, Taddicken (2013) and Park (2015) found that age has both directly and indirectly (through the number of applications used) influence on self-disclosure. The findings have shown that younger users, although they do not use significantly more applications and seem to be more skilled at data protection, disclosed more personal information. However, the differences between the age groups were only marginally.

But what about the role of incentives? While it may be safe to assume that incentives play an important role in privacy protection or the lack of it, the question here remains to what extent do the different generations differ in attitude towards personalized advertisements when they are confronted with an incentive in the ad? Are they more tempted and may look beyond privacy issues? In 2015, for one, Park discovered that older users significantly appeared more prone to exchanging data for personal rewards.

Despite the more common factors that may come with age and the matter of being born in a less digitalized society, there are several other factors which might influence their attitude. Firstly, is there a difference in how they react to so-called intrusive behaviour by companies? To be more precise, to what extent do the different generations differ when either of them is faced with advertisements from third-party sources, with whom they did not willingly or knowingly shared their personal data? While this is still yet to be explored, if we talk about online advertising in general, Tanyel, Stuart and Griffin (2013), state that the Z-generation appears to be more negative towards internet advertising in comparison to TV-advertising. Similar to previous generations who had a more negative attitude towards TV-advertising, the most frequently used medium of that generation.

Moreover, let's consider the role of privacy fatigue. According to Hardy, Shapiro and Borrill (1997), fatigue can arise from situations in which humans are faced with high demands and a feeling of inability to meet their goals. Having to disclose personal information to online companies frequently can also cause a feeling of lack of control. Users may believe that they cannot ensure their own privacy causing additional psychological stress and fatigue. Stress, in this case, can be both a cause and a consequence of privacy fatigue. If we consider possible generation difference, no statistical evidence within the role of privacy fatigue can be found. However, if we consider the role of stress, the baby-boomer generation is described as a generation consisting of busy people with time poverty, who are often overloaded or overworked (Coleman, Hladikova & Savelyeva, 2006). On the other hand, according to the American Psychological Association annual stress report, members of the Z-generation reported the worst mental health of any generation (American Psychological Association, 2018). Once again, it remains though to identify possible factors that might explain a difference in attitude.

2.6 Research question

While many studies have been conducted regarding the factors that might influence the attitude towards personalized advertisements, the findings, especially between generations, seem to be quite contradicting, lack hard evidence or are incomplete in explanation. This research will focus on closing, or complementing, some of the literature gaps between the baby-boomer generation and the Z-generation. Building on the literature, or the lack of it, the following research question is proposed:

In which respect does the Z generation differ in reactance and attitude towards personalized advertisements, in comparison with baby-boomers?

In order to answer the main research question, interviews will be conducted, in which several topics will be discussed, because it is expected that within these topics relevant and helpful findings will emerge. These topics have been either discussed or mentioned in the theoretical framework as a possible factor for one's attitude or reactance towards personalized advertisement or are derived from questionnaires of previous privacy- or personalization-related studies (e.g. amount of time spent online, perceived skill level). The topics that will be discussed can be categorized into four main themes: characteristics and online behaviour, privacy-related themes, attitude towards advertisements, and incentives.

First, are the characteristics and online behaviour. Within this theme, six different topics will be elaborated on: information disclosure, amount of time spent online, perceived skill level, trust in online companies, perception of intrusive behaviour and advertisements that use data without consent. The last topic of this theme applies to what extent the generations differ when either of them is faced with advertisements from third party sources, with whom they did not willingly or knowingly shared their personal data.

The next main theme applies to privacy-related topics. Within this theme, several interesting topics will be discussed: privacy behaviour and self-efficacy, perceived control, privacy concerns, and privacy-fatigue. While privacy fatigue is a fairly undiscovered part of personalization and/or the privacy paradox, it has been proven to have a significant impact on ones' privacy concerns (Choi et al., 2018). However, no further research has been conducted on privacy fatigue regarding (possible) generation differences.

The third theme not only applies to one's attitude towards advertisements and personalized advertisements, but it also applies to what extent the different generations have a different view on personalization and personalized advertisements.

The last theme relates to the possible role of incentives on ones' attitude towards personalized advertisements. Incentives seem to play a key aspect in the overall attitude towards personalized advertisements, but the amount of research regarding generation differences is minimal. Is one generation more tempted towards incentives and possibly more eager to exchanging data for personal rewards?

Figure 1:Predetermined themes and topics

Figure 1 provides a clear overview of the predetermined themes and topics that will be investigated throughout the interviews. In order to answer the research question, in-depth interviews will be conducted. The order in which the themes are discussed throughout the interview does not necessarily match the order of the themes mentioned earlier. The following section will focus on justifying the methods and instruments used in this study.

3. Method

The method section is used to elaborate and justify the methods and instruments which were used in this study. Within this section, the research design will be elaborated on, followed by the procedure. It also describes the justification of the interview content, the demographics of the participants, and how the data was analysed.

3.1 Research design

This study is an exploratory one, aimed at identifying and exploring factors that might explain possible generation differences when it comes to attitude and reactance towards personalized advertisements. The main goal of this study is to investigate the baby-boomer generation and the Z-generation and to see if, and why, differences exist. Gaining in-depth insights into possible reasons for differences between generations requires intensive collaboration with both the generations. In order to accomplish this, semi-structured interviews with both groups were conducted. Semi-structured was chosen because it provides reliable, comparable and qualitative data. Moreover, semi-structured provides the opportunity for identifying new insights, while following relevant topics (RWJF,2008). To make sure the same topics and areas were covered for each of the participants and thus being able to compare the two generations, an interview guide was drawn up in advance. Additionally, the interview guide helped to improve reliability. Ethical approval for this study was obtained from the Ethics Committee of the University of Twente and research was conducted in accordance with the guidelines given by the University of Twente. In addition, all participants were all fully aware that they could quit at any point.

3.2 Procedure

The first questions of the interview related to the participants' demographics and to find out if some form of internet literacy is present. Subsequently, the subjects were asked about their view on personalization and personalized advertisements. Thirdly, the exact purpose of my study was explained, followed by showing, and elaborating on, some examples of personalized advertisements (e.g. the case of urban outfitters, retargeting advertisements, mobile advertisements). By doing so, the view of the participants on advertising, personalization and personalized advertisements could be identified, both prior the explanation and after the explanation. Subsequently, an in-depth interview was conducted with several subjects (e.g. privacy concerns, privacy behaviour, privacy fatigue, perceived control, trust in online companies, intrusive online behaviour by companies and the amount to which an individual is sensitive to incentives).

The output of the interviews was transcribed and coded both during and after the collection of the data. The main instrument that was used in this study was an interview coding software, Atlas TI. This was combined with all the required materials for the interviews and the coding of them. The interviews were recorded using a voice recorder. On forehand, all participants had to fill in a consent form. The interviews were conducted in a face-to-face setting and lasted up to 20 minutes. Permission was obtained from the participants to record the interviews by letting the participants fill in a consent form (appendix B).

3.3 Interview content

The content of the interviews is mostly based on the factors that have been named that could explain if, and why, a generation difference exists. While most of the research that has been conducted on this topic was quantitative, examining previous studies helped to set up an interview

design that covered most of the possible factors but left room for new possible insights. Previous research helped to construct validated interview questions. For example, the research by Divey and Hart (2006), and Choi et al. (2018), helped to construct questions regarding privacy concerns and privacy fatigue. While those studies were quantitative, the questions that derived from those studies helped to gain insights into the if and why. So, why does one have privacy concerns or why is one growing weary of having to think about privacy.

On forehand, an interview scheme was designed which included the following themes: characteristics and online behaviour, privacy-related themes, attitude towards advertisements and incentives. At the beginning of the interview, participants were asked to state their current profession or study and to state their age. Furthermore, participants were asked to indicate the frequency of social media use, if they ever been a victim to (online) privacy invasion, how many hours they spend online and what they consider to be their skill level with computers and online software (1-10). The questions within the interview themes started by asking the participants about their view on advertising in general, personalization and personalized ads. Subsequently, a small introduction and explanation were given, followed by once again asking their view on personalization and personalized ads. The following questions related to topics within the themes of privacy and, characteristics and online behaviour. Besides 'regular' questions, two statements were discussed to find out if there is a difference between generations when one is confronted with advertisements from third-party sources or first-party sources.

The last questions of the interview related to the theme of incentives. To find out if, and to what extent, people are sensitive to incentives, three scenarios with incentives were described. The first scenario related to the role of incentives in general. The second scenario related to a more covert personalized advertisement. To be more precise, a geographical personalized advertisement that will be shown if one is within the range of the company. The third scenario related to a scenario where they would walk past an electronica store and that they would get an advertisement on their phone, offering an incentive, for the laptop they were looking for online. The third scenario was the more overt personalized advertisement. The interview scheme was assessed prior to the interviews and small changes were made during the interviews. Questions that resulted in the same answers were left out and others were added when more explanation was necessary. The final interview scheme can be found in appendix A.

3.4 Participants

A total of thirty members of the target groups participated in this study. Of these thirty members, sixteen were in the baby-boomer generation and fourteen were in the Z-generation. The average age of the participants in the Z-generation was 23 years old (SD=1.1). The youngest participant is 21 and the oldest is 26. Within this generation four participants are female and ten are male. The average age of the participants in the baby-boomer generation was 56 years old (SD=2.6). The youngest participant is 54 and the oldest is 62. Within this generation, eight are female and eight are male. In line with theory, the Z-generation is any individual that is born after 1990 till 2010. Baby boomers represent adults who are born between 1945 and 1965.

With two exceptions, every participant in the younger generation had a bachelor's degree or higher and over 75% are still in college. The studies and professions that the participants from the younger generation have, vary a lot. Within the older generation, every participant has a job and works in an office function with a moderate to high level of education. The jobs are quite diverse (e.g. project manager, finance controller, managers and communication employees). The participants were recruited in a quota sampling routine and were gathered through the means of convenience

sampling and snowball sampling. Initially, most of the participants were gathered within the network of the researcher. Subsequently, individuals within the network of the participants were asked to partake in this research. All participants have the Dutch nationality and were interviewed in Dutch.

3.5 Data analysis

The recordings of the interviews were transcribed and bundled. The data was both deductively and inductively coded with the use of a start list of codes, developed from existing literature. Most of the codes are directly linked to a topic. For example, participants were asked to what extent they feel like he/she can trust online companies in general. This mostly resulted in two codes, participants that felt like they can trust online companies and participants that felt like they cannot trust online companies. Additional codes were added when new topics emerged, and the data was organized into the key themes. These themes are characteristics of the interviewee, attitude towards advertising, privacy-related themes, online attitude in general, and incentives. The first round of coding was conducted when a total of twelve interviews (six per generation) had been completed and transcribed.

The second round of coding was conducted after all thirty interviews had been completed and transcribed. In comparison with the first round of coding, several sets of codes had been added or broadened, resulting in a more extensive and detailed codebook consisting of 39 sets of codes. To ensure reliable data analysis, a second coder has validated the codebook after the second round of coding. In order to measure inter-rater reliability, Cohen's Kappa coefficient was calculated. A total of 10% of all collected data was analysed by the second coder, resulting in a Cohen's Kappa of .929. The second coder analysed a total of three interviews and identified 87 codes. After the session with the second coder and the relatively high Cohen's Kappa, no significant changes were made to the codebook. The complete codebook can be found in appendix C.

4. Results

This chapter contains the results of this study, categorized by the explored themes and discovered code-groups. Firstly, the general differences in the characteristics will be described, followed by online attitude. The next theme that will be discussed is the subtheme privacy. The third theme that will be described is the attitude towards (personalized) advertisements, followed by the results with regard to incentives. The last section of this chapter will contain a structured overview of the overall results. Within the introduction of every subsection, a table is provided to give a clear overview of the results within that subsection. Throughout this chapter, several quotations are used. The original Dutch quotations can be found in Appendix D.

4.1 Characteristics and online behaviour

Table 1: Results within the theme of characteristics and online behaviour

	Clear difference	Some difference	No noticeable difference
Information disclosure	x		
Amount of time spent online	x		
Perceived skill level	x		
Trust in online companies		x	
Perception of online intrusive behaviour			x
Advertisements that use data without consent		x	

This section helps to compare the characteristics and (online) traits of the participants and to find out to what extent a difference between the generation exists. Within this section elements like the amount of time they spend online, their trust in online companies, the data they disclose, their perceived skill level with computers and software will be compared.

4.1.1 Information disclosure, perceived skill level and amount of time spent online

On average, the older generation state that they spend 1,4 hours per day online. This is measured in hours that they spend in their leisure time on activities like browsing social media, watching Netflix or reading the news. However, the lot of them do have jobs that require them to spend a decent number of hours per day behind the computer. However, if we compare them to the younger generation, a noticeable difference is present. The amount of time spent online in leisure time by the younger generation, for example, averages on 3,8 hours per day. Furthermore, some of the participants in the younger generation also have jobs or study obligations that require them to spend even more hours online, amounting up to 12 hours per day spend behind the computer.

The numbers of hours spent online might have had an impact on one's perception of their skill level and self-efficacy with software on the computer, either offline or online. For example, the older generation averages themselves a 6.3 on a scale from 1 till 10. However, the participants from the younger generation estimate themselves quite higher with an average of 8.4. The difference in time spent online between the generations can also be expressed in how active they are on social media. Within the older generation, only two of the sixteen participants stated that they are active on social media. They all seem to have an account on social media but post little to nothing. The younger generation seems to be quite more active, not only in hours but also in the frequency of posting.

Some even post relatively frequently on either Facebook or Instagram, ranging from at least one time per week to posting something every month.

The next aspect of information disclosure that was explored, applies to the extent to which one registers him- or herself online. All participants were asked to what extent they register themselves online when ordering a product or service and to what extent they fill in a registration form completely and truthfully. On both sides, most of the participants stated that they only register if necessary. The main arguments ranged from being able to track the order, not wanting to have too many accounts, till not ordering that frequently online. These motives were mentioned by participants in both generations. When asked if they always fill in the registration form completely and truthfully, interesting motives appeared. While the results were quite the same, where on average both generations fill in the registration form completely enough to fulfil the order, the reactions why they filled in the form truthfully were quite different. The older generation responded, besides practical reasons, with more moral motives. Some of them responded with a tone of voice that implicated that they filled in it truthfully because they are an honest person and do not like lying. The younger generation mentioned more practical motives, simply because they want to complete the order without disclosing too much data.

4.1.2 (Dis)trust in online companies

Participants were asked to what extent they are confident that most online companies would act in a customer's best interest. In both generations, very divided opinions were found. For example, within the older generation, people seemed to be slightly more distrustful towards online companies in comparison with the younger generation. Eleven of the sixteen participants within the older generation feel like companies only act in a commercial manner or in their own interest. In comparison, seven out of the fourteen participants within the younger generation feel like online companies only act in their own interest. Motives for distrust in the older generation were very clear, online companies handle in their own interest because of commercial manners. For example:

> [1] "No, they act from a commercial point of view, so self-interest comes first."
> (Participant 23, age 54)

However, within the younger generation, participants more or less differentiated the types of companies. National companies and especially local or smaller companies were perceived as more trustful over international companies. For example:

> [2] "Uhm that really depends on which company it is. I will not trust large foreign
> companies as quickly as Dutch webshops, for example. They always depend on
> technology and something can always go wrong. So, I don't think that every
> company acts in the interest of the customer, but mainly thinks about their own
> wallet." (Participant 3, age 24)

> [3] "From my field of expertise, I know that most online companies only act in the
> interest of the customer. At least, SME's do this. I do not trust larger institutions
> and companies in this. Here, in my opinion, data is traded, such as at call centres
> etc. This has already been demonstrated in several scandals." (Participant 10, age
> 25)

Furthermore, within the younger generation, some participants have mentioned that they not necessarily distrust online companies, but more their security, or the lack of it, which eventually can lead to a data breach.

If we consider motives for confidence or trust in online companies, people within both generations state that online companies are more or less dependent on the consumers and/or its opinion and cannot afford to be distrustful. This impact of the consumer on a company is mentioned multiple times. However, real motives for trusting online companies, besides mentioning that companies are dependent on the consumers' opinion, are negligible.

4.1.3 Intrusive behaviour and advertisements that use data without consent

To get a better view of what both generations consider to be intrusive behaviour in an online setting, participants were asked what they perceived as online intrusive behaviour by a company. The general results were quite the same if we compare both generations. However, motivation and clarification seem to vary.

The perception of intrusive behaviour can be categorized into two groups. 1.) Unwanted advertisements, which can be either personalized or not. 2.) Unwanted e-mails. Moreover, push advertisements and advertisements that directly interrupted with an activity (e.g. Youtube), were perceived as highly intrusive and annoying by both generations. The opinions and perception of intrusive behaviour were quite the same for both generations. The older generation, however, gave some more generic answers with an annoyed tone of voice in it. For example:

> [6] "If they don't know when to stop, with their advertisements and e-mails."
> (Participant 26, age 56)

> [7] "If you get a lot of advertisements and emails, I didn't ask for that."
> (Participant 30, age 54)

The younger generation gave some more nuanced and technical underlined answers. For example:

> [4] "you choose to buy online, so you can expect that they want to sell you more."
> (Participant 8, age 22)

> [5] "Advertisements that are only based on click-behaviour and nothing else, I see
> that as a missed opportunity." (Participant 13, age 23)

Furthermore, within the interviews, two statements were discussed to find out if there is a difference between generations when one is confronted with advertisements from third-party sources or first-party sources. The first statement applies to what extent one feels that only companies that have their consent might analyse, use and keep track of their data. Within the older generation, with one or two exceptions that simply don't care, everyone agrees to this statement. The main attitude seems to be 'why would other companies have the right to use my data'. In line with the older generation, the participants in the younger generation seem to share this opinion.

The second statement applied to what extent one might get negative feelings towards a company or advertisement if they see a personalized advertisement from a company that they did not knowingly share their data with. Within the older generation, the vast majority of the participants agrees with this statement and might get negative feelings. However, 1/3 third of the participants also seem to respond a little more nuanced and not necessarily get negative feelings. Within the younger generation, the opinions seem to be quite the opposite, where the vast majority doesn't necessarily get negative feelings and 1/3 do get negative feelings. The motivation they provide for not necessarily getting negative feelings can be categorized into three groups. Firstly, those who have somewhat more technical knowledge and understand how those advertisements are used. Secondly,

are those that are used to it and won't necessarily get negative feelings. Lastly, are those whose reaction is dependent on the content of the advertisement. For example:

> [8] "Not necessarily negative, but when I have viewed a product it does not automatically mean that I also want that product. For example, if I accidentally clicked on a product, I immediately see advertisements for it. I don't want that." (Participant 12, age 23)

4.2 Privacy

The previous section helped to explore and compare the more general factors and characteristics. This section will explore the factors around the concept of privacy. Within this section factors like privacy concerns, perceived control, privacy behaviour & privacy self-efficacy, and privacy fatigue will be elaborated upon.

Table 2: Results within the theme of privacy

	Clear difference	Some difference	No noticeable difference
Privacy concerns	x		
Perceived control		x	
Privacy fatigue		x	
Privacy behaviour		x	

4.2.1 Privacy concerns

According to Xu, Tei, Tan & Agarwal (2012), negative privacy experiences directly influence one's privacy concern. Because of this, participants, on forehand, were asked if they have ever had bad experiences with (online) privacy. All mentioned negative privacy experiences, three within the older generation and two within the younger generation, applied to a hacked account, either on social media or email. While it may be hard to generalize and the results are marginal, the older generation, while not being that active online in comparison with the younger generation, do have experienced somewhat more negative privacy experiences. However, a real pattern with negative privacy experiences and privacy concerns seems to be lacking. One participant did state that the hack made her more aware of privacy and security. However, actual change in privacy behaviour was not mentioned.

Throughout the results of the responses, three codes emerged if privacy concerns were considered. Firstly, is the extent to which a person worries about their privacy. Secondly, is the absence of personal privacy concerns. Lastly, is the presence of privacy concerns in general and this applies to the extent a person worries about privacy or data leaks in general. Since this research is in nature a qualitative comparative research, the two generations will be compared to see to what extent a difference in privacy concerns is present.

First of all, is the absence or presence of privacy concerns. Within the older generation, six out of sixteen participants shared one or more personal privacy concerns. If both the generations are compared, personal privacy concerns seem to be more present in the younger generation, where twelve of the fourteen participants mention one or multiple forms of personal privacy concerns. The concerns that were mentioned by participants in the older generation apply to the misuse of data. For example:

> *[9] "Sometimes, I suspect that this data is being "traded" on the street. For example, my interests, telephone numbers or name and address details."*
> *(Participant 26, age 56)*

If these privacy concerns are compared to the privacy concerns of the younger generation, some interesting findings emerge, where the concerns of the younger generation are not only more present but also more extensive. For instance, if we consider the issues that the younger generation mention, several topics arise, rather than only the misuse of data. For one, are the concerns that might arise with the use of social media (e.g. identity theft, the unwanted spread of photographs, lack of account privacy and the possibility that someone may use old data). For example:

> *[10] "I am only concerned in the long run. For example, when you are 15 and you share things on social media, forums, etc. and usually this is deleted by most 20 years old. However, I am sometimes afraid that this data can someday be found/used against people. You often see this happening to people being "exposed" for very old tweets, etc. This can happen to anyone who is on social media at a young age." (Participant 1, age 23)*

Other personal privacy concerns that were mentioned by this generation is the misuse or theft of their data or that their data is being sold as mentioned by the following participant:

> *[11] "Yes, I sometimes do fear that my data will be stolen in one way or another. I am also sometimes afraid that my passwords or bank details will be stolen and that they will subsequently steal money from me. (..) Because I don't trust all the companies. In my opinion, not every company has the means to optimize security. In addition, some companies will also have fewer concerns about properly securing certain data." (Participant 3, age 24)*

However, similarities were found in the absence of personal privacy concerns, where individuals from both generations mention one simple motive: 'what you don't share, cannot be misused'. Especially within the older generation, the lack of sharing and not being online resulted in an absence of personal online privacy concerns.

Besides personal privacy concerns, general privacy concerns were also mentioned throughout the interviews. For example:

> *[12] "Online privacy is becoming increasingly important because we spend more and more time online and data from us is available online. It is important that everyone is aware of this and that it can also be harmful or annoying".*
> *(Participant 25, age 57)*

Rather than being concerned that it affects them personally, general privacy concerns apply to the extent to which one worries that data, in general, is not secure. This might be stirred up by frequent exposure to related news items, where several participants mention data theft or data leaks that they heard or read in the news. General privacy concerns were slightly more present and mentioned within the younger generation. Furthermore, all general privacy concerns in both generations seem to apply to the misuse, resell or leak of data.

4.2.2 Perceived control

Closely linked to personal privacy concerns is the extent to which an individual feels like they have control over their data. To get a better view of one's perceived control, participants were asked to

what extent they feel like they have control over their data. In the previous section, several interesting findings were discussed, where the younger generation mentions more and broader privacy concerns than the older generation. If we consider perceived control, all of the participants within the older generation state that they don't feel like they have control over the data that companies collect from them. Besides simply stating that they don't feel like they have control over their data, one argument is quite present and given multiple times throughout the interviews: digitalization acceptance. This is the extent to which an individual feels like it's just part of this era. For example:

> [13] "No definitely not. I think that we are already too far ahead of that, regarding digitization." (Participant 27, age 62)

Especially in the older generation, this argument was mentioned by the majority of the participants. Within the younger generation, quite some diverse answers were given when asked to what extent they feel like they have control over their data. While the majority also feel like they cannot control the data that companies collect from them, they came up with more technical arguments:

> [14] "I don't feel that I really have any influence on that (data), because I often have no idea what information about me becomes the property of the company. The privacy statements are often extremely long and you will not read them. In addition, you usually have to accept cookies because otherwise, you cannot use the website. There should be much more clarity about this and also the settings of this should be much easier. Nowhere is it clearly stated which data a company actually has from you. In the settings, a kind of menu should come with on/off buttons of your data that you want to share with a company. I hardly have an idea of this now." (Participant 3, age 24)

> [15] "I have the feeling that I have no control over this, nobody has. To make optimal use of online functions and app functions, you will have to share certain data (e-mail, location, etc.).By connecting to Wi-Fi you already share so much information, it is practically impossible to get a grip on the situation, except if you are content with the fact that they get your info." (Participant 1, age 23)

Furthermore, besides those who believe that they can't control the data being collected, several participants within the younger generation feel like they can shield themselves from data collection by either deleting their data or going 'incognito' by simply using incognito or private modus while browsing products. Digitalization acceptance, however, seems to be a phenomenon that is more present within the older generation.

4.2.3 Privacy fatigue

A relatively 'new' phenomenon within the aspect of privacy is privacy fatigue. This is the extent to which an individual grows weary of having to think about privacy. To get a better view of a possible generation gap and to find out to what extent a form of privacy fatigue present is, participants were asked two questions. Firstly, if they could imagine that people were growing weary of having to think about privacy and if they could imagine that or if they believed we should keep our focus. Subsequently, participants were asked if they felt like they are less interested in privacy-related issues.

Within the older generation, some form of privacy fatigue is more present. The majority of the participants in the older generation state that they can imagine that people are growing weary of

privacy and that they are being overrun with information regarding privacy. Furthermore, some participants within this generation feel like it's not clear enough, resulting in disinterest. To be more precise, the laws surrounding privacy and what information is stored by companies is perceived as unclear and vague by some participants. For example:

> *[16] "I can imagine that (growing weary). By law, it should be clear what can and what cannot. The government must enforce this. It is impossible for ordinary people to oversee everything." (Participant 16, age 54)*

However, within the younger generation, the opinions seem to be quite one-sided. The participants from this generation mostly state that we should keep our focus if it comes to privacy. Some form of privacy fatigue seems to be more absent. For example:

> *[17] "I am interested in it, but on big data and the consequences it can have on a large scale. For example, in the case of Cambridge Analytica. These are things that must be prevented at all times and which must be monitored very closely. Sponsored channels to influence politics must face a very severe prison sentence." (Participant 10, age 25)*

However, some participants within the younger generation state we should keep our focus, but we shouldn't exaggerate. For example, some participants mentioned that privacy is quite important, however, getting an 'annoying' amount of notifications works quite counterproductive.

Furthermore, the need for a clear overview of what is stored by the companies is mentioned by participants in both generations.

4.2.4 Privacy behaviour

The previous section helped to determine to what extent a difference in privacy concerns are present. However, research into online privacy shows that individuals tend to be interested in their privacy and the protection of it, but that it rarely influences actual behaviour. To what extent does this apply in this research and is there a difference between the different generations?

Within the older generation, the mention of privacy-related behaviour is minimal. Three participants protect their Facebook or Instagram from unwanted visitors, and some have a password or code or their laptop or mobile, but any other measurements are not mentioned. With three exceptions, every participant in this group states that they simply don't know where you could change such settings.

Secondly is the younger generation. The previous section helped to examine their privacy concerns and those were relatively high, in comparison to the older generation. However, actual privacy-related behaviour was scarce throughout the interviews. Besides having their Instagram or Facebook account protected in a matter that outsiders cannot view their profile, other measurements are hardly mentioned. Only a small number of participants mention that they do use some form of privacy protection. These are the exclusion of rights for certain applications, going incognito and denying certain cookies. One participant explicitly changed its privacy settings, besides the account lock, in their Facebook account. However, this was done after the Facebook Cambridge Scandal. This action-reaction motivation is mentioned multiple times throughout the interviews:

> *[18] "Nothing at all. Maybe a bit of laziness. Privacy is perhaps worth a lot if you look at it that way, but I think I'll only do something with it when it goes wrong." (Participant 5, age 23)*

The motivation for not changing any settings can be categorized into three groups within the younger generation. Firstly, those that know the settings but state that they are simply too lazy or doesn't care enough to change them. Second, are those that know the setting and actually change them. Thirdly, and the biggest group, are those that have no clue where to find those settings.

4.3 Attitude towards advertisements

Within this section, the attitude with regard to advertisements will be explored and compared. Within this research, three sets of codes are distinguished. Firstly, the attitude towards online advertising in general, followed by the attitude towards personalized advertisements pre-explanation. Lastly, are the attitudes towards personalized advertisements post-explanation. However, this section will begin with examining to what extent a difference can be found within the generations' knowledge of personalized advertisements.

Table 3:Results within the theme of attitude towards advertisements

	Clear difference	Some difference	No noticeable difference
Knowledge of personalized advertisements		x	
Attitude towards online advertising general			x
Attitude towards personalized advertisements pre-explanation	x		
Attitude towards personalized advertisements post-explanation	x		

4.3.1 Knowledge of personalized advertisements

Being more online and posting more frequently leaves a bigger internet trail, which might result in more frequent encounters with personalized advertisements. However, can an actual difference be found in the knowledge of personalized advertisements? All participants were asked if they ever saw a personalized advertisement and what they consider to be personalized in an online setting. In the previous chapter, several forms of personalization and personalized advertisements are discussed. The most evident form of personalization, retargeting, was also extensively mentioned. Within the older generation, the only forms of personalization that were mentioned were also retargeting and personalized emails. For example:

> [19] *"An offer to get into the showroom, after you have visited the site of a car dealer." (participant 15, age 55)*

Although all participants in both generations could mention one or two examples of personalization, the number of mentioned personalization options by the older generation was very limited, in comparison to the younger generation. Besides retargeting and personalized emails, remarketing and customization of a website were mentioned by the younger generation. Furthermore, more technical details were provided:

> [20] *"On the basis of what I do on my laptop, the internet can make predictions of what I have interests in. Personalized advertisements are used based on that expectation pattern." (participant 8, age 22)*

> [21] *"Another nice example: when I log on to a website somewhere, I sometimes see my name in an advertisement. For example, on the website asos.com, a*

clothing website, I see an advertisement with "especially for you (name) " and then I suddenly see products that I once viewed but now with a discount."
(Participant 2, age 22)

4.3.2 Attitudes towards online advertising in general

The types of attitude people have can be categorized into three groups. Firstly, those with a negative attitude toward online advertising. The second group who are more or less neutral. The last group are those who gave a positive comment on online advertising in general. For the older generation, participants gave very diverse answers. A small majority of the participants gave quite the negative answers, they perceived them as annoying and inconvenient. For example:

> *[22] "To be honest, quite annoying. You must click things away before you can read certain items or before you can watch certain videos. "(Participant 19, age 55)*

They mainly aimed at advertisements that popped up and interrupted their activity. The other participants in this group were somewhat neutral or positive, where they acknowledged that you could potentially reach out to a big audience.

The younger generation also gave some very divided answers. The motivation for disliking advertisements also applied to unwanted banners or interruption of their activities (e.g. advertisements before watching a Youtube video). However, in the neutral and positive group, participants often mention that they don't necessarily dislike advertisements in general but more advertisements that are not relevant to them. For example:

> *[23] "I have no problems with online advertising as long as the advertisements remain relevant and are not annoying. advertisements on YouTube (irrelevant video spam) are very annoying. If the advertisement appeals to me or is relevant, then I have fewer problems with it." (Participant 10, age 25)*

4.3.3 Attitudes towards personalized advertisements pre-explanation

Before the explanation of personalized advertisements, participants were asked for their opinion on personalized advertisements. While the general attitude towards advertisements gave quite some divided answers, the opinions on personalized advertisements are more structured. To be more precise, the older generation is quite negative regarding personalized advertisements and the younger generation responded quite positive.

From all pre-explanation responses within the older generation, only one seemed to be fond of personalized advertisements. The vast majority of the respondents within the older generation responded in a negative manner. Some of them mention re-targeting as annoying or unnecessary since they see advertisements for products they already bought. Moreover, participants from this generation responded that they perceive them as unwanted or as an invasion of their privacy. For example:

> *[24] "Not really nice. Now it (personalized advertisements) is just presented to me whether I am waiting for it or not. It feels like a violation of my privacy."*
> *(Participant 15, age 55)*

However, some of them responded with a double-sided answer. With on one side, they perceive them as annoying, on the other side, some of them do see the potential benefits and are reminded of something they wanted to buy or it gives them ideas to buy something.

The younger generation, on the other side, has a more positive general tone of voice towards personalized advertisements. They were perceived as more relevant than a normal advertisement. Especially if the advertisement contains previously sought-after products with an additional incentive. However, the relevance of the advertisement seems to play a key role. Non-relevant advertisements in a sense that they already purchased the item and are still shown in the advertisement, can be perceived as annoying. For example:

> [25] *"The only thing that annoys me is when I see an advertisement really often, that it just causes irritation. But I also sometimes see advertisements for a product that is of no interest to me at all, then I think to myself, what are those companies doing? But as long as it's something that is relevant to me, then I think it's fine. When I see an advertisement for a product I once viewed or something that might be interesting to buy. Then I think it's fine because it is just a lot more relevant to me."* (participant 2, age 23)

In comparison with the online advertising in general, as long as the advertisement doesn't really pop-up or interferes with activity, participants within the younger generation tend to be fine or somewhat positive with it.

4.3.4 Attitudes towards personalized advertisements post-explanation

After a brief introduction into personalized advertisements and addressing some examples of personalized advertisements, participants were once again asked about their opinion on personalized advertisements and to what extent they perceived them as more relevant than normal advertisements.

For one, where before the explanation some positive comments with regard to personalized advertisements by the older generation were made, no positive comment has been made after the introduction and mentioning some examples. The vast majority of the participants in the older generation stated that they perceived personalized advertisements as somewhat negative. The most commonly made negative statement is that they are not really necessary and don't add any value. Furthermore, are those that even feel like that the personalized advertisement is an invasion of their privacy. For example:

> [26] *"I don't think they are necessary; I just find them obnoxious. (…) No, I personally experience it as a violation of my privacy. They have nothing to do with that information."* (Participant 27, age 62)

On the other side, are those that are not really fond of them but acknowledge them as more relevant. If we compare them to the younger generation, quite the opposite answers were given. Within the younger generation, none of them stated that they perceived personalized advertisements as directly negative. The main attitude seems to be that people are fonder of personalized advertisements because they don't get to see random advertisements that are based on nothing, but actually, advertisements that are based on their interests and needs. However, according to some participants, companies shouldn't push their limits. As long as the information that they gather isn't too personal, they state quite positive comments. However, the scanning of ones' appearance and adjusting advertisements or showing advertisements of a franchise while

watching a video, is considered as intrusive. Furthermore, some participants within this generation mentioned that didn't want to be put in a personalized bubble. For example:

> [27] "They are relevant, but I would like to get more general things. You are being pushed into a personalized box. I would like to get out of that." (Participant 6, age 25)

4.4 Incentives

The perceived benefits of personalization can include financial discounts, increased convenience, or improvement of socialization. To find out if and to what extent people are sensitive to incentives, three scenarios with incentives were described. The participant had to state what their initial response would be towards a specific advertisement if some form of incentive was offered to them.

Table 4: Results within the theme of incentives

	Clear difference	Some difference	No noticeable difference
Incentives in general			x
Restaurant incentive (covert)	x		
Laptop incentive (overt)			x

4.4.1 Incentives in general

The first scenario related to the role of incentives in general. Participants were asked if they are more eager to click on an advertisement with some form incentive (e.g. discounts) than when they saw an advertisement without incentives. Within the older generation, the majority of the participants stated that they might be stimulated by the incentives. Four participants within the older generation state that they are absolutely not sensitive to discounts. However, the context of the discount is an important factor, where some of them might be triggered by the incentive but it depends on the product/service they are offered and how badly they need it. For example:

> [28] "If I had already planned to buy the product, I would be more eager. If it is a general advertisement, then I can control myself." (Participant 16, age 54)

The younger generation, however, seems to be more responsive towards incentives. All respondents, with one exception, stated that they would be more eager to click on the advertisement if it contains a discount. Only one person mentions that it depends on the context and the content of the advertisement.

4.4.2 Restaurant incentive

The second scenario related to a more covert personalized advertisement. To be more precise, a geographical personalized advertisement that will be shown if one is within the range of the company. The participant was asked how they would respond to this location-based personalized advertisement with free coupons for a restaurant nearby.

While the older generation had a quite negative opinion towards personalized advertisements, the responses for this advertisement were quite positive. Of all sixteen participants within the older generation, eleven responded somewhat positively towards the scenario and were eager to check out the restaurant. Although some of them will first look up the restaurant and the menu, most of

them were eager to consent. Within the participants that gave a negative response, there was more focus on the context (i.e. the discount) than the actual form of advertising. For example:

> *[29] "I don't really have that much with discount coupons, I will go to a normal restaurant" (Participant 15, age 55)*

The opinions of the younger generation were quite divided. The responses can be categorized in no direct response, a negative response and a positive response. All the participants are more or less equally divided over the groups. However, in comparison with the older generation, people more or less acknowledged the advertisement and responded with regards to privacy or the form of advertisement. For example:

> *[30] "I would like to see what those coupons are. But a bit creepy that they use it that way." (Participant 14, age 22)*

4.4.3 Laptop Incentive

Participants were asked how they would respond in a scenario where they would walk past an electronica store and that they get an advertisement on their phone, offering a significant discount for the laptop they were looking for online. In contrast to the restaurant incentive, the laptop incentive was more overt in a way that two forms of personalization were applied. It was a location-based advertisement in combination with retargeting.

This time, however, very divided results emerged, and responses were quite diverse within both the generations, ranging from checking the laptop out, to being totally 'creeped out'. However, in contrast to the restaurant incentive, participants within the older generation acknowledged the personalization and targeting in the advertisement. For example:

> *[31] "My first reaction would be how they know that I am in front of the store. If I haven't bought the laptop yet and it's cheaper than online, I would go inside anyway." (Participant 18, age 57)*

The younger generation also responded quite diverse. Four of them would be eager to check the laptop out, five of them wouldn't respond directly, but might check it out later, and five of them responded quite negatively. As goes for the older generation, some even were kind of 'creeped out' by the advertisement. For example:

> *[32] "Yes, I think it's scary. I understand that they do it, but it doesn't really make me happy. (…) Because they really keep an eye on you, that just goes too far for me" (Participant 7, age 21)*

4.5 Summary of the results

This study compared a variety of factors that might influence one's attitude towards personalized advertisement and could trigger reactance. While it may be hard to generalize, some interesting patterns have emerged in this research. Table 5 provides an overall overview of the comparison between young and old, categorized per discussed subject.

Table 5: Summary of the results

Topic	Clear difference	Some difference	No noticeable difference
Information disclosure	The younger generation posts more frequently on social media.		
Amount of time spend online	The younger generation spent almost double the hours online.		
Perceived skill level	The older generation averages themselves a 6.3, the younger generation averages an 8.4		
Trust in online companies		The older generation seemed to be slightly more distrustful towards online companies.	
Perception of intrusive behaviour			x
Advertisements that use data without consent		The older generation gets more negative feelings towards advertisements from a third-party source.	
Privacy concerns	The concerns of the younger generation are not only more present but also more extensive.		
Perceived control		The older generation seems to experience less perceived control.	
Privacy fatigue		Privacy fatigue is a phenomenon that is more present within the older generation.	
Privacy behaviour		Actual privacy behaviour is scarce throughout the interview. However, the younger generation seems to use a bit more privacy behaviour.	
Knowledge of personalized advertisements		The younger generation provides more technical details.	

Attitude towards online advertising general		x
Attitude towards personalized advertisements pre-explanation	The older generation is quite negative regarding personalized advertisements and the younger generation responded quite positively.	
Attitude towards personalized advertisements post-explanation	The vast majority of the participants in the older generation perceived personalized as negative. The younger generation seems to be quite fond of personalized advertising.	
Incentives in general		x
Restaurant incentive (covert)	The older generation was quite positive, in comparison with the younger generation.	
Laptop incentive (overt)		x

5.Discussion & conclusion

The discussion section of this research will be used to delve into the meaning of the results. Firstly, the discussion towards the results will be elaborated on, providing the interpretation of the results. Secondly, the theoretical and practical implications will be discussed, followed by limitations and opportunities for future research.

5.1 Main findings

The main goal of this research was to explore the factors which might influence one's attitude towards personalized advertisements and to compare the results of the baby-boomers with those within the Z-generation. If we consider the attitude towards personalized advertisements in general, some interesting findings have been discovered. While no clear differences were observed in the attitude towards online advertising in general, personalized advertisements were clearly perceived as more negative and intrusive by the participants within the baby-boomer generation. Especially after naming some practical examples of personalized advertisements, the attitude by the older generation had a negative tone of voice in it, in comparison to the younger generation. The negative remarks that the younger generation gave, apply to not wanting to live in a personalized bubble and the advertisement shouldn't intervene with any activities. The most commonly made negative statement within the older generation is that personalized advertisements are not really necessary and don't add any value. Furthermore, some people even feel that the personalized advertisement is an invasion of their privacy. Literature suggested that several factors can influence one's attitude towards personalized advertising and which might trigger reactance.

First, is the amount of time spent online and the information disclosed when online. The younger generation is more online and posts more frequently on social media. However, no real differences can be found when one is registering him-or herself online. According to Bansal et al. (2010), Li (2014) and Wakefield (2013), online trust has a direct influence on information disclosure. Although no significant differences can be found in direct information disclosure, the participants within the older generation seemed to be slightly more distrustful towards online companies in comparison to the younger generation. However, the different motives for distrust and the frequency of them resulted in only a small difference between generations.

Second, considering the privacy-related themes, the study by Zeissig et al. (2017) reported the lowest mean value of privacy concern for age 18-29, and the highest mean value was reported in the group of age 55-69. In the same study, the means for protection behaviour were also found to be the lowest for age 18-20 and the highest mean value was reported in the group with age 55-69. However, within the older generation of this research, the lack of sharing and not being online, in comparison with the younger generation, resulted in an absence of mentioning personal online privacy concerns. The concerns of the younger generation are not only more present but also more extensive. However, research into online privacy shows that individuals tend to be interested in their privacy and the protection of it, but that it rarely influences actual behaviour (Barth and De Jong, 2017; Joinson, Reips, Buchanan, & Schofield, 2010). The same seems to apply to the younger participants, where privacy-related behaviour was scarce throughout the interviews. The privacy paradox seems to be more present within the younger generation.

Furthermore, according to Choi, Park, and Jung (2018), users with higher levels of privacy fatigue tend to putt less effort into privacy decisions. While privacy fatigue or what factors exactly influence this phenomenon is yet to be investigated, this study can report that, within the older generation, some form of privacy fatigue is more present. Participants within this generation state that they can

imagine that people are growing weary of privacy and some of them stated that they are being overrun with information regarding privacy. The younger generation mostly stated that we should keep our focus when it comes to privacy. The results match with the study by Choi, Park and Jung (2018), where the older generation put less effort into privacy decisions or privacy behaviour and reported higher levels of fatigue. However, throughout some interviews with participants from this generation, the main tone of voice seems to be that they are simply not that much online, resulting in some form of disinterest. Furthermore, some participants within this generation feel like privacy, what companies keep track of, and privacy-related rules are not clear enough, resulting in disinterest or annoyance. To what extent privacy fatigue, privacy concerns, and disinterest link, or not, is still a topic, yet to be investigated.

While privacy concerns are less present within the older generation, they do seem to have a noticeably more negative opinion towards personalized advertisements, which might result in any form of reactance towards that advertisement. But is there a difference in attitude, when data is collected covertly? Within the research, the participants had to state to what extent negative feelings would arise if they were confronted with an advertisement from a third-party source, with whom they did not willingly or knowingly share their data. The overall tone of voice within the older generation seems to be that negative feelings arise if they see such a personalized advertisement. Within the younger generation, the overall tone of voice seems to be that they do not necessarily get negative feelings. The motivation for this can be either technical knowledge, they are accustomed, or it depends on the exact content of the advertisement.

This technical know-how seems to play a key role throughout the interviews. For one, people within the younger generation consider themselves quite technical, with an average perceived skill level of 8.4. Furthermore, throughout the interviews, people within the younger generation could provide more technical details, often resulting in more nuanced answers towards personalized and intrusive behaviour. For example, while both generations feel like do not have control over their data, the younger generation came up with more technical arguments and could even shield themselves from data collection. Most of the older generation, however, simply felt like they could not control their data and that it is just part of this era (digitalization acceptance). Furthermore, if we consider the knowledge of personalized advertisements, the younger generation could mention more technical details, while the number of mentioned personalized options by the older generation was quite limited, in comparison with the younger generation.

Another interesting finding, with regard to technical know-how, was found within the restaurant incentive, the more covert personalized advertisements. While throughout the interviews, people from the older generation were more openly negative towards personalized advertisements and not just advertisements in general, the restaurant incentive was perceived as quite positive. This might suggest that participants within this generation might not directly perceive that advertisement as personalized. Suggesting that the actual level of personalization and how covertly or overtly this is done might play a key role in the overall adoption rate and click-through-rates of such advertisements. The more overt advertisements, the laptop scenario, contained more obvious forms of personalization and the results were quite different. Responses within both generations were quite diverse, ranging from checking the laptop out, to being totally 'creeped out'. However, in contrast to the restaurant incentive, participants within the older generation acknowledged the personalization and targeting in the advertisement. The first scenario with a form of incentive in it resulted in quite the same answers. All respondents within both the generations, with one exception, stated that they would be more eager to click on the advertisement if it contains a discount. As some of the participants stated, the sensitivity to discount might be grounded within humans.

In conclusion and to answer the main research question, this study examined to what respect the Z-generation differs in reactance and attitude towards personalized advertisements, in comparison with baby-boomers. First of all, there is a direct difference in attitude. While no clear differences were observed with their attitude towards online advertising in general, personalized advertisements were clearly perceived as more negative and intrusive by the participants from the baby-boomer generation. However, these differences emerged when participants were explicitly asked about their opinion towards personalized advertisements. If some practical scenarios were provided, some interesting findings emerged as well. For example, the more covert personalized advertisements, the restaurant incentive, was perceived as quite positive by the older generation. Suggesting that the actual level of personalization and how overtly or covertly this is done plays a key role in their attitude.

As stated by Bleijer and Eisenbeiss (2015), reactance can be described as a negative psychological response towards a persuasion attempt. Advertisements are a very obvious form of a persuasion attempt and the differences found in the study are quite interesting. Although the actual level of reactance (cognitive, affective or behavioural) was quite hard to be generalized or measured, the findings do suggest a difference in overall reactance. At first sight, if the personalized advertisements are quite overt, reactance might be sooner triggered for an individual from the older generation. The Z-generation, influenced by more technical know-how and more time spent online, may not be that easily triggered in reactance and were quite fond of personalized advertisements. However, they state that reactance can be triggered if they feel like they are being put in a personalized bubble or if companies are too intrusive. Furthermore, within both generations, reactance can be triggered if the advertisement intervenes with activities. For example, when a pop-up advertisement shows up when browsing the news or watching a video.

5.2 Theoretical implications

Within this research, several theoretical implications have emerged. For one, according to Chen et al. (2019) the tension between the positive effects of personalization, which helps to increase service and product relevance, and the perceived privacy concerns and loss of freedom, is called the personalization privacy paradox. If the perceived negative effects outweigh the perceived positive effects, a negative response in the form of reactance towards the advertisement can be triggered. This personalization privacy paradox seems to be more applicable to the younger generation, where the elements of this paradox are more present. Not only do they mention the loss of freedom as a possible motive for reactance (personalized bubble), they also mention and see the positive side of personalization more than the older generation. The personalization privacy paradox seems to be not that applicable for the baby-boomer generation, due to an absence of the perceived positive side of personalization. However, since this research is qualitative comparative research, no statistical evidence is provided. Further research to help 'prove' this assumption, might lead to a better understanding of this paradox.

Furthermore, the same study by Chen et al. (2019) and the research by Sutanto et al. (2013), stated that privacy concerns have a positive influence on triggering reactance. Yet, they also found that perceived benefits may contribute to a positive response. The results somewhat fit with theory, where incentives and privacy concerns were motives for either a positive reaction or negative reaction towards personalized advertisements. However, if we take differences between generations into account, privacy concerns were more present within the younger generation, although the older generation was quite more negative towards personalized advertisements. The data of this research contributes to possible reasons for a lack of privacy concerns or the presence of

privacy fatigue, where most of the older generation just feel like it is part of this era and/or that they have absolutely no perceived control. Furthermore, the laws surrounding privacy and what information is stored by companies are perceived as unclear and vague by some participants within the older generation. Future research might help to clarify all possible factors regarding privacy concerns and data storage and help to develop an environment in which even the older generation feel like they have control over their data.

This research has shown that there is a clear difference between the generations in the amount of information that they share on social media. Although no real number can be drawn, the younger generation clearly seems to be more active on social media. According to Brown, Eicher and Petrie (1986), adults seem to experience less social pressure during the later stages of their life. This might suggest that the social pressure to actively engage in social media and thus disclosing personal information becomes less during ones' adulthood. This study can somewhat confirm this, where the older generation all seem to have an account on social media but post little to nothing. However, if social pressure really is a factor to disclose less or more information, is yet to be studied. Furthermore, if we consider information disclosure in general, the study by Taddicken (2013) and Park (2013) showed that age has an influence on self-disclosure, where younger users, although they seem to be more skilled at data protection, disclosed more personal information. The findings of this research can somewhat confirm this. However, if we examine information disclosure while ordering products, the younger generation seems to be slightly more protective of their information. Although both generations fill in the registration form completely enough to fulfil the order, the motivation within the younger generation seems to be more practical and some mention that they want to complete the order without disclosing too much data. However, as stated by Barth and De Jong (2018), people tend to be interested in their privacy, but it rarely influences behaviour.

The last theoretical implication relates to personalization. Although, the type of reactance that Brehm's psychological reactance theory distinguishes (cognitive, affective and behavioural) was not explicitly explored in this research. The extent to which reactance towards personalized advertisement in general might occur was explored, laying the groundwork for future research with regard to the optimal level of a personalized advertisement and to what extent, any form of reactance may be triggered with that advertisement. This research has shown that people within the older generation might not acknowledge or recognize a 'personalized' advertisement if it is too covert because of the possible lack of technical know-how. Quite overt advertisements, however, were perceived as intrusive and might trigger a reactance. Future research measuring to what extent what form of personalization is most applicable per generation could lead to some interesting insights.

5.3 Practical implications

The understanding of why some generations react differently than other generations when it comes to personalized advertisements can be quite useful for future endeavours. Not only can online marketers adjust retargeting per generation, but one can also make a budget distribution with regards to general advertisements and personalized advertisement and redistribute its budget and cost per click, per generation. For example, when companies utilize personalized advertisements, they can adjust their budget per generation. For instance, the more overt personalized advertisements might not lead to the desired click-trough-rates within the older generations. One could potentially save a lot of budget by retargeting their more overt personalized advertisements. The results, however, do suggest that more research needs to be conducted to gain a better

understanding of the level of personalization and personalized advertisements and how it affects different generations.

5.4 Limitations

This research has several limitations that should be noted. To start with, there are shortcomings within the sample. The participants in this study were mostly (highly educated) students. While quite understandable, considering the fact that the Z-generation was examined, it might have had some influence within the answers. For example, students are mostly known for not having unlimited recourses when it comes to budget. Questions with regard to incentives and discounts may be extra appealing to them, in comparison with the older generation where every participant had a job. However, within the older generation, everyone worked in an office, resulting in a possible non-representative sample of that generation. The next limitation within the participants is the fact that the sample of the younger generation had some participants who, besides their study, worked in the online marketing scene. Although only three participants had this profession, it might have influenced a neutral view on the subject.

Furthermore, because the type of reactance could not be properly measured or generalized, it was decided not to further investigate the different forms of reactance. In future studies, researchers can develop some form of personalized advertisements and present them to the participants. In a quantitative design study, one can actually measure outcomes or reactance when the participants are actually exposed to a personalized advertisement, rather than the scenario as adopted in this study.

5.5. Conclusion

This study examined and explored factors that might explain possible generation differences when it comes to attitude and reactance towards personalized advertisements. While several interesting contradictions between the generations have been found in the study (e.g. privacy concerns, information disclosure), the main finding suggests that baby-boomers perceive personalized advertisements as quite obtrusive and unnecessary, which could lead to any form of reactance towards the advertisements. While no differences were found in the attitude towards regular online advertisements and some of the baby-boomers even perceived those as somewhat neutral or positive, personalization was quite negatively perceived, in comparison with the younger generation, who experience personalization quite positive. However, if the advertisement contains a more covert form of personalization, the older generation might not directly perceive that advertisement as personalized due to a possible gap in technical know-how, leading to a more nuanced opinion of the advertisement. Suggesting that the actual level of personalization and how covertly or overtly this is done might play a key role in the overall adoption rate and click-through-rates of such advertisements. Furthermore, the privacy paradox seems to be more present within the younger generation, where they mentioned more and extensive privacy concerns, but mostly lacked actual privacy behaviour. However, to confirm most of these theories and findings, more extensive (quantitative) studies are necessary.

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References

Aguirre, E., Mahr, D., Grewal, D., de Ruyter, K., & Wetzels, M. (2015). Unraveling the personalization paradox: The effect of information collection and trust-building strategies on online advertisement effectiveness. *Journal of Retailing*, *91*(1), 34–49. https://doi.org/10.1016/j.jretai.2014.09.005

Althos. (n.d.). Personalized advertising. Retrieved 3 October 2019, from http://www.iptvdictionary.com/IPTVDictionary-Personalized-Advertising-Definition.html

Altman, I. (1975). *The Environment and Social Behavior: Privacy, Personal Space, Territory, Crowding*. UK: Brooks-Cole Pub.

American Psychological Association. (2018). *Stress in America: Generation Z*. Retrieved from https://www.apa.org/news/press/releases/stress/2018/stress-gen-z.pdf

Ansari, A., & Mela, C. F. (2003). E-Customization. *Journal of Marketing Research*, *40*(2), 131–145. https://doi.org/10.1509/jmkr.40.2.131.19224

Baek, Y. M., Kim, E., & Bae, Y. (2014). My privacy is okay, but theirs is endangered: Why comparative optimism matters in online privacy concerns. *Computers in Human Behavior*, *31*, 48–56. https://doi.org/10.1016/j.chb.2013.10.010

Bansal, G., Zahedi, F., & Gefen, D. (2010). The impact of personal dispositions on information sensitivity, privacy concern and trust in disclosing health information online. *Decision Support Systems*, *49*(2), 138–150. https://doi.org/10.1016/j.dss.2010.01.010

Barth, S., & de Jong, M. D. T. (2017). The privacy paradox – Investigating discrepancies between expressed privacy concerns and actual online behavior – A systematic literature review. *Telematics and Informatics*, *34*(7), 1038–1058. https://doi.org/10.1016/j.tele.2017.04.013

Barth, S., de Jong, M. D. T., Junger, M., Hartel, P. H., & Roppelt, J. C. (2019). Putting the privacy paradox to the test: Online privacy and security behaviors among users with technical knowledge, privacy awareness, and financial resources. *Telematics and Informatics*, *41*, 55–69. https://doi.org/10.1016/j.tele.2019.03.003

Bassiouni, D. H., & Hackley, C. (2014). 'Generation Z' children's adaptation to digital consumer culture: A critical literature review. *Journal of Customer Behaviour*, *13*(2), 113–133. https://doi.org/10.1362/147539214x14024779483591

Blank, G., & Dutton, W. H. (2011). Age and trust in the internet: The centrality of experience and attitudes toward technology in Britain. *Social Science Computer Review*, *30*(2), 135–151. https://doi.org/10.1177/0894439310396186

Bleier, A., & Eisenbeiss, M. (2015). The importance of trust for personalized online advertising. *Journal of Retailing*, *91*(3), 390–409. https://doi.org/10.1016/j.jretai.2015.04.001

Brehm, J. W. (1966). *A theory of psychological reactance* (Rev. ed.). New York: Academic Press.

Brinson, N. H., Eastin, M. S., & Cicchirillo, V. J. (2018). Reactance to personalization: understanding the drivers behind the growth of ad blocking. *Journal of Interactive Advertising*, *18*(2), 136–147. https://doi.org/10.1080/15252019.2018.1491350

Brookman, J., Rouge, P., Alva, A., & Yeung, C. (2017). Cross-device tracking: Measurement and disclosures. *Proceedings on Privacy Enhancing Technologies*, *2017*(2), 133–148. https://doi.org/10.1515/popets-2017-0020

Brown, B. B., Eicher, S. A., & Petrie, S. (1986). The importance of peer group ("crowd") affiliation in adolescence. *Journal of Adolescence*, *9*(1), 73–96. https://doi.org/10.1016/s0140-1971(86)80029-x

Chen, Q., Feng, Y., Liu, L., & Tian, X. (2019). Understanding consumers' reactance of online personalized advertising: A new scheme of rational choice from a perspective of negative effects. *International Journal of Information Management*, *44*, 53–64. https://doi.org/10.1016/j.ijinfomgt.2018.09.001

Chester, J. (2012). Cookie wars: how new data profiling and targeting techniques threaten citizens and consumers in the "Big data" era. *European Data Protection: In Good Health?*, 53–77. https://doi.org/10.1007/978-94-007-2903-2_4

Choi, H., Park, J., & Jung, Y. (2018). The role of privacy fatigue in online privacy behavior. *Computers in Human Behavior*, *81*, 42–51. https://doi.org/10.1016/j.chb.2017.12.001

Coleman, L. J., Hladikova, M., & Savelyeva, M. (2006). The baby boomer market. *Journal of Targeting, Measurement and Analysis for Marketing*, *14*(3), 191–209. https://doi.org/10.1057/palgrave.jt.5740181

Davis, B. (2018, October 9). A guide to personalised advertising online – Econsultancy. Retrieved October 3, 2019, from https://econsultancy.com/a-guide-to-personalised-advertising-online/

Edwards, S. M., Li, H., & Lee, J.-H. (2002). Forced exposure and psychological reactance: Antecedents and consequences of the perceived intrusiveness of pop-Up advertisements. *Journal of Advertising*, *31*(3), 83–95. https://doi.org/10.1080/00913367.2002.10673678

Fitzsimons, G. J., & Lehmann, D. R. (2004). Reactance to recommendations: When unsolicited advice yields contrary responses. *Marketing Science*, *23*(1), 82–94. https://doi.org/10.1287/mksc.1030.0033

Friedrich, R., Peterson, M., Koster, A., & Blum, S. (2010, March 26). The rise of generation C: Implications for the world of 2020. Retrieved May 15, 2019, from https://www.strategyand.pwc.com/report/rise-generation-implications-world-2020

Gerber, N., Gerber, P., & Volkamer, M. (2018). Explaining the privacy paradox: A systematic review of literature investigating privacy attitude and behavior. *Computers & Security*, *77*, 226–261. https://doi.org/10.1016/j.cose.2018.04.002

Hallam, C., & Zanella, G. (2017). Online self-disclosure: The privacy paradox explained as a temporally discounted balance between concerns and rewards. *Computers in Human Behavior*, *68*, 217–227. https://doi.org/10.1016/j.chb.2016.11.033

Hardy, G. E., Shapiro, D. A., & Borrill, C. S. (1997). Fatigue in the workforce of national health service trusts: Levels of symptomatology and links with minor psychiatric disorder, demographic, occupational and work role factors. *Journal of Psychosomatic Research*, *43*(1), 83–92. https://doi.org/10.1016/s0022-3999(97)00019-6

Hoofnagle, C. J., King, J., Li, S., & Turow, J. (2010). How different are young adults from older adults when it comes to information privacy attitudes and policies? *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1589864

Joinson, A., Reips, U.-D., Buchanan, T., & Schofield, C. B. P. (2010). Privacy, trust, and self-disclosure online. *Human-Computer Interaction*, *25*(1), 1–24. https://doi.org/10.1080/07370020903586662

Keith, M. J., Thompson, S. C., Hale, J., Lowry, P. B., & Greer, C. (2013). Information disclosure on mobile devices: Re-examining privacy calculus with actual user behavior. *International Journal of Human-Computer Studies*, *71*(12), 1163–1173. https://doi.org/10.1016/j.ijhcs.2013.08.016

Kietzmann, J., Paschen, J., & Treen, E. (2018). Artificial intelligence in advertising. *Journal of Advertising Research*, *58*(3), 263–267. https://doi.org/10.2501/jar-2018-035

Kim, C., & Kim, D. J. (2017). Uncovering the value stream of digital content business from users' viewpoint. *International Journal of Information Management*, *37*(6), 553–565. https://doi.org/10.1016/j.ijinfomgt.2017.05.004

Koohikamali, M., Gerhart, N., & Mousavizadeh, M. (2015). Location disclosure on LB-SNAs: The role of incentives on sharing behavior. *Decision Support Systems*, *71*, 78–87. https://doi.org/10.1016/j.dss.2015.01.008

Lambrecht, A., & Tucker, C. (2013). When does retargeting work? Information specificity in online advertising. *Journal of Marketing Research*, *50*(5), 561–576. https://doi.org/10.1509/jmr.11.0503

Lee, C., & Coughlin, J. F. (2014). Older adults' adoption of technology: An integrated approach to identifying determinants and barriers. *Journal of Product Innovation Management*, *32*(5), 747–759. https://doi.org/10.1111/jpim.12176

Leon, P. G., Ur, B., Wang, Y., Sleeper, M., Balebako, R., Shay, R., … Cranor, L. F. (2013). What matters to users? *Proceedings of the Ninth Symposium on Usable Privacy and Security - SOUPS '13*. https://doi.org/10.1145/2501604.2501611

Levin, E., Quach, T. N., & Thaichon, P. (2019). Enhancing client-agency relationship quality in the advertising industry – an application of project management. *Journal of Business & Industrial Marketing*, *34*(2), 463–473. https://doi.org/10.1108/jbim-08-2017-0186

Li, H., Sarathy, R., & Xu, H. (2011). The role of affect and cognition on online consumers' decision to disclose personal information to unfamiliar online vendors. *Decision Support Systems*, *51*(3), 434–445. https://doi.org/10.1016/j.dss.2011.01.017

Maaß, W. (2011). The elderly and the internet: How senior citizens deal with online privacy. *Privacy Online*, 235–249. https://doi.org/10.1007/978-3-642-21521-6_17

Matson, M. (2016, May 1). Marketing to generation Z. Retrieved October 15, 2019, from https://www.innovagreek.com/blog-1/2017/7/3/marketing-to-generation-z

Miltgen, C. L., & Peyrat-Guillard, D. (2014). Cultural and generational influences on privacy concerns: a qualitative study in seven European countries. *European Journal of Information Systems*, *23*(2), 103–125. https://doi.org/10.1057/ejis.2013.17

Montgomery, A., & Smith, M. D. (2008). Prospects for personalization on the internet. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1169874

Murthi, B. P. S., & Sarkar, S. N. (2003). The role of the management sciences in research on personalization. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.407940

Newell, S., & Marabelli, M. (2015). Strategic opportunities (and challenges) of algorithmic decision-making: A call for action on the long-term societal effects of 'datification'. *The Journal of Strategic Information Systems*, *24*(1), 3–14. https://doi.org/10.1016/j.jsis.2015.02.001

Pappas, C. (2016, January 29). 8 Important characteristics of baby boomers eLearning professionals should know. Retrieved 4 October 2019, from https://elearningindustry.com/8-important-characteristics-baby-boomers-elearning-professionals-know

Park, Y. J. (2015). Do men and women differ in privacy? Gendered privacy and (in)equality in the Internet. *Computers in Human Behavior*, *50*, 252–258. https://doi.org/10.1016/j.chb.2015.04.011

Petronio, S. (2002): Boundaries of privacy. Dialectics of disclosure. Albany, NY: SUNY Press.

Priporas, C., Stylos, N., & Fotiadis, A. K. (2017). Generation Z consumers' expectations of interactions in smart retailing: A future agenda. *Computers in Human Behaviour*, 77, 374–381.

Richard, J. E., & Meuli, P. G. (2013). Exploring and modelling digital natives' intention to use permission-based location-aware mobile advertising. *Journal of Marketing Management*, *29*(5–6), 698–719. https://doi.org/10.1080/0267257x.2013.770051

Robins, F. (2003). The marketing of 3G. *Marketing Intelligence & Planning*, *21*(6), 370–378. https://doi.org/10.1108/02634500310499239

Rust, R. T., & Chung, T. S. (2006). Marketing models of service and relationships. *Marketing Science*, *25*(6), 560–580. https://doi.org/10.1287/mksc.1050.0139

RWJF. (2008). RWJF - Qualitative research guidelines project | Semi-structured interviews. Retrieved 16 October 2019, from http://www.qualres.org/HomeSemi-3629.html

Schlossberg, M. (2016, May). Gen Z shops in stores because they have a "problem.". Retrieved May 15, 2019, from https://www.businessinsider.in/Teen-Generation-Z-is-being-called-millennials-on-steroids-and-that-could-be-terrifying-for-retailers/Gen-Z-shops-in-stores-because-they-have-a-problem-/slideshow/53565476.cms

Schreurs, K., Quan-Haase, A., & Martin, K. (2017). Problematizing the digital literacy paradox in the context of older adults' ICT use: Aging, media discourse, and self-determination. *Canadian Journal of Communication*, *42*(2). https://doi.org/10.22230/cjc.2017v42n2a3130

Seemiller, C., & Grace, M. (2016). Generation Z goes to college (2nd ed.). San Francisco, USA: Wiley.

Shareef, M. A., Dwivedi, Y. K., Kumar, V., & Kumar, U. (2017). Content design of advertisement for consumer exposure: Mobile marketing through short messaging service. *International Journal of Information Management*, *37*(4), 257–268. https://doi.org/10.1016/j.ijinfomgt.2017.02.003

Shen, A., & Dwayne Ball, A. (2009). Is personalization of services always a good thing? Exploring the role of technology-mediated personalization (TMP) in service relationships. *Journal of Services Marketing*, *23*(2), 79–91. https://doi.org/10.1108/08876040910946341

Singer, N. (2014, August 23). E-tailer customization: convenient or creepy? Retrieved October 6, 2019, from https://www.nytimes.com/2012/06/24/technology/e-tailer-customization-whats-convenient-and-whats-just-plain-creepy.html?ref=natashasinger

Smith, K. T. (2017). Mobile advertising to digital natives: preferences on content, style, personalization, and functionality. *Journal of Strategic Marketing*, *27*(1), 67–80. https://doi.org/10.1080/0965254x.2017.1384043

Steijn, W. M. P. (2014). Developing a sense of privacy: An investigation of privacy and the differences between young and old in the context of social network sites. S.l.: [s.n.].

Strycharz, J., Van Noort, G., Smit, E., & Helberger, N. (2019). Protective behaviour against personalized advertisements: Motivation to turn personalization off. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, *13*(2). https://doi.org/10.5817/cp2019-2-1

Sutanto, J., Palme, E., Tan, C.-H., & Phang, C. W. (2013). Addressing the personalization-privacy paradox: An empirical assessment from a field experiment on smartphone users. *MIS Quarterly*, *37*(4), 1141–1164. https://doi.org/10.25300/misq/2013/37.4.07

Taddicken, M. (2013). The 'privacy paradox' in the social web: The impact of privacy concerns, individual characteristics, and the perceived social relevance on different forms of self-disclosure. *Journal of Computer-Mediated Communication*, *19*(2), 248–273. https://doi.org/10.1111/jcc4.12052

Tam, K. Y., & Ho, S. Y. (2006). Understanding the impact of web personalization on user information processing and decision outcomes. *MIS Quarterly*, *30*(4), 865. https://doi.org/10.2307/25148757

Tanyel, F., Stuart, E. W., & Griffin, J. (2013). Have "millennials" embraced digital advertising as they have embraced digital media? *Journal of Promotion Management*, *19*(5), 652–673. https://doi.org/10.1080/10496491.2013.829161

Tucker, C. E. (2013). Social networks, personalized advertising, and privacy controls. *Journal of Marketing Research*, *51*(5), 546–562. https://doi.org/10.1509/jmr.10.0355

Tufekci, Z. (2007). Can you see me now? Audience and disclosure regulation in online social network sites. *Bulletin of Science, Technology & Society*, *28*(1), 20–36. https://doi.org/10.1177/0270467607311484

Van Gool, E., Van Ouytsel, J., Ponnet, K., & Walrave, M. (2015). To share or not to share? Adolescents' self-disclosure about peer relationships on Facebook: An application of the Prototype Willingness Model. *Computers in Human Behavior*, *44*, 230–239. https://doi.org/10.1016/j.chb.2014.11.036

Wakefield, R. (2013). The influence of user affect in online information disclosure. *The Journal of Strategic Information Systems*, *22*(2), 157–174. https://doi.org/10.1016/j.jsis.2013.01.003

Warshaw, J., Matthews, T., Whittaker, S., Kau, C., Bengualid, M., & Smith, B. A. (2015). Can an algorithm know the 'real you'? *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems - CHI '15*. https://doi.org/10.1145/2702123.2702274

Westin, A. F. (1967). Privacy and freedom. New York: Atheneum

Williams, D. L., Crittenden, V. L., Keo, T., & McCarty, P. (2012). The use of social media: an exploratory study of usage among digital natives. *Journal of Public Affairs*, *12*(2), 127–136. https://doi.org/10.1002/pa.1414

Williams, Kaylene & Page, Robert & Petrosky, Alfred & Hernandez, Edward. (2010). Multi-generational marketing: descriptions, characteristics, lifestyles, and attitudes. Journal of Applied Business and Economics. 11. 21-36.

Xu, F., Michael, K., & Chen, X. (2013). Factors affecting privacy disclosure on social network sites: an integrated model. *Electronic Commerce Research*, *13*(2), 151–168. https://doi.org/10.1007/s10660-013-9111-6

Xu, H., Teo, H.-H., Tan, B. C. Y., & Agarwal, R. (2012). Research note—Effects of individual self-protection, industry self-regulation, and government regulation on privacy concerns: A study of location-based services. *Information Systems Research*, *23*(4), 1342–1363. https://doi.org/10.1287/isre.1120.0416

Zeissig, E.-M., Lidynia, C., Vervier, L., Gadeib, A., & Ziefle, M. (2017). Online privacy perceptions of older adults. *Human Aspects of IT for the Aged Population. Applications, Services and Contexts*, 181–200. https://doi.org/10.1007/978-3-319-58536-9_16

Appendices

Appendix A: Interview scheme

- o Wat is uw huidige beroep/studie?
- o Hoe oud bent u?
- o Hoeveel uur besteedt u gemiddeld online (bijv. sociale media, werk gerelateerd, vrije tijd (Spotify, Netflix)?
  - o Hoe zou u uw vaardigheidsniveau beoordelen met dergelijke apparaten of software (1-10)?
  - o Hoe actief bent u op social media, post u regelmatig iets?
- o Heeft u wel eens iets vervelends meegemaakt online; iets wat u ervaren heeft als een inbreuk op uw privacy?
- o Wat vindt u van online adverteren in het algemeen?
  - o Waarom?

Tegenwoordig wordt veel online-informatie, zoals advertenties, gepersonaliseerd. Weet u wat daarmee bedoeld wordt? Wat beschouwt u als een gepersonaliseerde advertentie?

- o Heeft u ooit een gepersonaliseerde advertentie gezien, zo ja, wat was het?
  - o Zo ja, wat vond u ervan?

Voordat ik met de andere vragen begin, een korte inleiding over gepersonaliseerde advertenties. Personalisatie en gepersonaliseerde advertenties kunnen vele vormen aannemen. Zo bestaan er tegenwoordig advertenties, die worden getoond worden wanneer u een product op een website bezoekt en vervolgens krijgt u advertenties voor dat product van die website te zien. Andere "eenvoudige" vormen van personalisatie (niet per se advertenties) kunnen websites zijn die specifiek voor u zijn ontworpen (bijv. een website met mannenkleding of vrouwenkleding)

Gepersonaliseerde advertenties kunnen ook ontstaan door demografische en geografische kenmerken. Bijvoorbeeld advertenties die zijn gebaseerd op uw locatie, geslacht, leeftijd, enzovoort. Dus, advertenties die alleen aan u worden vertoond omdat u bijvoorbeeld x jaar oud bent. Meer recentere vormen van gepersonaliseerde advertenties kunnen komen in de vorm van een billboards, uitgerust met camera's, die zich aanpassen aan uw uiterlijke vertoning. Verder zijn er advertenties die gebaseerd zijn op uw sociale activiteit of wat u kijkt op uw televisie. Bijvoorbeeld u kijkt Lion King op Netflix en op uw tablet komt vervolgens een advertentie van de nieuwe film.

U heeft net een introductie gehad over gepersonaliseerde advertenties, wat vindt u van dit soort advertenties?

Beschouwt u, ondanks uw mening over adverteren, gepersonaliseerde advertenties als relevanter? Waarom wel of waarom niet?

- o Als u artikelen online bestelt, maakt u dan altijd een account aan of alleen indien nodig?
  - o Als u zich registreert/ account aanmaakt, in hoeverre vult u het gegevensformulier volledig en naar waarheid in?
    - ▪ Waarom wel of waarom niet?

- o Gebruikt u momenteel enige vorm van privacybescherming? Verandert u privacy-instellingen (bijv. op uw telefoon, sociale media)?

- o Waarom wel of waarom niet?

- o In hoeverre kent u de privacy instellingen van uw applicaties en andere online software?
    - o Weet u dat u ze kunt veranderen en weet u ook hoe? (Bijvoorbeeld op Facebook of bij het gebruik van applicaties)

- o Bedrijven verzamelen dus allerlei informatie over u, heeft u het idee dat u daar grip op hebt?
    - o Waarom wel of waarom niet?

- o Heeft u er vertrouwen in dat de meeste online bedrijven in het belang van een klant handelen?
    - o Waarom wel of waarom niet?

- o Wat vindt u, op het gebied van online winkelen en online adverteren, opdringerig gedrag van een bedrijf?
    - o Waarom?

In hoeverre bent u het eens met de volgende stellingen:

- Ik wil dat alleen dat bedrijven die ik toestemming heb gegeven (bijv. cookies), het recht houden mijn gegevens bij te houden, te analyseren en te gebruiken. (hier graag invullen in hoeverre u het er mee eens bent)

- Als ik een gepersonaliseerde advertentie zie (bijvoorbeeld korting op een product waar u zojuist naar hebt gezocht) van een bedrijf met wie ik mijn gegevens niet bewust heb gedeeld, dan ontstaan er negatieve gevoelens richting die advertentie of dat bedrijf. (hier graag invullen in hoeverre u het er mee eens bent.)

- o Maakt u zich wel eens zorgen over misbruik van de informatie die u online heeft verstrekt aan bedrijven?
    - o Waarom wel of waarom niet?

- o In hoeverre maakt u zich zorgen dat een bedrijf of persoon persoonlijke informatie van u op het internet kan vinden?
    - o Als u zich zorgen maakt of juist niet, waarom?

- o We horen tegenwoordig ook wel dat mensen een beetje moe worden van al het gedoe over online privacy. Kunt u zich dat voorstellen?
    - o Waarom wel of waarom niet? Of heb je het gevoel dat we er wel scherp op moeten blijven.

- o Merkt u dat u bijvoorbeeld minder geïnteresseerd raakt in online privacy kwesties?
    - o Waarom wel of waarom niet?

Kunt u aangeven hoe u zou reageren op de volgende drie situaties?

- o Als u een advertentie ziet met een vorm van een stimulans erin (bijv. kortingen, gratis software, etc.), bent u dan eerder geneigd om erop te klikken, dan wanneer u een advertentie zonder stimulansen ziet? Denkt u dat andere (bijv. uw vrienden) wel sneller geneigd zijn/hetzelfde doen? (hier graag aangeven wat uw reactie zou zijn)

- o Stelt u zich voor: U loopt rond 18:00 uur met een vriend in een onbekende stad en u voelt zich hongerig. Terwijl u op uw telefoon naar een restaurant zoekt, verschijnt een advertentie met gratis kortingsbonnen voor een restaurant in de buurt. Wat zou uw (eerste) reactie zijn? (hier graag aangeven wat uw reactie zou zijn)

- o Stelt u zich dezelfde situatie voor, maar nu loopt u langs een elektronicawinkel. U kijkt willekeurig op uw telefoon voor een bericht en er verschijnt een advertentie van die elektronica winkel. De advertentie bevat een aanzienlijke korting op de laptop die u laatst online zocht. Wat zou uw (eerste) reactie zijn? (hier graag aangeven, wat uw reactie zou zijn)

Appendix B: Consent form

Bedankt dat u overweegt deel te nemen aan mijn afstudeeronderzoek voor mijn Master Communicatiewetenschappen. Dit onderzoek heeft goedkeuring gekregen van de ethische commissie van de Universiteit Twente.

Het interview heeft als doel factoren te onderzoeken die iemands houding ten opzichte van gepersonaliseerde advertenties kunnen beïnvloeden. Het belangrijkste doel van mijn interview is om de houding van mensen ten opzichte van gepersonaliseerde advertenties en advertenties in het algemeen te achterhalen.

Om dieper inzicht te krijgen in dergelijke motieven zal een diepgaand interview worden afgenomen. Dit interview duurt ongeveer 10/15 minuten. Om alle benodigde gegevens te verzamelen, wordt het interview opgenomen en later getranscribeerd.

Deze opname zal niet buiten dit onderzoek worden gebruikt en zal worden vernietigd nadat het onderzoek is voltooid. Alle informatie die tijdens dit onderzoek wordt verstrekt, is vertrouwelijk en anoniem.

De deelname aan deze test is vrijwillig en u bent vrij om uw deelname, zonder het noemen van een reden, op elk moment tijdens het interview te stoppen. Bovendien kunt u vragen om uw gegevens tot 24 uur na deelname te verwijderen.

Ik heb de punten en verklaringen van dit formulier zorgvuldig gelezen en volledig begrepen. Al mijn vragen werden naar tevredenheid beantwoord en ik stem vrijwillig in om deel te nemen aan dit onderzoek.

Ik heb de informatie op dit formulier gelezen en ga ermee akkoord.

Datum   Handtekening:

_____   _____

Als u aanvullende informatie over het onderzoek wil, nu of in de toekomst, kunt u contact opnemen met Stef Klein Nagelvoort, op s.kleinnagelvoort@student.utwente.nl

Appendix C: Coding scheme

Code	Name	Description	Examples
Characteristics			
C1	Age		
C2	Occupation		"Business controller"
C3	Amount of time spend online	The average time that one spends online.	"Perhaps 2 hours per day"
C4	Skill level	The perception of one's skill level with software on the computer, either offline or online (1-10).	
C5	Social media active	How active one is on social media.	"I am very active as a user but post little to nothing. Maybe 4 times a year."
C6	Online registration amount	How often does one register himself or herself when ordering a product.	"Only if necessary."
C6.1	Online registration completely	The extent to which an individual fills in a registration form completely and truthfully	"if they ask simple things, that's fine. But if they ask too much for a simple product, then I will drop out."
Online Attitude			
T1	Perceived control	The extent to which an individual feels like they have control over their data.	
T1.1	No perceived control	The extent to which an individual doesn't feel like they have control over their data.	"No, because the problem is that everyone needs the internet these days. And everyone who uses the internet just leaves traces. I don't think you can do anything about it"
T1.2	Digitalization acceptance	The extent to which an individual feels like it's just part of this era.	"No, not all, because we are already in a too far stage in this digitalized world"
T2	Trust in online companies	The extent to which an individual feels like he/she can trust online companies in general.	"Yeah, I do believe so. I do think that most of the companies have goodwill"

T2.1	Distrust in online companies	The extent to which an individual feels like he/she cannot trust online companies in general.	"No, because sometimes you do hear stories. That such companies can't keep things for themselves or a data leak".
T3	Perception of intrusive behaviour	An individual's perception of online intrusive behaviour by a company.	"Yes, too many emails. Or if you get advertisements for something a few times a day, because you accidentally liked it."
T3.1	Reaction to companies with consent	People's reaction to the statement: I only want companies, with whom……	"Yeah I agree, why would other companies be allowed to use my data."
T3.2	Reaction to companies without consent	People's reaction to the statement: If I see a personalized advertisement…	"I do get negative feelings, I have nothing to do with that company".
Privacy			
P1	Privacy behaviour	The extent to which an individual uses any form of privacy behaviour.	"Antivirus. I also try to avoid cookies as much as possible, so that I get tracked less".
P2	Privacy self-efficacy	The perception of one's ability to protect one's privacy.	"I am not sure how to change this, I think I should ask my son something like that."
P3	Personal Privacy concerns	The extent to which an individual worries about their privacy	"I am a little bit worried about identity theft."
P3.1	Absence of personal privacy concerns	The extent to which an individual doesn't worry about their privacy	"I don't worry, because I don't share anything"
P3.2	Privacy concerns in general	The extent to which an individual worries about privacy or data leaks in general.	"Online privacy remains a tough subject, we should keep our focus".
P4	Privacy Fatigue absence	The extent to which an individual doesn't grow weary of heaving to think about privacy and thinks we should keep our focus.	"I remain interested, I keep an eye on whether it concerns me personally."
P4.1	Privacy Fatigue presence	The extent to which an individual grows weary of heaving to think about privacy	"Yes, I do feel like it's a bit too much".

P5	Negative Privacy Experience	Has one encountered a negative privacy experience, or not	"No, not necessarily, but my Facebook account has been hacked. Fortunately, I was able to get it back later".
Attitudes			
A.K	Knowledge of personalized advertisements	Individual knowledge of personalized advertisements.	"On the basis of what I do on my laptop, the internet can make predictions of what I have interests in. Personalized advertisements are used on that expectation pattern."
A1	Attitude towards online advertising in general	One's attitude towards online advertising in general, prior to the introduction in personalized advertising.	"Annoying, when I'm watching a video and then some commercial appears."
A1.1	Attitude towards online advertising in general negative		
A1.2.	Attitude towards online advertising in general neutral		
A1.3.	Attitude towards online advertising in general positive		
A2	Attitude towards personalized advertisements, pre-explanation	One's attitude towards personalized advertisements.	"Not really necessary, I already ordered that product."
A2.1.	Attitude towards personalized advertisements, pre-explanation negative		
A2.2.	Attitude towards personalized advertisements, pre-explanation neutral		
A2.3.	Attitude towards personalized advertisements, pre-explanation positive		
A3	Attitude towards personalized advertisements, post-explanation	The attitude towards personalized advertisements after the introduction.	"Eventually people will live in their own personalized bubble, this will put people in a box. This will be counterproductive in the long term"
A3.1.	Attitude towards personalized advertisements, post-explanation negative		
A3.2.	Attitude towards personalized advertisements, post-explanation neutral		
A3.3	Attitude towards personalized advertisements, post-explanation positive		
Incentives			
I1	The general attitude towards incentives	An individual's general attitude towards incentives in an advertisement.	"Depends on how much I want the product. If I really need it, why shouldn't I click on it".
Restaurant incentive			

The responses of the interviewee in the restaurant scenario. The more 'covert' personalized advertisement'.			
I2.1	Responds (somewhat) positive to the covert personalized Ad.	The extent to which an individual is mildly positive or fine with the advertisement.	"Yeah, that's (the ad) awesome. I know my GPS is on and shares my data with Google So I really don't have a problem with it."
I2.2.	No direct response	No direct response to the incentive.	"I might consider it for later".
I2.3.	Responds (somewhat) negative to the covert personalized Ad.	The extent to which an individual is mildly negative about the advertisement or is getting creeped-out by the advertisement.	"That's kind of creepy, that they use that in such a manner."
Laptop incentive The responses of the interviewee in the laptop scenario. The more 'overt' personalized advertisement.			
I3.1	Responds (somewhat) positive to the overt personalized Ad.	The extent to which an individual is mildly positive or fine with the advertisement.	"Yeah, that's (the ad) fine. I'm aware of what I share and the discount is always nice".
I3.2.	No direct response	No direct response to the incentive.	"I will check that out later when I'm home."
I3.3.	Responds (somewhat) negative to the overt personalized Ad.	The extent to which an individual is mildly negative about the advertisement or is getting creeped-out by the advertisement.	"I would walk into that store and I ask how I can turn that off, and why that company is harassing me."

Appendix D: Original quotations

[1] Nee, ze handelen uit commercieel oogpunt, dus het eigen belang voorop. (Participant 23, age 54)

[2] Uhm dat hangt er heel erg van af welk bedrijf het is. Grote buitenlandse bedrijven zal ik minder snel vertrouwen dan bijvoorbeeld Nederlandse webshops. Ze zijn altijd afhankelijk van de technologie en er kan altijd iets misgaan. Dus ik denk niet dat ieder bedrijf in het belang van de klant handelt maar vooral aan hun eigen portemonnee denkt. (Participant 3, age 24)

[3] Vanuit mijn vakgebied weet ik dat de meeste online bedrijven alleen in het belang van de klant handelen. Hier vertrouw ik ook in alleen bij MKB-bedrijven althans. Grotere instanties en bedrijven vertrouw ik hier niet in. Hier wordt data naar mijn mening verhandeld, zoals bij callcenters etc. Dit is al gebleken in meerdere schandalen. (Participant 10, age 25)

[4] Ja, maar aan de andere kant je kiest er zelf voor om dingen te kopen online. Dus dan kun je er vanuit gaan dat ze nog wat meer proberen te verkopen (Participant 8, age 22)

[5] Advertenties tonen die puur alleen gebaseerd zijn op klikgedrag en niet verder kijken. Ik zie dat als een gemiste kans wat tot negatieve gevolgen kan leiden. (Participant 13, age 23)

[6] "Als ze van geen ophouden weten, met bijvoorbeeld hun advertenties en mails." (Participant 26, age 56)

[7] "Als je heel veel advertenties en mails krijgt, ik vraag daar niet om." (Participant 30, age 54)

[8] Niet per se negatief, maar als ik een product bekeken heb betekent het dan niet automatisch dat ik dat product ook perse wil. Als ik bijvoorbeeld per ongeluk op een advertentie klik, dan zie ik er direct advertenties voor. Dat hoeft van mij niet (Participant 12, age 23)

[9] Soms, heb het vermoeden dat deze gegevens op straat of 'doorverhandeld' worden. Bijvoorbeeld mijn interesses, telefoonnummers of NAW-gegevens. (Participant 26, age 56)

[10] Ik maak me hier op termijn slechts zorgen om. Bijvoorbeeld: als je 14 bent deel je dingen op social media, forums etc etc, en dit is allemaal verwijderd door de meeste 20 jarigen. Ik ben soms wel bang dat die data ooit ergens weergevonden kan worden/tegen mensen gebruikt kan worden. Je ziet dit vaak gebeuren dat mensen 'geexposed' worden om hele oude tweets, etc. Dit kan iedereen overkomen die op jonge leeftijd op social media zit. (Participant 1, age 23)

[11] Ja ik ben er wel eens bang voor dat mijn gegevens gestolen worden op een of andere manier. Ook ben ik wel eens bang dat mijn wachtwoorden of bankgegevens worden gestolen en vervolgens van mij geld zullen stelen. Het is mij nog nooit gebeurd maar ik heb het idee dat dit wel makkelijk kan gebeuren. Omdat ik niet alle bedrijven vertrouw. Niet elk bedrijf heeft naar mijn mening de middelen om beveiliging optimaal te maken. Daarnaast zullen sommige bedrijven ook minder zorgen maken om bepaalde gegevens goed te beveiligen. (Participant 3, age 24)

[12] Online privacy word wel steeds belangrijker, omdat we steeds meer tijd online besteden en gegevens van ons online beschikbaar zijn. Het is dan wel belangrijk dat iedereen zich hiervan bewust is en dat dit ook schadelijk of hinderlijk kan zijn (Participant 24, age 57)

[13] Nee zeker niet. Ik denk dat we daarvoor al in een te ver stadium zijn wat betreft digitalisering. (Participant 27, age 62)

[14] Ik heb niet het idee dat ik daar echt invloed op heb omdat ik vaak geen idee heb welke gegevens van mij ook eigendom worden van het bedrijf. De privacy verklaringen zijn vaak enorm lang

en ga je niet lezen. Daarnaast moet je meestal wel verplicht cookies accepteren omdat je anders de website niet kunt gebruiken. Hier zou veel meer duidelijkheid over moeten komen en ook de instellingen hiervan zouden veel makkelijker moeten. Er staat ook nergens duidelijk vermeld welke gegevens een bedrijf nou precies van je heeft. In de instellingen zou een soort van menu moeten komen met aan/uit buttons van je gegevens die je zelf met een bedrijf wilt delen. Hier heb ik nu nauwelijks een idee van. (Participant 3, age 24)

[15] Ik heb het gevoel hier geen grip op te hebben. Dit heeft niemand. Om optimaal gebruik te maken van online functies en app functies, zul je bepaalde data moeten delen (e-mail, locatie, etc.) door met wifi te verbinden deel je al zoveel informatie, het is praktisch onmogelijk om grip te hebbenop de situatie, behalve als je content bent met het feit dat ze je info krijgen. (Participant 1, age 23)

[16] Dit kan ik mij wel voorstellen. Door wetgeving moet duidelijk zijn wat er wel en niet kan. De overheid moet daar op handhaven. Voor gewone mensen is het ondoenlijk om alles te overzien. (Participant 16, age 54)

[17] Ik ben er wel in geïnteresseerd, maar dan de kant van big data en de gevolgen die het op grote schaal kan hebben. Bijvoorbeeld bij de kwestie van Cambridge Analytica. Dit zijn zaken die ter aller tijde voorkomen moeten worden en waar zeer strak toezicht op moet worden gehouden. Gesponsorde kanalen om de politiek mee te beïnvloeden moet een zeer zware gevangenisstraf op staan. (Participant 10, age 25)

[18] Eigenlijk helemaal niks. Misschien wel beetje luiigheid. Privacy is misschien wel veel waard als je het zo bekijkt maar ik denk dat ik het pas ga doen als ik tegen de lamp aan loop. (Particpant 5, age 23)

[19] Een aanbieding om in de showroom te komen nadat je de site van een autodealer bezocht hebt. (Participant 15, age 23)

[20] Aan de hand van wat ik doe op me laptop, kan het internet voorspellingen doen van waar ik interesses in heb. Aan de hand van dat verwachtingspatroon worden gepersonaliseerde advertenties ingezet. (Participant 8, age 22)

[21] Nog een leuk voorbeeld: als ik ergens inlog op een website, dan zie ik wel eens mijn naam in een advertentie. Bijvoorbeeld op de website asos.com, een kledingwebsite, zie ik dan een advertentie met "speciaal voor jou (naam)" bijvoorbeeld. En dan zie ik producten die ik eens heb bekeken opeens met korting. (Participant 2, age 22)

[22] Om eerlijk te zijn, best wel irritant. Ja je moet bijvoorbeeld eerst dingen wegklikken voordat je bepaalde items kunt lezen of voordat je bepaalde video's kunt afspelen. (Participant 19, age 55)

[23] Ik heb geen problemen met online adverteren zolang de advertenties maar relevant blijven en niet irritant zijn. Advertenties op YouTube (Niet relevante video spam) zijn wel zeer irritant. Als de advertentie mij aanspreekt of relevant is dan heb ik er weinig problemen mee. (Participant 10, age 25)

[24] Niet fijn. Nu wordt het me gewoon voorgeschoteld of ik er nu op te wachten zit of niet. Het voelt als een inbreuk op mijn privacy. (Participant 15, age 55)

[25] Het enige wat mij irriteert is als ik een advertentie echt super vaak zie, dat het gewoon irritatie opwekt. Maar ik zie ook wel eens advertenties van een product die totaal niet voor mij interessant zijn, dan denk ik wel bij mezelf, waar zijn die bedrijven mee bezig? Maar zolang het iets is wat

relevant is voor mij, dan vind ik het prima. Als ik een advertentie zie van een product wat ik eens heb bekeken, of iets wat wellicht interessant is om te kopen. Dan vind ik het prima omdat het dan gewoon vele maler relevanter is voor mij. (Participant 2, age 23)

[27] Niet nodig , vind het gewoon hinderlijk (..). Nee, ik ervaar het zelf als een inbreuk op mijn privacy. Ze moeten verder niks met die informatie. (Participant 27, age 62)

[27] Ze zijn wel relevant maar ik zou wel meer algemene dingen krijgen. Je wordt wel een beetje in een hokje geduwd, ik wil daar ook wel uit. (Participant 6, age 25)

[28] Als ik het product al van plan was te kopen, dan ben ik wel eerder geneigd. Als het een algemene advertentie is, dan kan ik mij wel beheersen. (Participant 16, age 54)

[29] Ja, niet zoveel baat bij kortingsbonnen. Ga wel naar een normaal restaurant. (Participant 15, age 55)

[30] Zou wel even kijken wat voor kortingsbonnen het zijn. Maar ook wel beetje creepy dat ze dat zo gebruiken. (Participant 14, age 22)

[31] Eerste reactie zou zijn hoe weten ze nu dat ik voor de winkel sta. Als ik de laptop nog niet gekocht heb en goedkoper is dan online zou ik toch wel even naar binnen gaan. (Participant 18, age 57)

[32] Ja vind ik wel eng. Ik snap wel dat ze het doen, maar ik word er niet echt vrolijk van. (…) Omdat ze je dan echt zo in de gaten houden. Dat gaat mij dan net weer te ver. (Participant 7, age 21)