The impact of Personalized Advertising on Online Shopping Behavior

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Abstract

The study of consumer behavior and its influence on purchasing decisions is crucial for businesses to optimally target consumer's needs. Due to the rise in digitalization, personalized advertising has developed into a potent tool for marketers to target consumers with tailored messages. Thoughts about customer privacy, moral issues, and legal limitations have surfaced in addition to the advantages of individualized advertising. This study intends to investigate the relationship between customers' opinions regarding tailored advertising and their influence on online shopping behavior. Furthermore, the perspective of firms is also investigated and enables to have a clearer overall picture of personalized advertisement.
The research incorporates a literature review, expert interviews, and a consumer survey. The findings highlight the significance of effectively targeted advertising, the impact of customer reactions to privacy concerns, and the relevance of demographic characteristics.
Consumers are highly concerned about privacy, indicating the need for companies to handle sensitive data responsibly. The study offers insights on the traits that affect consumers' preferences for tailored advertising and forecasts the significance of various marketing platforms. Additionally, it underlines the significance for businesses to comprehend data protection and personalization. Overall, if personalized advertising is applied with caution of all these aspects, it is a powerful and beneficial tool to improve online shopping experience.
The study includes academic and managerial implications, limitations, and recommendations for further research. It outlines possibilities for businesses to adjust to changing trends and upcoming changes in regulations while maintaining consumer trust and offering advice on overcoming privacy issues.

Keywords: Consumer Behavior, Personalized Advertising, Online Shopping Behavior, Data Privacy, Third-Party Cookies, Marketing Platforms, Personalization Paradox

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Resumo

O estudo do comportamento do consumidor e da sua influência nas decisões de compra é crucial para que as empresas possam optimizar a resposta às necessidades dos consumidores. Devido ao aumento da digitalização, a publicidade personalizada tornou-se uma ferramenta potente para os profissionais de marketing direccionarem os consumidores com mensagens personalizadas. Para além das vantagens da publicidade individualizada, surgiram reflexões sobre a privacidade dos clientes, questões morais e limitações legais. Este estudo pretende investigar a relação entre as opiniões dos clientes relativamente à publicidade personalizada e a sua influência no comportamento de compra online. Além disso, a perspectiva das empresas também é investigada e permite ter uma visão global mais clara da publicidade personalizada. A investigação incorpora uma revisão da literatura, entrevistas a especialistas e um inquérito aos consumidores. Os resultados destacam a importância de uma publicidade eficazmente direccionada, o impacto das reacções dos clientes às preocupações com a privacidade e a relevância das características demográficas.

O estudo oferece informações sobre as características que afectam as preferências dos consumidores por publicidade personalizada e prevê a importância de várias plataformas de marketing. Se a publicidade personalizada for aplicada com cautela em todos estes aspectos, é poderosa e benéfica para melhorar a experiência de compra em linha.

O estudo inclui implicações académicas e de gestão, limitações e recomendações para investigação futura. Descreve as possibilidades de as empresas se adaptarem às novas tendências e às futuras alterações da regulamentação, mantendo a confiança dos consumidores e oferecendo conselhos para ultrapassar os problemas de privacidade.

Palavras-chave: Comportamento do consumidor, publicidade personalizada, comportamento de compras online, privacidade de dados, cookies de terceiros, plataformas de marketing, paradoxo da personalização

List of Abbreviations

AI	Artificial Intelligence
GDPR	General Data Protection Regulation
Gen	Generation
KPIs	Key Performance Indicator
OPA	Online Personalized Advertising
ROI	Return on Investment

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1. Introduction

1.1. Significance of the topic

The study of consumer behavior is a wide-ranging field of marketing that examines how individuals and groups make decisions regarding the consumption and disposition of goods and services. In a society based on free competition, it is commonly assumed that individuals tend to choose those things most beneficial to them. However, such rational behavior is not always the case (Guest, 1944) so that understanding consumer behavior and its influences is a crucial process for businesses seeking to effectively meet customer needs and influence purchasing decisions. With an increase in digitalization, the internet became a focal point in making purchasing decisions (PWC, 2020). In the digital era, personalized advertisement has emerged as a powerful tool for marketers to target consumers with customized messages and services. Personalized advertising has revolutionized the way of customer communication, but its impact on actual consumer behavior remains a topic of great interest and debate.

Personalized advertisement can be defined as advertising that utilizes information about individual addressee, such as demographic information, personal affinities, and shopping-related information like brand preferences. Brands often and successfully use personalized advertising to reach and engage target consumers. Retargeting, which focuses on re-routing potential buyers to a website or social media profile during their buyer journey, can help ads to reach customers. Those techniques also entail the gathering, use, and sharing of personal information, raising issues regarding consumer privacy. They are also a way to help the consumer cope with the flood of data (Boerman et al., 2017).

Apart from the advantages for sellers and buyers, privacy, and ethical considerations as well as associated legal restrictions surround the topic due to concerns about right data use and manipulation. This topic is of particular interest as currently there is a process of transition in targeted advertisement induced by the predicted end of third party-cookies.

How do these factors influence consumer behavior? What can influence consumers´ buying proposition and desires when shopping online? How do companies react to the current changes? It is of utmost importance to investigate the effects of personalized advertisement on the consumer.

1.2. Research Objective

This dissertation aims to explore the intricate relationship between personalized advertisement and the attitude consumers have towards it, which leads to the following research question:
R: 'How is personalization in advertisement currently affecting online shopping behavior and consumer's attitudes towards it?'

1.3. Dissertation Outline

To find out how consumers change their behavior and whether OPA (Online Personalized Advertising) creates more benefits or is rather detrimental due to concerns, different research strategies got combined.

In order to present how this thesis is structured, this section anticipates its structure. The thesis is divided into five chapters.

- The first chapter highlights the significance of the topic and introduces different perspectives on the topic of the dissertation as well as basic terminology.
- It is followed by the literature review in the second chapter, which summarizes findings of existing literature. The review provides the theoretical background and introduces the main aspects of current research relevant to the objective and is the basis for the development and formulation of further hypotheses.
- The third chapter describes the methodology including the research design, derivation of the hypotheses and outlines the process for the primary data collection. It explains how the selling side´s expert interviews are conducted and how the consumer survey is set up and includes a description of the participants of the study.
- In the fourth chapter, which is the results and analysis chapter, the results of the interviews and the survey are presented. Each hypothesis postulated in chapter 3 gets tested and additional analysis is done.
- The fifth and final chapter presents the main findings which include the discussion and conclusion, the implications of the study and indicates possibilities for future research.

2. Literature review

The purpose of this literature review is to review, organize, and integrate the literature on OPA (online personalized advertising) and assess the-state-of-the-art to find out possibilities for

future research. OPA has been used synonymously with several other terms, including targeting, customization, and personalization. These terms are not completely identical, but all refer to the personalization of advertising and are thus all considered for the following literature review.

The review first has a look at the definition of personalized advertisement, then connects it to tracking and its impact on consumer's privacy concerns. It also sums up different factors of effectiveness, including the influence of emerging technologies and consumer groups. At the end, different social media platforms are further investigated, as well as privacy concerns and an outlook to emerging consumer platforms is given.

Technological progress has enabled marketers to track and use online behavioral data to target consumers more effectively with more relevant advertisements than it was possible years ago. Due to the ongoing trend to online shopping, advertising could become more personalized, and marketers are increasingly developing new tools to better target their current and potential consumers. This comes along with different risks and benefits which are covered by previous papers including those about personalized advertisement, personalization and generational differences and platform deviances of consumer behavior. Furthermore, it gets investigated which role internet cookies and privacy concerns play for online shoppers´ behavior. The aspect of the personality of the consumer is also important, thus literature connecting those topics are also scrutinized, as well as all papers and articles about future behavioral advertising trends and how they can influence consumers perception (see figure 1).

This thematic literature review sums up different types of literature including papers, market reports, news articles and consulting publications to the before mentioned topics. The news articles and consulting publications are also a crucial part, as they also contribute to the latest research and often suited for the target platforms. They close the gap of the limited available academic literature on the topics.

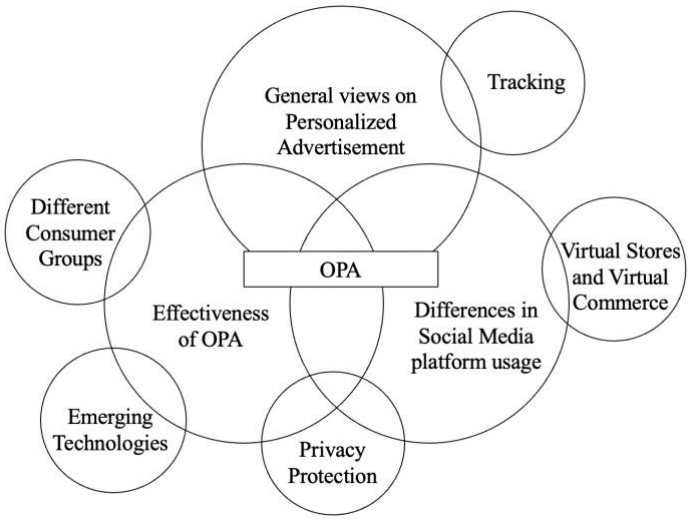

Figure 1: Overview of topics covered in the Literature Review

2.1. General views on Personalized Advertisement

In order to get a first impression about the OPA literature, the paper of Varnali (2021) gives a good overview over the existing literature. It reviews and organizes 80 peer-reviewed journal articles from 47 scholarly journals on that topic. The findings suggest that it may not always outperform traditional online advertising, neither for advertisers nor for publishers, depending on different factors. These include the level of competition among advertisers, the degree of customization that is practical, the diversity of consumer and advertiser populations in terms of targeting preferences, and the pricing strategies of competitors. Relying on the gratifications theory which states that users actively contribute to the communication process and are goal oriented in their media use, the authors looked at how perceptions of OPA's usefulness, informativeness, entertainment value, and intrusiveness affect later behavioral reactions. They also outlined the role of the rational choice theory in mediating the impacts of perceived non-personalization costs and privacy concerns on the connection between ownership and vulnerability.

Another integrative review from Aiolfi et al. (2021) describes the benefits and risks: When comparing the existing literature, they conclude that OPA is a controversial type of advertising. On the one hand some sources report usefulness and credibility whilst others raise various concerns. Consequently, acceptance and avoidance of OPA influenced the behavioral intention to click on a targeted ad. Personalization nowadays is happening in real time while users browse the internet thanks to recent advancements in online profiling technologies.

According to their findings, more companies can boost the perceived utility of their adverts without raising objections or privacy issues. They also conducted that if the level of click intention raises, the purchase intention increases as well and vice versa.

Shen et al. (2021) discuss that one classical model of consumer purchase decision making is the five-stage classical model: It begins with the problem recognition, followed by information search, moves to the evaluation of alternatives, and subsequently looks at the purchase decision as well as the post-purchase evaluation. The OPA affects the stages two, three, four and five so it is a crucial factor for almost the whole purchasing process.

2.2. Tracking and its impact on consumer`s privacy concerns

The web-based behavior tracking enables marketers to show advertisement depending on consumers' interests and needs. It is also possible to track browsing behavior, such as product combination, preferences, and demographic data. This data is gathered either covertly, mostly via cookies, or openly by asking for relevant information (Bang & Wojdynski, 2016). The authors showed that these impacts can affect behavior, with tailored advertising getting more clicks when users have control over the website's privacy settings. They stated that personalized banner ads are clicked far more frequently than general ones, suggesting that the greater attention brought on by personalization influences behavior.

According to the concept of stimulus-organism-response, Kim et al. (2022) discovered that consumer responses were heavily influenced by privacy concerns and that people with higher sensitivity levels may avoid customized internet ads or may react negatively to them. Therefore, the effectiveness of personalized advertising may depend on perceived privacy risk. Consumers can gain from personalized ads since they are more likely to encounter advertisements that speak to their needs and interests and to view fewer advertisements overall. Additionally, personalization can increase consumer attention and achieve instant ad involvement.

An over-abundance of personalized advertisement can generate anxiety and concern. A possible explanation for the effectiveness of advertising goes back to social contract theory. Although many services let users choose how much personal information they give to a company, many customers believe their personal information is less safe, bringing more risk than value.

It can be concluded that the negative aspects of personalization shall not be neglected. Many sources name privacy concerns on social networks as the main negative factor of OPA (Tucker, 2013). Ultimately, the consumers perception of control over their personal information affects how likely they are to click on online advertising. The study reported that responses to untargeted ads often did not change in a significant way. It also reports that allowing users to openly control their personal data may be advantageous for media that rely on advertising. Still, because the analysis was limited to Facebook, the findings cannot be generalized to other networks.

These findings are closely related to the personalization paradox, stating that personalization is not always effective. More individualized services often result in higher relevance and customer adoption, but paradoxically, they may also make customers feel more vulnerable and result in lower adoption rates. An experimental field study on Facebook and secondary data on a tailored advertising campaign show that when customers understand that their personal information has been acquired without their agreement, click-through rates decrease dramatically. Trust-building marketing strategies with informational cues can reduce this negative effect (Aguirre et al., 2015).

2.3. Effectiveness of OPA and the Role of Emerging Technologies

According to a recent study (McKinsey, 2023), personalization directly influences buying behavior across the customer life cycle. 78% of consumers are more likely to repeatedly buy from companies that personalize compared to companies that do not personalize. Because of a lack of personalization, nearly half of consumers are prepared to leave brands with which they already have a relationship.

Another study (McKinsey, 2019) did find that companies that put a strong emphasis on personalization grow faster: 71% of the consumers expect their products to be personalized. The research also implicated that on average, firms receive 40% more revenue from personalized marketing. According to the findings, personalization improves performance and customer outcomes. Success factors for personalization leaders include opportunity identification, quick activation, and scaling, as well as data enablement, agile operating style, and capability creation.

The following five conditions were found as factors that brands can include to keep their customers: Relevancy to interests, Enjoyable Product details, Storytelling and product which makes the consumer laugh (Multichannel Merchant, 2019). Digitalization is a main driver for improved personalization online. But not only external factors play a role in personalization effectiveness, but also personality traits of the consumer himself. Both factors will be explained in more detail in the following two sub-sections.

2.3.1 Effectiveness of OPA related to different consumer groups

The findings of a study from Bang et al. (2019) demonstrate that people with high levels of narcissism paid more attention to personalized advertisement, whereas people with low levels of narcissism did not exhibit these strong distinctions. Thus, the personality and the values of consumers do influence their preferences in brands and personalization as well. People who value quality in a brand, for instance, are shown to have a more positive relation to brand loyalty than people who prioritize other values. According to the findings of an online customer panel, personalization significantly affects brand engagement and brand attachment among consumers, both of which have a substantial impact on perceived quality and brand loyalty (Shanahan et al., 2019).

Tracing back to Social Identity theory, Maldonado et al. (2003) found differences in ad processing between women and men. One of the results was that it is easier for women to make a connection between a brand and their own activated identity. One possible explanation here would be that in general perception of western cultures, females are regarded as being more nurturing and empathic, while males are stereotyped as being less emotional and more logical (Christov-Moore et al., 2014).

Forbes (2019) found that 67% of Millennials and Gen Z (generations get explained in 4.2) expect offers from companies to always be personalized. On the other hand, their article also states that most consumers claim that messages from companies that are not personally relevant to them are ‘annoying.’, especially if they are personally irrelevant products. Moreover, when comparing the generations, it is interesting to mention that around 30% of Gen Z and Gen Y have been influenced to buy a product by positive reviews on social media and search for inspiration there, while only 17% and 19% of older generations do so. They are also less likely to be influenced by promotions, influencers, recommend brands themselves and 17% of them stated to not use social media at all (PWC, 2019).

2.3.2 The role of advances in digitalization and emerging technologies

With the Covid-19 pandemics, the whole world became more digitalized. Since then, the importance of personalization especially raised. The modern consumer is acting even more digital and makes more use of mobile devices (PWC, 2020). 56% of customers between 18-44 years old report that they use digital channels for shopping. The same report found that many older generations also value digital experiences. However, customers looking for the assurance of human support may find digital channels impersonal. By understanding their usage patterns and tailoring experiences, marketers may effectively connect to consumers. Customers can feel their requirements are met even without direct human interaction by using push notifications at times when users are most likely to interact, customizing information to their preferences (Treasure Data, 2021).

The over-the-top technology, which enables access to streaming content through the internet, is also starting to enter private households with their advanced technology of virtual advertising. It is already possible to have online campaigns in the form of a personalized ad break while watching TV targeted directly to individuals (infront, 2020).

This technology also got taken one step further as it can be seen on the front screen at Detroit's airport. After scanning the boarding pass, each customer can see their personal flight information on the display. The technology works with different pixels calculating right where one stands in a viewing area in front of the screen and the information gets deleted as soon as a passenger leaves the area. Several related use cases are planned for these types of screens, from Sky Club lounges stadiums to other entertainment venues (Business Insider, 2022).

Another aspect that is evolving is the tracking mechanisms itself: Digital tracking tools include cookies, clickstream data and web bugs. Clickstream data is gathered while a user uses a web browser. A cookie is a text string that a client browser saves when it connects to a certain server (Cahn et al., 2016). Web bugs let advertisers follow clients from a distance and are tags that can be added to an HTML message. Web bugs differ from cookies in the form that they are not saved on the user's computer and are intended to be imperceptible to the user. They cannot actively be declined as cookies. But they do fall under the same regulatory category and are blocked whenever cookies are. Cookies are going to be used as a superordinary phrase for both terms in this dissertation (Goldfarb & Tucker, 2011).

2.4. Differences in Social Media platform usage

Gen Z, followed by Gen Alpha is entering the workforce and is thus shifting the generational purchasing power. This comes along with a change in platform requirements, as they have different desires and habits, especially in social media usage, compared to older generations.

A revised marketing strategy should focus on relevant social media platforms of Gen Z which are Snapchat, Instagram, TikTok and other modern networks. Sticking only with traditional advertising is not an option if a company wants to be successful. Gen Z has a shorter attention span and is likely to decide after even a few seconds whether content is relevant. They are also highly drawn towards positioning and influencer marketing. Another recent trend is that 28% of Gen Z considers investing in digital currency and almost the same amount considers using it to make purchases (PWC, 2019).

Most of the existing literature is about advertising on Facebook; much has changed in Social Media usage, so it is interesting to investigate the existing literature and the trends in modern e-commerce: Namely Instagram, TikTok, and the trend towards virtual commerce aka the Metaverse.

De Keyzer et al. (2015) examined the impact of perceived advertising personalization on Facebook. When consumers view content as customized, one main effect can be found in their studies: Personalization appears to be more effective for high involvement products by raising the perceived relevance of the advertisement. For products with low involvement, however, there was no significant effect observed. A positive attitude towards Facebook might not be able to further enhance the beneficial effect of perceived customization for a high involvement product since a consumer's incentive to process the marketing may already be strong.
Other results show a favorable relationship between consumer perceptions of customization technology's utility and their behavioral intentions to use an e-commerce mobile app (Song et al., 2021).

Looking at the different platforms, Instagram has already been experienced with user-relevant content and influencer advertisement for some years. TikTok, which is becoming more and more popular, is by now mainly a video-sharing platform. Results show that the algorithm used by TikTok is better in terms of displaying specifically labeled information to potentially

interested users because the algorithms have fundamentally distinct functions. The number of views on the TikTok posts were significantly higher than those on Instagram. The findings of this study suggest several explanations for why the TikTok algorithm may have performed better than the Instagram algorithm, of which the higher replay value is probably the most important one (Bishqemi and Crowley, 2022).

Hendriana et al. (2022) found that entertainment, credibility, personalization, and interactivity elements had an impact on purchase intention through perceived advertising value and attitude toward brands on TikTok. In their marketing strategy, the aspect of personalization had the most favorable effects on purchase intention through advertising value and attitude toward advertising.

The findings of Darmatama and Erdiansyah (2021) demonstrated that the most significant factor influencing customer purchasing decisions for beauty products on TikTok is product image. The results of this study are consistent with those of earlier studies. It was shown that online advertising, which is typically viewed on smartphones, has a considerable impact on customer's overall purchasing intentions. Other factors examining the optimal advertising strategy on TikTok got investigated by Yuan et al. (2022): The results of his study indicate that the performance of advertising is higher when the product is in a lower priced segment and when the seller has a smaller video exposure.

2.5. Privacy protection

There are currently various other changes but the platform itself, such as cookie regulations, so it will be interesting to predict how the changes in legal and voluntary regulations from social media governance and their following restrains impact consumer behavior.
On websites, the efficiency of targeted ads without customized text remained constant. Ads, that used more unique private information to tailor their message to target audiences who were more likely to employ opt-out privacy settings, saw a greater improvement in effectiveness (Tucker, 2013).

The planned ban of third-party cookies from web browsers by the end of 2023 is likely to have an impact on the personalized settings of websites. Previously, OPA on websites got tracked via cookies, but in the future, more registrations will be needed to gather personal data. Most experts think that the short-term impact of eliminating third-party cookies will be

negative for advertising effectiveness. Certain current measurement and attribution techniques will become obsolete because of the cookie prohibition implemented by Google and Apple and the increasing privacy protection regulation.

Interest-based targeting is a related approach developed by Google as an alternative to cookie-based targeting. Another attempt to replace cookies is contextual advertising: Natural language processing and image recognition allows algorithms to grasp the sentiment of pages and apps, enabling marketers to show ads relevant for their potential customers (McKinsey, 2022a).

Topics, a different Google technique, might effectively substitute third-party cookies as a signal for creating interest-based audiences. It places you in a group with similar people from across the world based on your browser history from the previous week (Tech Crunch, 2022).

2.6. Virtual Stores and Virtual Commerce

One possible solution to many data protection issues is arising with the development of the virtual commerce, which is a new paradigm of facilitating online business. In the so-called Metaverse, brands can better serve their customers through more relevant offers and incentives, all in a privacy-protected way. With this form of live commerce, new forms of media could include contextual purchasing in the future, which enable consumers to purchase any desired product at any time.
Therefore, the personalization in the Metaverse might be facilitating the end of third-party cookies (McKinsey, 2022b). Because every step in there is completely online, consumer behavior is still trackable. Data from the metaverse includes first-party data, which makes consumers access a hyper-personalized experience (Forbes, 2021).
Each pricing decision in the Metaverse is optimized to maximize effectiveness and relies on the underlying principles of behavioral economics. This is related to the priming effect: Designers and companies can customize stimuli to maximize the effectiveness of their marketing pitches for each individual customer while being able to give the products higher value with the application of the psychology of artificial scarcity (EY, 2022).

According to Obsess (2021), 25% of customers, especially younger ones, have shopped online at 3D virtual stores. Seventy of them have already made purchases from a virtual shop. Virtual shops are frequently thought of as a brand's portal into the metaverse. When compared

to traditional e-commerce sites, the conversion rate of customers who visit a virtual store and then make a purchase is higher, which demonstrates improved consumer involvement in virtual shopping environments. This emphasizes the significance for retail businesses of developing effective metaverse commerce strategies which will resonate with consumers throughout the following years. The next generation of digital consumers will anticipate shoppable virtual worlds; therefore, firms should align their strategies accordingly.

A literature review from Shen et al. (2021) on consumer behavior in the Metaverse focusing on consumer behavioral responses application design, found that the shopping experience in the Metaverse likewise as in real life can have hedonic and utilitarian values.

McKinsey (2022c) stated that the metaverse offers marketers the chance to interact with consumers in completely new ways while also advancing internal capabilities and brand innovation. Since payment credentials are mostly a prerequisite, omnichannel commerce is already second nature to the majority of metaverse consumers. Engagement and brand marketing are increasingly centered on the consumer. The more than 50% increase in influencer marketing over the previous five years demonstrates the trend towards independent content creators. This change indicates that a significant share of innovative and engaging experiences is likely coming from creators in the Metaverse.

The results revealed that while behaviorally targeted online ads can have a positive direct effect on purchase intention, exposure to OPA also sets off a negative indirect effect on purchase intention that attenuates these. It will be interesting to have a look at how OPA influences consumer behavior considering these new digital trends, which will be analyzed in the next chapters.

Overall, some literature on the topics of personalized advertisement, tracking, digitalization, and modern platform usage does exist already. The rapid change in these topics leads to limited actuality and it is of high interest to invest how they interact with each other. On one hand, personalization was found to be detrimental for consumer behavior, on the other hand sources conclude that it is required by customers. This leads to controversies and the necessity for further research.

3. Methodology

The objective of this chapter is to describe the research process and techniques used to identify, select, process, and analyze the required data and explains the choice of the methodology and its concrete procedure. Its aim is to support the findings of the previous literature review and gain deeper insights. The first section is going to elaborate the research design, followed by deduction of the hypotheses and a description of the primary data collection, namely expert interviews and a representation of the consumer survey including a description of the participants.

3.1. Research Design

As a result of the secondary data, it could be seen that the existing literature still not fully covered the impact of personalization on new types of platforms and younger generations. Accordingly, primary data was collected to review the previously assumed literature on personalized advertisement. To discover deeper insights, exploratory research was conducted in the form of expert interviews, supplemented by a survey as descriptive research.

In a first step, a qualitative approach was chosen by conducted expert interviews to gather a broad perception on current topics from experts from the seller side in different areas and companies of the economy. As a next step, a consumer survey was designed and conducted to get in-depth quantitative information and ultimately to statistically test the hypotheses (see 3.3).

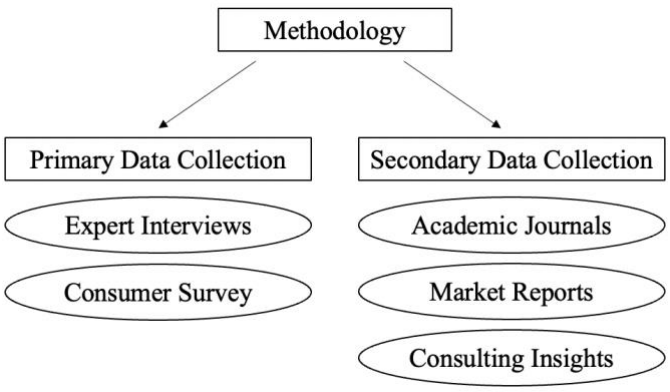

Figure 2: Overview of Methodology: Primary and Secondary Data Collection

The literature review led to the following hypotheses:

3.2. Hypotheses

The literature review reviewed secondary data on personalization in advertisement and related topics in order to develop hypotheses to answer the research question.

Most of the literature agrees that personalization does impact consumer behavior in many ways. As seen before, it was found that personalized banners are clicked more frequent than general ones and that it increases attention and involvement. Higher involvement shows in the result of higher purchasing rates. This leads to the first hypothesis, aiming to find out whether people who order a lot and often online react positively or negatively to personalized advertisement of products they unconsciously want.

H1: Frequency in online shopping is positively related to reaction of advertisement that was not actively searched for.

The effects of personalization can vary due to different external factors. The image an individual has of a brand highly relies on that. Since some studies suggest that females show a stronger connection to brand identity, there might be a link between the gender of a consumer and personalization as well (Maldonado et al., 2003). As a result, the author wants to find out, whether there is a relation between the gender of a consumer and perception of personalization for ads. It is therefore hypothesized that:

H2: Personalized advertisement has a different effectiveness depending on the gender.

Moreover, studies (Forbes, 2019) found that younger generations expect more personalization than older ones. Older generations are also less likely to be influenced by marketing activities (PWC, 2019). A possible deduction is that they are less open to new products and rather stick to products they already know. This leads to the third hypothesis:

H3: Age is positively related to brand loyalty.

As well as the demographic factors, internal factors such as personality traits of a consumer can play an influencing role as well. As for instance higher narcissism is suspected to have a stronger effect on personalization, the question comes up how other personality features influence the perception of personalization (Bang et al., 2019). People who put a high emphasis on quality in a brand have been observed to have a higher brand loyalty as well. As

perceived quality is positively related to brand loyalty, quality got chosen as a distinctive brand attribute (Shanahan et al., 2019). The hypothesis tries to find out whether consumers who prioritize quality are also less likely to be influenced. Thus, the next hypothesis is as follows:

H4: People that value quality as the highest brand attribute are less likely to be impacted by personalized advertisement.

Another important factor when it comes to the response of personalization is the affinity to new technology of the individual. Advances in technology and analytics allow marketers to create much more personal content (Treasure Data, 2021). For this reason, the following hypothesis arises:

H5: Affinity to new technology is positively related to responsiveness of personalization.

Studies observed that the consumer responses to customized internet ads are influenced by the individual's privacy concerns (Kim et al., 2022). Consumers with high levels of concern might react in a different way, which thus leads to the sixth and final hypothesis:

H6: Concern for online data privacy is negatively related to reaction on personalized advertisement.

Each hypothesis is tested and evaluated in 4.2.1. After an analysis, it can be concluded whether the hypotheses are accepted or rejected. Primary data is conducted as a next step, which will be presented and outlined in the following.

3.3. Primary Data Collection

The primary data collection was carried out to gain insights from two different perspectives: The selling companies and the consumer's point of view. In a first step, qualitative research was used by gathering selling side´s expert interviews, which provided complementary, up-to-date insights to the literature for the later analysis. As a next step, quantitative research in the form of a consumer survey was utilized to verify the interview results and gather more data to develop well-supported assumptions divided into different demographic backgrounds and test the hypotheses.

3.3.1 Methodological approach for Expert interviews

An interview guideline got set up and five industry experts got selected. These in-depth conversations help to clarify priorities and identify challenges. Reasons for choosing this research method also include that single experts can stand for a representative opinion for a wider circle of players and enable a fast and unproblematic access to objective data (Bogner et al., 2009).

Their seniority level ranges from junior levels to executives, and each one of them has had touchpoints with personalization or tracking at some point in their past professional career. This was a selection requirement and the expertise areas covered marketing agencies, data analytics, consulting and luxury and fashion industry (see Appendix A). Overall, the process of conducting the interviews lasted from March 29, 2023 until April 15, 2023.

The interview length ranged from 20-30 minutes. At the beginning of each interview, a short introduction of the topic was given. Personalized advertising got defined and explained by a few examples. Each interview followed the guideline and the questions got individually adjusted. Not every person got asked each one, as for instance one expert had more insight into third-party cookies, while another knew more about the consumer responses.

A qualitative research process usually consists of the following three steps: Data collection, transcription, and analysis.

The interviews were conducted in German and were first recorded, and notes were taken, then they were fully transcribed and translated into English. Following his three-step process model of paraphrase, generalization, and reduction, Mayring (2010)'s qualitative content analysis provided the guiding framework for the data analysis. It was regarded as the most applicable one for the analysis given the extent of this research and the dissertation timeline.

The transcripts were paraphrased as part of the data analysis process to achieve a uniform level of language. The paraphrases were then abstracted to a certain degree in the following stage. Thus, they were generalized to improve the overall comprehension. In the third phase, duplicate or irrelevant statements were removed and similar phrases got combined. At the end, the major statements got categorized and summed up to interpret the results and draw conclusions (Mayring, 2010).

3.3.2 Methodological approach for Consumer survey

The primary data includes first-hand research, that was acquired through a questionnaire to deepen the gained insights and reveal individual perceptions and opinions. A consumer survey is a cost-efficient and fast way to get easy access to certain target groups and thus obtain multiple answer in a short period of time. The collected data was helpful to create a robust foundation of insights, laying the groundwork for further analysis and the development of recommendations.

This quantitative method has several benefits for this study, for instance flexibility, rapidity, timelessness, question variety, and control over answer sequence (Evans & Mathur, 2005). Additionally, because they can respond to the survey whenever and wherever, the respondents benefit from high flexibility. Regarding the benefits of speed and timelessness, it is simpler to design a survey and obtain numerous responses quickly. An online survey also has some disadvantages which include a potential for low response rates and the possibility of low motivation due to a lack of personalization. One possible reason for this is technology affinity as a prerequisite to fulfill the survey which may automatically deter certain groups of respondents (Wright, 2006). However, the predominantly advantages of an online survey led to the choice to conduct an online survey in the form of a questionnaire.

The survey was distributed via a link in social networks in the form of posts and messages to friends, family and business networks and ran from April 18, 2023 until May 8, 2023, reaching a total of 128 participants. It got set up on Qualtrics, due to its various features and ease of use as support for data collection, analysis, and export. The language options were English and German which could be chosen at the beginning, ensuring that a greater audience could be reached.

The questionnaire consisted of 16 questions in total, logically split up into five sections: (1) Introduction, (2) Social Media Usage, (3) Shopping Behavior, (4) Data privacy, (5) Demographics. It was kept as efficient as possible, by only focusing on complex, relevant questions and thus avoiding an unnecessary survey length.

In the introductory part before the actual survey, the author introduced herself, the topic, the objectives and proclaimed the anonymity of the results. Each section starts with a short paragraph about the topic of each section, and section (2) and (3) each have a field for

additional comments at the end. Most questions were closed questions and in case of questions that might not be referable to every respondent, a ‘not applicable’, ‘It never happened to me’ or an ‘I do not know’ option got added. The (2) Social Media Usage part aims at finding out the frequency of usage of different platforms as well as the purpose and kind of topics the respondents use it for. It is followed by the biggest part of the survey which is the (3) shopping behavior section. The questions in this section cover the frequency of online shopping and a question to find out where the respondents prefer to buy different products at a 5-point nominal scale ranging from ‘In a Store’ to ‘Online’. It is followed by a question about experience with shopping in the Metaverse, a ranking of the importance of different brand attributes and a question to find out more about the individuals general brand loyalty. A final question describes different scenarios related to personalized advertisement a consumer can face when shopping online and asks for the perception on a 5-point semantic differential scale from negative to positive. The next section about (4) Data privacy asks to accept or reject different statements on online data privacy. It includes the topics firewall, deletion and acceptance of third-party cookies, encryption software, rejection of certain social media platforms due to privacy concerns, reading of privacy setting upon platform registration and a question whether the user is concerned with data privacy but does not know a solution. The last section consists of the demographics (5) and is useful to better segment different usage behaviors. After questions on gender, age, current occupation, and current residence, one question is included to find out more about the character of each person. It is based on the Five-Factor Model, which includes five broad personality traits in terms of five basic dimensions (McCrae & John, 1992). This 5-point Likert scale targets to find out about the extent of extraversion and openness. It got reduced to only the traits that matter for the research purpose and got complemented by openness to new technology and relevant traits, which were self-esteem and empathy in this case.

From the 128 recorded responses, only 125 fully completed the survey. This represents a rate of around 98% and only fully completed surveys are included in the analysis. 70.64% of the respondents identified themselves as females, 29.46% as male and one person preferred not to reveal their gender, resulting in a higher proportion of female participants (see table 1).

In terms of the age structure (see 4.2), most of the participants were Gen Z with 59.82% (were born between 1996-2010), followed by Gen Y (15.18%, between 1981-1995). 13.39% were

Gen Boomer and Gen Silent combined (born before 1965), while 9.82% were Gen X (born 1965-1980) and 1.79% Gen Alpha (after 2010) (adigiconsult GmbH, 2022).

Therefore, at the time of the research the majority of the participants was between 13 and 27 years old.

Regarding the current occupation, 44.64% stated to be a Master's student, 25.00% working full-time, followed by 10.71% of students who are studying in their Bachelor's. 8.93% of the respondents are working part-time, 4.46% are retired and 2.68% were still in school. The same amount with 2.68% preferred not to reveal their occupation and 0.89% are currently apprentices.

Most of the participants with 70.54% are from Germany, followed by 15.18% from Portugal, 3.57% from Austria, 2.68% from Italy, as well as 2.68% from Switzerland, 1.79% from Hungary and 3.56% from other regions (namely France, Norway, Romania, and South America). Detailed demographics can be found in Appendix B.

After presenting the demographic backgrounds, the following chapter will present a detailed data analysis and visual representation of the results.

Demographic Overview of Respondents				
n=128	78 female	15 Gen Boomer & Gen Silent	3 Student (School)	79 Germany
			12 Student (Bachelor)	17 Portugal
			50 Student (Master)	4 Austria
	33 male	11 Gen X	1 Apprentice	3 Italy
		17 Gen Y	28 Full-time worker	3 Switzerland
		67 Gen Z	10 Part-time worker	2 Hungary
	1 prefer not to say	2 Gen Alpha	5 Retired	4 Others (France, Norway, Romania, South America)
			3 Prefer not to say	

Table 1: Demographic Overview of Respondents

4. Results and Analysis

4.1. Results of the expert interviews

This section is based on the results of the qualitative research and reflects the arguments raised by the expert interviewees on several topics: Targeted advertisement, Consumer privacy concerns, measures for companies for data protection, the end of third-party cookies and about future important platforms and consumer attributes.

The experts revealed that targeted advertisement is crucial for companies, which do marketing to reach the right target groups for their products in terms of their targeted demographics. When well executed, it can be useful and an inspiration for other customers. One fashion company estimated a turnover rate for newsletters of 1-2% and even 5% for social media.

It underlies a previous creation of customer profiles for insights, analytics and segmentation, including modern technology such as AI (Artificial Intelligence). One benefit of it is that customers are less swamped with unnecessary ads, but it is also used to increase the allocation of the marketing budget, in particular KPIs (Key Performance Indicator) to achieve the marketing ROI (Return on Investment) on dollar spent. Firms can either filter consumers by certain traits or they can deliberately exclude consumers by selected criteria. The choice of the right platform is also important.

Some concerns from the consumer perspective got pointed out, such as targeting being an invasion of privacy. Especially retargeting can be rather intimidating for consumers who do not delete their cookies. Especially when seeing advertisement of websites, they feel uncomfortable being on, consumers might get the undesired feeling that their behavior is being observed. Still, the company experts agree that with cookies there is a possibility to choose to give personal data and that makes it more legitimate. With this consent, consumers can delegate what they are scrolling on. The cookie consent rates are 70-80%, indicating that most people are not too concerned with their privacy. Another point is that big data and data analytics are increasing in importance and buying behavioral data is only a small part of the overall picture.

In terms of how experienced the companies are with the issue of online data protection, there arise huge variances: Many are starting to look for solutions and some have a lot of experience with it or are even developed own technology. Overall, the trust in existing

regulations is predominant at the experts: At least in Europe, there should not be any legal loopholes to steal data due to GDPR (General Data Protection Regulation).

A new perspective was laid upon customer data protection: A main issue for prospecting of data does not concern the targeted consumers, but more the existing ones. They do not even see the data they generate for e.g. statistical pairs or target audiences.

The same accounts for the preparations for the end of third-party cookies which introduce the new tracking era: The companies are all thinking about it to some extent, some being more advanced and prepared than others.

There can be a shift observed from client-side tracking to server-side tracking, which depends on the money spent and the channels (more complex and expensive for search, prospecting, paid social, newsletter). The process of looking for the ideal solution got described as a huge black box for most of the firms to efficiently allocate the marketing budget. GA4 is an example for a widely implemented analytics tool, some companies already move on from GA4 with other tracking tools to gather more first-party data. One company even implemented an own privacy-first personalization tool which is using AI to assist brands in better identifying and connecting with consumers.

The platforms that are important, as well as their content are also constantly changing. Overall, it can be summed up, that they are getting more involvement leading to a higher consumer interaction and consuming more time. Important trend topics that were mentioned are importance of influencers and a split into two main categories for platforms for online shopping: Traditional marketing platforms, but also product platforms and marketplaces itself.

Especially for the younger generation, TikTok is important, as well as Snapchat. There is also a prediction for YouTube to regain importance, as it shows a good mixture of relevant content with tutorials and leisure time content as beauty tutorials and music and other entertainment. Instagram does have a relevance as well, as they progressively deliver a higher value. Even though Facebook is still the most-booked platform for advertisement in the passive consumption and marketing impact sector, it is expected to lose its presence, because of their lagging personalization. Some platforms which have previously not played a role in advertisement could gain shares as well: BeReal (high in daily users) and Pinterest (of special interest for inspiration and simplicity in use). Besides from the marketing platforms, other

platforms increasingly become important in marketing: Retail Media is gaining importance, meaning traffic-rich platforms such as Amazon, Zalando and Douglas become more marketers for products and therefore function as brokers. On these, the purchase decision is made and if one can influence it on these platforms with marketing, it makes sense to put an emphasis on it. The commission fees rise, and they throw out old stock, which is why consumer data is even more important which the firms can use and sell.

Another trend is the change in content consumption from images over videos and filters to Augmented Reality. The opinions on the future of the Metaverse differ as well. Some experts suggest an emphasis on good story telling, others on product and packaging, price, and sales channels. Sustainability got mentioned as a major trend in the Metaverse as well. The concrete recommendations for actions include boosting the social media presence there without overwhelming the customers. Existing brands should try to bring their consumer circles to the Metaverse and guide them on there to stick out. Ideally, they feel like they are being individually addressed by getting personalized offers and automated, individual texts.

Gen Z require a lot more personalization than older generations, because they often see it as a precondition. Apparently, Gen Z expects a connection to a brand paired with an individual experience. For them, personalized content plays an even bigger role than for other generations, as they are more exposed to seeing personalized content. One example for this is the increasing mass customization which could be observed by luxury brands in the past and now other brand such as Zara are following this trend.

Social status and education are mentioned as other attributes playing a role in personalization, as they might be less likely to be influenced. Generally insecure people are suspected to be more easily influenceable by firms.

These qualitative insights do contribute to the overall understanding of the topic and supplement the literature by first-hand insights, nevertheless there is still a need to test the hypothesis with quantitative results. The trends give a good indication for which platforms will play a major role soon, what will be important to consider for companies and how differences in consumers show in the response to personalized content. The consumer survey in the next section aims to investigate further the links between different age groups, their online shopping behavior, habits, and concerns.

4.2. Results of the consumer survey

After closing the survey on Qualtrics, the data got exported in a SPSS format and uploaded directly into IBM SPSS Statistics 28, where the analyses were conducted. Subsequently, string and categorical variables were recoded, labels of axis got simplified and the data got cleansed. Table 2 and table 3 give an overview over the birth year of the questionnaire and the deducted generational belonging, as well as the short forms of different personalization scenarios used later on and their average observed reactions.

Birth Year	Generation
before 1965	Generation Boomer and Generation Silent
1965-1980	Generation X
1981-1995	Generation Y
1996-2010	Generation Z
after 2010	Generation Alpha

Table 2: Birth Year and corresponding Generation

Personalization Scenario	Now imagine the following scenarios and try to imagine how you feel in each moment…	Average reactions	
P1: Scenario 1	… When you see advertisement you think is personalised to you.	rather negative/ neutral/ rather positive: 76,31% combined	
P2: Scenario 2	… When you see advertisement you do not need.	negative/ rather negative: 73,69% combined	
P3: Scenario 3	… When you see advertisement of a product you consider buying but did not actively search for it.	rather negative/ neutral/ rather positive: 82,46% combined	
P4: Scenario 4	… When you recently bought something and get an advertisement of it.	negative/ rather negative/ neutral: 91,23% combined	
P5: Scenario 5	… When you see an advertisement of something you just talked about.	negative/ rather negative/ neutral: 85,14% combined	

Table 3: Explanation Personalization Scenarios and corresponding overall average reactions

Pearson chi-square crosstabulation was used to assess the relationship between variables, ANOVA was performed to determine the average statistical differences between groups, and descriptives were used for samples. Observed results were deemed as statistically significant with a p-value of 5%, indicating a 95% confidence level. Depending on the research findings, a theory can be either falsified or verified (Saunders et al., 2009). Extracts of the SPSS evaluations can be found in Appendix C.

4.2.1 Hypothesis testing

Frequency in online shopping and advertisement that was not actively searched for (H1)

To test the **first hypothesis**, two chi-square test for association were conducted between the frequency of respondents' online shopping and two scenarios indicating that a consumer unconsciously considered buying a product without actively searching for it. The chosen scenarios were being exposed to a product one considers buying but did not actively search for (P3) and seeing an advertisement that just got talked about (P5).

A chi-square test can be used to compare the observed values to the expected values if the null hypothesis was true. The p-value for a chi-square test between frequency of online shopping and P3 is p=0.267. For a significance level of 5%, therefore H0 cannot be rejected, and no statistically significant correlation can be concluded.

A statistically significant association between the frequency of shopping online and P5 $\chi^2(25) = 58.798$, $p < 0.001$ has been found. Table 4 illustrates the tested variables and the chi-square test.

The frequency of online shopping is concentrated in the option of less than 2 weeks. When setting up two new variables (those who buy less than frequently than every 2 weeks or never, and those who buy more) and conducting an additional chi-square test, significant values $\chi^2(25) = 37.406$, $p < 0.001$) got found as well.

Crosstab								
Count (N)		P5: … When you see an advertisement of something you just talked about.						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Frequency of Online Shopping	Several times a day	0	1	0	0	0	0	1
	Once a day	0	0	1	1	0	0	2
	3-4 times a week	0	0	2	0	1	1	4
	Once a week	5	6	1	2	0	0	14
	Every two weeks/ less	42	22	12	11	0	1	88
	Never	2	2	1	0	0	0	5
Total		49	31	17	14	1	2	114

Chi-Square Test (all Frequencies)			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	58.798	25	<.001
Likelihood Ratio	31.737	25	.166
Linear-by-Linear Association	7.704	1	.006
N of Valid Cases	114		

a. 31 cells (86.1%) have expected count less than 5. The minimum expected count is .01.

Chi-Square Test (More than two weeks vs. Two weeks or less)			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	37.406	5	<.001
Likelihood Ratio	35.417	5	<.001
Linear-by-Linear Association	17.394	1	<.001
N of Valid Cases	114		

a. 31 cells (86.1%) have expected count less than 5. The minimum expected count is .01.

Table 4: Crosstab association reaction between P5 ('When you see an advertisement you just talked about') and online shopping frequency

In addition, a regression analysis with ANOVA got conducted to find out more about frequency in online shopping as predictor of reaction to P5. It revealed a p-value of $p<0.001<0.05$, which is below the tolerable significance level, so it does have a significant impact on the dependent variable in the context of the mode. The F-ratio $28.944<1$ is high which shows significant effect among the group means. The unstandardized β of 4.411 indicates that when frequency in online shopping increases 1 point, the dependent variable P5 increases in 4.411.

Model Summary									
R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
0.288	0.083	0.080	1.127	0.083	28.944	1	320	<0.001	0.506
a. Predictors: (Constant), Frequency in Online Shopping									
b. Dependent Variable: Personalization Scenario 5									

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Regression	36.769	1	36.769	28.944	<0.001
Residual	406.511	320			
Total	443.280	321			

Coefficients								
	Unstandardized Coefficients		Standardized Coefficients			95% Confidence Interval for B		Collinearity Statistics	
	Beta	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	4.411	0.416		10.605	0.001	3.592	5.229		
Frequency in Online Shopping	-0.464	0.86	-0.288	-5.380	>0.001	-0.633	-0.294	1.000	1.000

Table 5: Regression P5 and Frequency in Online Shopping

Personalized advertisement and Gender (H2)

A dummy variable (male=1, female=0) got created to test whether the reaction in the different personalization scenarios is mediated by the gender of the respondents (**H2**). The tables of each scenario all got combined into one (table 5). The scenarios P2 ($\chi^2(5) = 24.238$, $p<0.001$), P3 ($\chi^2(4) = 15.108$, $p=0.004$), and P5 ($\chi^2(5) = 12.495$, $p=0.029$), each show a significant p-value and are thus apt to have a relation with gender.

Count			Reaction to scenarios							Pearson Chi-Square		
			Negative	Rather Negative	Neutral	Rather Positive	Positive	Never happened to me	Total	Value	df	Asymptootic Significance (2-sided)
Gender	P1	Female	10	60	60	48	35	12	**225**	10.799	5	0.56
		Male	4	16	33	25	20	0	**98**			
		Total	**14**	**76**	**93**	**73**	**55**	**12**	**323**			
	P2	Female	62	118	32	6	7	0	**225**	24.238	5	<0.001
		Male	29	32	31	3	0	2	**97**			
		Total	**91**	**150**	**63**	**9**	**7**	**2**	**322**			
	P3	Female	17	52	36	88	32	0	**225**	15.108	4	0.004
		Male	4	20	34	29	10	0	**97**			
		Total	**21**	**72**	**70**	**117**	**42**	**0**	**322**			
	P4	Female	45	76	77	19	8	0	**225**	3.827	4	0.430
		Male	19	43	26	7	2	0	**97**			
		Total	**64**	**119**	**103**	**26**	**10**	**0**	**322**			
	P5	Female	78	68	30	42	5	2	**225**	12.495	5	0.029
		Male	39	24	24	10	0	0	**97**			
		Total	**117**	**92**	**54**	**52**	**5**	**2**	**322**			

Table 6: Combined Crosstab associations between reactions to Personalization Scenarios and each Personalization Scenarios split up by Gender

Even though the chi-square test revealed a relationship between the categorical variables of gender and each scenario P2, P3 and P5, the ANOVA of these scenarios did not show

significant results (P2 p=0.185>0.05, P3 p=0.580>0.05, P5 p=0.724>0.05) for differences between the groups.

Age and brand loyalty (H3)

Overall, when thinking about past behavior, 73,87% were rather brand loyal overall and 26,13% preferred to be looking for new products, simplified as brand switching. As a first step to find the relation to age (**H3**), a chi-square test got set up to test the independence of the variables birth year and brand loyalty. As the p-value is p=0.17 >0.05, the data suggests that the variables are not associated with each other.

An ANOVA test also revealed a significance value 0.171>0.05 and therefore, there is no statistically significant on the dependent variable in the context of the model and the difference between the group means.

When comparing the means of brand loyalty (1= brand loyal, 2= brand switching), no linear connection got found, but when looking at the means, the oldest generations (Boomer and Silent and Gen X) are shown to have the highest brand loyalty. Gen X (1.13), Gen Boomer and Silent (1.2) are below the overall mean which is 1.27 and are thus more brand loyal than the average participant. Gen Z (1.28), Gen Y (1.34) and Gen Alpha with the highest value (1.5) have higher means and thus are more brand switching. Interestingly, the average brand loyalty increases with age, besides from Gen Y and Gen Z, here it is the other way around (see table 6).

	Means Brand Loyalty		
Generation	**Mean**	**N**	**Std. Deviation**
Gen Boomer and Gen Silent	1.20	35	0.406
Gen X	1.13	23	0.344
Gen Y	1.34	44	0.479
Gen Z	1.28	200	0.448
Gen Alpha	1.50	8	0.535
Total	**1.27**	**310**	**0.445**

Table 7: Means of Brand Loyalty for each Generation

Quality as most important brand attribute and personalized advertisement (H4)

When ranking the importance of different brand attributes, quality was mostly ranked as being of highest importance (43,86%), followed by price (21,93%), design (19,30%), functionality (10,53%) and lastly sustainability (10,53%). For this reason, the impact of quality got chosen to be further investigated to test the **fourth hypothesis**.

There was a chi-square test conducted for P1 and the ranking of quality in the importance of brand attitudes. The p-value of $p=0.008<0.05$ and thus H0, which states that there is no significant correlation between the means, can be rejected (see table 7).
An ANOVA did not show significant results for the relationship between the independent and dependent variables here ($p=0.140>0.05$).

Crosstab							
Count (N)		Attribute Ranking - Quality					
		1	2	3	4	5	Total
Reaction to P1: ...When you see advertisement you think is personalised to you.	Negative	9	3	1	1	0	14
	Rather negative	32	24	14	6	0	76
	Neutral	45	24	15	6	3	93
	Rather positive	16	36	12	8	0	72
	Positive	25	25	5	0	0	55
	Never happened to me	6	6	0	0	0	12
Total		133	118	47	21	3	322

Chi-Square Test			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	38.239	20	.008
Likelihood Ratio	45.208	20	.001
Linear-by-Linear Association	.554	1	.457
N of Valid Cases	322		

a. 15 cells (50.0%) have expected count less than 5. The minimum expected count is .11.

Table 8: Crosstab association between Attribute Ranking – Quality and reaction to P5 ('When you see advertisement you think is personalized to you.')

As a next step, the values for people who ranked quality on the first place got analyzed. Around 33% of them (45/133) rate the impact of personalization as neutral. In comparison, of the people who ranked quality on place 2 are approximately 20% (24/118), people who ranked it on 3 32% (15/47), and on 4 29% (6/21) have a neutral attitude towards personalization.

Additionally, a variable got set up including only the respondents who put quality on the first place and the means for each scenario got compared. The highest means got found for P1 (3.26) and P3 (3.24), but also with high standard deviations. A value of 3 indicates neutral, with the highest deviations for P2 (2.06) and P5 (2.23) meaning these are negatively ranked (see table 8).

	Means People who value Quality as most important brand attribute		
Personalization Scenarios	**Mean**	**N**	**Std. Deviation**
P1	3.26	133	1.318
P2	2.06	133	0.919
P3	3.24	133	1.162
P4	2.50	133	0.974
P5	2.23	133	1.165

Table 9: Means of People who value Quality as most important brand attribute for each Personalization Scenario

Affinity to new technology and personalization (H5)

To find out more about the interaction of affinity to new technology and the response of personalization (**H5**), the effect of the statement 'I like to use new technology', which ranged from 'totally disagree' (1) to 'totally agree' (5) got compared via chi-square tests for each personalization scenario. P1 ($\chi^2(20) = 99.892$, $p < 0.001$), P2 ($\chi^2(20) = 40.610$, $p = 0.004$), P3 ($\chi^2(16) = 62.513$, $p < 0.001$), and P5 ($\chi^2(20) = 83.844$, $p < 0.001$) all have a p-value<0.05 and are all statistically significant (highlighted in dark blue).
Affinity to new technology influences all the scenarios besides from P4, which has a p-value=0.109>0.05 and is hence the only scenario which is not being significant (see table 9).

Count		'I like to use new technology'		
		Pearson Chi-Square		
		Total	Value	Asymptootic Significance (2-sided)
Personalization Scenarios	P1	99.892	20	<0.001
	P2	40.610	20	0.004
	P3	62.513	16	<0.001
	P4	23.175	16	0.109
	P5	83.844	20	<0.001

Table 10: Combined Crosstab associations between Technology Affinity and the Personalization Scenarios

Concern for online data privacy and personalized advertisement (H6)

For **H6** there were also chi-square tests for association conducted between whether different privacy measures are applied and the reaction of a person to the personalization scenarios.

Table 10 sums up the p-values for each test, indicating which measures have a significant correlation with the scenarios (highlighted in dark blue). For scenario 4 and 5, all values are p>0.05, indicating statistically significant values.

		Protection Measures						
		Firewall	Cookie Deletion	Accepting 3rd party cookies	Encryption Software	Not using certain platforms	Reading privacy settings	Not sure how to protect
Personalization Scenarios	P1	0.02	0.12	0.23	0.001	0.052	<0.001	<0.001
	P2	0.02	0.03	0.097	<0.001	0.035	0.251	0.078
	P3	<0.001	0.21	0.01	<0.001	0.12	0.116	0.001
	P4	0.002	0.014	<0.001	<0.001	<0.001	<0.001	<0.001
	P5	<0.001	0.023	0.002	<0.001	<0.001	<0.001	<0.001

Table 11: Combined Crosstab associations between Protection Measures and the Personalization Scenarios

4.2.2 Additional analysis

Besides from hypotheses testing, it was possible to generate further insights from the survey which will be summed up in this sub-section. The first block revealed, that on a scale from 1 to 5 (1=daily, 5= never used it), WhatsApp (1.1) is being most frequently used social media platform with almost all answers at a daily basis, followed by Instagram (1.83), YouTube (2.21), Snapchat (2.94), LinkedIn (3.04), Pinterest (3.04) and TikTok (3.91). The top three content social media is used for were Entertainment (ranked by 26.1% of the respondents as number 1), Information about friends (21.11%) and News (19.06%).

The next block analyzed the online shopping behavior: Only 0,88% stated to order something online daily, the majority (with 77,19%) claimed to order online every two weeks or less. In terms of where consumers prefer to buy certain products (1=in a store, 5=online), food and drinks, household and hygiene were mostly preferred to be bought in a store. Luxury products were on average rather purchased in stores and clothes and electronic devices were almost indifferent or equaled out on average. Interestingly, electronic devices showed the highest standard deviation (1.7), which leads to the conclusion that the buying preference here strongly depends on the individual.

Furthermore, the experience with virtual commerce such as the Metaverse was rather low: 35% have never even heard about it, 54,39% have heard about it but never tried it out

themselves. Only 8,77% stated that they have tried it out but not purchased anything there yet and 1.75% have tried it out and purchased something there.

It is also interesting to investigate the privacy settings consumers have implemented. The most common one was usage of a firewall (50.89%). The next mostly used measures was deleting cookies at least once a year, (43,75%), not using certain social media platforms due to privacy concerns (39,29%) and using an encryption software (15, 18%). 43,75% of the respondents said they are worried about their online privacy, but do not know how to protect it, which indicates a huge insecurity in the population.

5. Main findings

5.1. Findings from Primary Data Analysis

The findings from the expert interviews and the consumer survey complement the results of the literature analysis. The desire for more personalized content by Gen Z and the trend shifting away from Facebook got confirmed by experts. The end of third-party cookies and the possibilities for action revealed also align. The literature indicates different analytic tools that can be used as a replacement, whilst the expert interviews add on to the understanding, which kind of tools are used by individual firms.

5.2. Findings from Expert Interviews

It got found that targeting can be an invasion of privacy, especially retargeting. Despite the concerns of consumers, especially in Europe there should be no legal loopholes due to extensive rules and regulations. In the type of platforms, different shifts can be observed: From traditional marketing platforms to product platforms and marketplaces. Retail Media and virtual commerce are also gaining importance. As for social media, TikTok, Pinterest, YouTube, BeReal are expected to rise, Facebook is expected to decrease. It is crucial to find a right balance between not enough advertisement and an overload to positively stay in the consumers mind with personalized content.

5.3. Findings from Consumer Survey

H1 stated that people who order a lot and often online have a stronger reaction to personalized advertisement of products they unconsciously want. Based on the analysis of the data, this hypothesis is partially supported. The analysis showed that this was not significant when

being exposed to a product one considers buying but did not actively search for, but it revealed significant results in the scenario of seeing an advertisement that just got talked about. The second scenario also revealed significant results when taking a chi-square analysis for the categories of frequency in online shopping of more than every two weeks and less/ never. The regression analysis between the two variables did show a (rather weak) significant effect between the relationship of frequency in online shopping and P5. An increase of one level in frequency in online shopping leads to an approximately 4.4x increase in the level of reaction on P5.
Nevertheless, the effect found for this scenario had an overall stronger reaction, but only in certain cases so its effect should not be generalized (a hypotheses overview and their conclusions can be found in Appendix D.

H2 aimed at finding out whether there is a relation between the gender of a consumer and the perception of personalization. Significant results were found for 3 out of the 5 personalization scenarios, leading to the deduction that there is a mediating effect of the gender on these. This means that this hypothesis could be partially supported and thus is not going to be rejected.

H3 suspected that age has an impact on the individual's brand loyalty. The data analysis found that there is no significant effect between the year of birth and the brand loyalty, leading to the conclusion that this hypothesis could not be supported due to missing evidence. Nevertheless, a general trend of an increase in brand loyalty with an increasing age can be observed between most generations. Gen Y and Gen Z make an exception here.

H4 assumed that there was a connection between consumers who prioritize quality over other brand attributes and their reaction to personalized advertisement. The analyzed data found that overall, quality was ranked as the most important brand attribute. When comparing the quality ranking, a significant, positive association was found with advertisement that people consider being addressed to them. Thus, by those who rank quality as the most important brand attribute, the highest percentage is set neutral towards personalization. This suggest that these people have more stable values and are even less likely to be influenced.

Furthermore, an analysis with only the people who ranked quality as their most important attribute got conducted with this scenario and of these, it did have the most positive reactions overall. It can be concluded that this hypothesis is supported, and the reaction by these people is the most positive and the least likely to be impacted by personalization.

H5 stated that people who are affine to new technology are more affected by personalization than those who are not technology affine. Technology-affinity has been shown to have a significant effect, when people think advertisement is personalized to them, when they see advertisement they do not need, when seeing advertisement one considered but did not actively search for and when seeing advertisement of something they just talked about. Nevertheless, when a product got bought recently and an advertisement got shown, it did not have an effect. Overall, as 4 out of 5 scenarios did show an effect, it can be concluded that the hypothesis is supported.

H6 suspected that consumers who are concerned with their data privacy online react to personalization differently than those who are not. In the cases when having bought something recently and seeing an advertisement one just talked about, every single protection measure was showing significant effects.

For the majority of the scenarios significant correlations were found as well (not for: P1x Cookie Deletion, P1x Accepting third-party cookies, P2x Accepting third-party cookies, P2x Reading privacy settings, P2x Not sure how to protect it, P3x Cookie Deletion, P3x Not using certain platforms, P3x Reading privacy settings). As a conclusion, the reaction of personalized advertisement has shown to have a correlation with the implementation of privacy protection. Thus, the hypothesis is supported, but only partially as it was not the case for each single scenario.

5.4. Discussion and Conclusion

As a preparatory step, it is necessary to recall the research question: **'How is personalization in advertisement currently affecting online shopping behavior and consumer's attitudes towards it?'.** By analyzing the secondary data with the literature review and the primary data with the expert interviews and the consumer survey, results have been found and conclusions can be drawn.

This dissertation adds to the understanding of personalized advertisement of online shopping behavior for state-of-the art circumstances. It adds on the existing literature and combines new types of platforms with new technology and a shift in consumers and their expectations.

Expert interviews and consumer survey confirmed that if targeted advertisement is well executed, it is a powerful marketing tool and can create positive responses from various customers. With the use of this new technology, an information overload with unnecessary and unfitting advertisement can be avoided, which leads to a more efficient budget allocation.

Literature research, expert interviews and consumer surveys agree that privacy concerns of customers rank under the biggest issue to overcome. As shown, a huge part of the population is worried about their online data, and there is a tendency to react differently to personalized content. To avoid data lacks and trust loss, it is important that it is dealt deliberately with the right handling of their sensitive data. Companies stated they are trying to find solutions with new regulations and the development of tools for existing problems and the planned end of third-party cookies.

Two main categories are predicted by experts to be important for online shopping: Traditional marketing platforms and marketplaces with an important focus on retail media. The change in social media platforms comes along with a change in consumer behavior. Some platforms are going to adapt to new usage purposes and others, such as the Metaverse bring many opportunities.

The age of customers plays a role in preferences of personalization and comes along with openness to new technology, as well as the gender and the characteristics and values of people. More secure people contributing to the survey results who value attributes such as quality with a high social status and education are predicted to have higher demands on customized content and are less easily influenced.

New findings of this research which were not in the previous literature review include the importance of these characteristics. Character traits, such as insecurity as an influencing factor are an interesting finding as well. Another new contribution are the predictions for the type of marketing platforms and marketplaces by the industry experts. The fact that privacy concerns are high but also come with high cookie consent rates is also of relevance. Ultimately, it is interesting that retailers have no other option for success than to adapt to the new trends and regulations although it might not be their favorite choice.

Summed up, personalization is a revolution which brings many benefits, but on the other hand it is not always effective. This effect can be described as the personalization paradox:

Customers desire a tailored experience, but they are also wary of data collecting and protection procedures.

Higher relevance and customer adoption are frequently the results of more customized services, but they can also make customers feel more vulnerable and lead to lower adoption rates. Informational cues combined with trust-building marketing techniques can lessen this adverse effect.

5.5. Managerial Implications, Limitations and Outlook

Brands and managers will need to expand their understanding of personalization and data privacy to promote the trust of their customers to present their marketing as a trustworthy enterprise. Many customers are indeed worried about their online privacy, but do not know good solutions for it. This results in a high responsibility of firms and official institutions to guide them in these topics and ensure their trust.

Additionally, with new social media platforms there arise new challenges for managers. The existing social media strategies might not be applicable anymore and need to be revised or even more than one strategy should be set up to target each channel individually.

Whenever research is conducted, limitations arise that must be considered. First, the preparedness to respond to an online survey correlates with openness to share views and opinions in digital media. People with privacy concerns were probably more reluctant to participate. A possible bias is that survey respondents consist of 70.54% Germans and 70.64% females. These high proportions might influence the results. It would be interesting to conduct a similar survey with a more diverse sample. Gen X (9.82%) and Gen Alpha (1.79%) also did not get represented as much as other generations. Due to these factors, it may be more challenging to provide accurate conclusions that can be applied to the general public. Additionally, the test of the hypotheses did find correlations at times, but it was not possible to find the concrete relation which for instance the gender has as a mediator for personalization response.

The research methods itself also show some limitations: The academic literature for the secondary research did not provide a lot of new information on the subject and some regulations or technology might be outdated. As for the expert interviews, the experiences of single experts could also be biased, and its reliability should be trusted with caution. The

social desirability bias is another issue, as the interviewee might answer with a tendency to underreport socially undesirable attitudes or in this case answers which might reflect poorly on their firm and marketing in general. Furthermore, finding experts who are committed to participate in the surveys was also a challenge. An online survey might not always be representative for the whole population, as described by dominant demographic tendencies before. Another possible limitation is that it does not allow the respondents to clarify questions in case of ambiguities.

In terms of experience in virtual shopping (25%, Obsess (2021)) the numbers from the secondary research do not fully align with the numbers found in the survey: Around 10% for experience in virtual shopping. This deviance might be further investigated in additional research.

For these reasons, it would be of importance to have focus groups or real field experiments complementing the survey results and opinions of the experts. In a long-term study, before- and after treatments could also be observed to have a better understanding of consumer behavior. In terms of the consumer characteristics, psychological studies could be conducted as well beforehand, and the characteristics and its concrete impacts can be better understood.

Ultimately, the new technology and especially the virtual commerce is constantly evolving, and the research results only display the current state, but need to be revised sooner or later. It will also be interesting to see how the end of third-party cookies is actually impacting shopping behavior and if the predictions will come true.

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Appendices

Appendix A – Interview Summaries

Name: Tilman Galler
Position: Associate Partner at OHR Consulting, a customer-centred marketing strategy consultancy; Ex-Director E-Commerce, Omni-Channel & Marketing at ECCO Europe AG; Ex-Head of E-Commerce Europe at Triumph International

1. Do you have any experience in with targeted advertising in your professional life?	• Depends on which type of personalization; in terms of audiences which you just explained me is the case here it was not me personally because I was not responsible for the channel, but for the **whole topic Social Media,** Performance Marketing and Digital Marketing in terms of prospecting • In particular for **Meta** (Facebook, Instagram) with Targeted Advertising with Paid Social for specific character traits or personalized in terms of exclusion criteria (=hashed) consumer data for Facebook: Either to **target them or to specifically exclude** them to measure marketing efficiency for different user groups
2. What do you think are the main concerns consumers raise when they get sponsored ads?	• To a huge extent consumers do **not even recognize** advertisement as personalized, as they are not targeted by their name but only by their user behavior which they might not reflect • If it is recognized, it covers the whole range: some think it is **nice, some think it is scary**; when you are **interested in a topic as a consumer** (e.g.Pinterest and you plan a wedding) there is a lot of data as a marketer which you can use for different channels and this can be perceived as positive • In terms of **retargeting**, a huge part of the users do believe it **is spooky**, which is rather on records than off records; if someone did not **delete their cookies**, one might think that it is perceived he always looks at particular pages because he got retargeted; or every 4th page on Facebook is that firm, this is **more annoying** and people **question what happens** with the data • Still, I believe that the majority of the people is **not so concerned** as it can also be seen at the **cookie consent rates** (70-80%)
3. Do you think targeted advertising is an invasion of privacy?	• Summed up there are privacy concerns, but it can also be **useful and an inspiration** when it is well executed
4. What measures would you suggest companies to protect the individual's privacy while still delivering targeted advertising?	• From my experience, the main issue is **not so much about the consumers I target**, but more on the side of the **existing users** which I gather data from by statistical pairs or target audiences. In the area of prospecting, I address those on other channels/ marketing measures so the **targeted ones are not the main concern** and the people we **use the data from do not even get to know** it • One question is **how much one dollar is worth** which I invest in a already existing target group. I personally believe that the data is secured within the framework that companies (at least in **Europe**) should **not have any legal loopholes with GDPR**, because you either give your cookie consent or not and based on that we safe your data. Generally, it is in the customers own consent not to give data away, especially when it is **payment data**. The **customer does not get any information** about the pure interest and behavior data we generate

	• Another important issue is the infrastructure: It is a major topic: What type of **firewalls** do we have? **Where and how do I save the data** (Especially in terms of sensitive data such as passwords and payment data, not so much for behavioral data which is often the root for personalized advertising)
5. Are you already prepared for the end of the third-party cookies?	• Definetly yes, it is a daily topic in my field of work. In my change advisory board of Scandinavia Holding A/S, we currently look how we adapt to it with our new platform. We are a **bit late** with the tracking topic and were not able do to proper event tracking and have **just implemented GA4** (an Analytics tool). Many companies already move on from GA4 with other tracking tools to gather more first-party data. Google postponed it again, but it is still going to be the future of tracking to **adapt to the end of third-party cookies** and that there will be a **shift from client-side tracking to server-side tracking**. This means that the **consumer generates, saves, and hosts the data**. I am not a specialist in server-side tracking, but we prepare for it which requires a huge infrastructure, effort and tech-staff that build the server-side tracking so at the end it enables a safe attribution for increasingly complex marketing measures. We are in **constant discussion about the best attribution model**, but no one has a clear solution, but there is no way around it for every marketer. It **depends on the money** spent, the channels (**more complex and expensive for search, prospecting, paid social, Newsletter**). **Currently, it is a huge black box** for most of the firms to efficiently **allocate the marketing budget**
6. What do you think are the most important platforms for Consumer Behavior in the future?	• It **depends a lot on the target group**. Generally divided in young and old it is as follows: "Fish where the fish are". There are two kinds of platforms: The **traditional marketing platforms**, but also the **product platforms and marketplaces** itself • The **youth** is more on **TikTok and Snapchat**, I do not believe in TikTok and think it is going to be replaced sooner or later. Currently, the topic advertising fraud is **huge in the debate** about TikTok: A lot of traffic is around Bot-generated platforms and the Bots earn money, but the firm does not earn new customers. If I had a target group which operates on TikTok, I would do **"test-and-use",** but with a lot of conscience • I believe in the **future of YouTube**, as it is a good mixture of relevant content with tutorials and leisure time content as beauty tutorials and music and other entertainment. **Instagram does have a relevance, as they progressively deliver more value** (like YouTube) • **Facebook is dying** out in the next five years, not only for the younger generation, but also for the older ones. Interestingly, in the **passive consumption and marketing impact**, it is still the **most-booked** platform because they still have the most accounts • There will be new platforms as well which we do not know yet. **Pinterest** for instance is also **of special interest** for inspiration and easy to use • Besides from the marketing platforms, other platforms increasingly become important in marketing: **Retail Media** is gaining importance, meaning traffic-rich platforms such as **Amazon, Zalando, Douglas** become more marketers for products and therefore function as brokers. On these, the purchase intention is decided and if you can **influence it on these platforms with marketing**, it makes sense to put an

	emphasis on it. The commission fees rise and they throw out old stock, but all want users; that is why **consumer data is even more important** which the firms can **use and sell**. The collections itself are not so importance anymore, but it is about marketing

Name: Laura Mahle
Position: Intern Brand Marketing and Clienting at mytheresa.com, luxury e-commerce shop; Ex-Intern at PR & Communications at Tiffany & Co, luxury jewellery

1. Do you have any experience in with targeted advertising in your professional life?	• Yes. I was part of several teams who **played targeted ads on social media such as Facebook, Instagram but also the send out of targeted newsletter mails** at Condé Nast, The Estée Lauder Companies Inc. and Tiffany & Co. I was even part of a company (American Express), where they would target consumers with **digital billboards** in the city / train stations
2. If yes, which one?	• See last answer; additionally we worked with different programs like the **Facebook Business Manager and NL-sendout programs** (do not remember the name)
3. There are many reasons why companies use targeted advertising – Which one are the most important ones for you?	• On the one hand **reach the right target group** for their product/message in terms of age/gender/geography to be successful in their communication / business but also **not to swamp customers with unnecessary ads** (e.g. a middle aged men with an ad for tampons or whatever) •
4. What do you think are the main concerns consumers raise when they get sponsored ads?	• Their data for sure - whether their **online behavior was tracked** etc. what they were searching for / scrolling on
5. Do you think targeted advertising is an invasion of privacy?	• **To some extent yes**, but I think it is a very difficult question. I think a lot of consumers would actually be **surprised and shocked of how much they are tracked** in order for companies to create targeted ads
6. Do you use ad tracking	• Not as of now, **no**
7. What is a good measure for an average conversion rate for your/ your clients ads?	• I would need to differentiate here: for **NL I think it always was around 1-2%** and for **social media more around 5%**
8. What measures would you suggest companies to protect the individual's privacy while still delivering targeted advertising?	• I do not know, that is a **difficult and complex question,** and we are currently looking for solutions
9. Do you think consumers are more or	• In my personal experience and behavior I think **less likely**

less likely to buy a sponsored product compared to when they actively search for it?	
10. How is your experience with shopping in virtual commerce (e.g. the Metaverse)?	• No experience so far
11. What are the influential factors of purchase that can influence purchase decisions?	• **Price, accessibility, product quality**
12. Do you have any tips for companies to promote purchase in virtual commerce?	• From what I have heard, good **Story telling** is key here
13. How can companies ensure to keep the trust of consumers?	• Customer service, brick and morter, trustworthy brand appearance
14. What do you think is changing with the shift from more traditional platforms like Facebook to Instagram to TikTok and the Metaverse?	• **More participation and being a more active role** if that makes sense • Change in content consumption from images to video to filters to Augmented Reality
15. In which way does personalization impact Generation Z?	• A lot • Gen Z shows **many more different behavior characteristics** than its predecessors. They long for a connection to the brand, an indiviudal experience and service and I think **personalization** plays an important role for them. Not necessarily personalizing products but **more tailor the whole purchasing experience and relationship** to the brand
16. Do you think some people can be better influenced by personalized advertisement than others?	• Definitely • I think there is a correlation with the **social status and probably educations**. I am guessing that people with a **higher education that are also more aware are not as easily influenced** as people who aren't.

Name: Luisa Thiemer
Position: Junior Consultant at TD Reply, a data analytics consultancy

1. Do you have any experience in with targeted advertising in your professional life?	• Not directly • Indirectly yes: Our company is not acting in the front, but rather executing behind the technology

2. There are many reasons why companies use targeted advertising – Which one are the most important ones for you?	• To get the **attention of the right users** & thereby getting new customers
3. What do you think are the main concerns consumers raise when they get sponsored ads?	• Privacy
4. Do you think targeted advertising is an invasion of privacy?	• Yes and no • Of course, it is a violation of privacy since my personal data is being used. However – you often have the possibility to **choose (e.g. Apps) whether you allow companies to use it or not**. So, I would say when you have the **choice, then it is fine**
5. Do you think consumers are more or less likely to buy a sponsored product compared to when they actively search for it?	• **More** likely
6. How is your experience with shopping in virtual commerce (e.g. the Metaverse)?	• Yes, but nothing purchased (yet) • Professionally none, as it is still very new
7. Do you think the consumption patterns are going to change when people feel less supervised behind their virtual character?	• Definitely
8. What are the influential factors of purchase that can influence purchase decisions?	• The product and its packaging, the price and the sales channel. In the **Metaverse**, from my experience the major trend is s**ustainability**
9. Do you have any tips for companies to promote purchase in virtual commerce?	• **Boost social media presence & but don't overwhelm customers** with too much information and advertising
10. What do you think is the most dangerous factor here?	• **Information overload**
11. How can companies ensure to keep the trust of consumers?	• Find the right **balance** between the right amount of advertisement to stay in the consumers mind with personalized content and still not annoying or even scaring some customers with too many ads
12. What do you think are the most important platforms for Consumer Behavior in the future?	• **Social media platforms** • I believe there is a **high consumer interaction and involvement** in the platforms. Influencers will be still big topic. The **type of content** is always adapting. For instance **petfluencers** are also increasing in popularity.

18. What do you think is changing with the shift from more traditional platforms like Facebook to Instagram to TikTok and the Metaverse?	• They are becoming even **more engaging and time-consuming platforms**
19. In which way does personalization impact Generation Z?	• The people of the new generation are **more used to** it so they even require it as a **prerequisite.**
20. Do you think some people can be better influenced by personalized advertisement than others?	• Definitely
21. If yes, which ones? Do they have any special characteristic traits?	• Rather **insecure or unsure** of who they are and what they like. They are a perfect target for influential firms.

Name: Antonia Kiermaier:
Position: Social Media Consultant at Capgemini Invent, an IT consulting company

1. Do you have any experience in with targeted advertising in your professional life?	• Yes, at Capgemini Invent and am **responsible for the Social Media** • We operate different channels, such as **LinkedIn, TikTok, Employer branding portals and our homepage**. For some accounts, we have partner companies that do the posts for us and send **weekly reports** about the marketing efficiency. The numbers tell us exactly which strategies are successful and then we adjust them in our weekly meetings
2. There are many reasons why companies use targeted advertising – Which one are the most important ones for you?	• For us, it is mainly to **increase the allocation of the marketing budget**. This way we **ensure to meet only the target group**. When we post jobs for **graduates** for example, we learned that the most successful and efficient way was to post on L**inkedIn for the right age group and to post recruiting events on Instagram**.
3. What do you think are the main concerns consumers raise when they get sponsored ads?	• Privacy concerns and the danger to establish a **negative brand image by annoying consumers**. • Really narrow grade and when a consumer has a negative perception, it is unlikely that it will ever turn around again. Of course, **privacy concerns are also not to neglect**.
4. What measures would you suggest companies to protect the individual's privacy while still delivering targeted advertising?	• **Never display data** that would **scare** the consumers • Stay as broad as possible and not use direct statements about the circumstances about the consumers life.

5. Do you think consumers are more or less likely to buy a sponsored product compared to when they actively search for it?	• Consumers will be more likely to buy it. A lot also happens in the **unconscious** – The consumer passively sees a lot of advertisement, even when he does not even recognize it. • Then he might **think it was his idea to buy a product even though it was not and he has been influenced**
6. Do you have any tips for companies to promote purchase in virtual commerce?	• Companies should try to guide their customers into the new world. If you assist them with the beginnings, they will forever remember you with the beginning of this new experience. An **existing brand already has many customers** and should communicate to them that they also want to connect in the virtual world to stay in contact. This can be achieved by **mail newsletters or Social Media posts** (but in moderation) • Therefore, a high investment share should be allocated to the launch in the virtual commerce
7. What do you think is the most dangerous factor here?	• To **not adapt at all** and lose this great market opportunity and to not stand out
8. Are you already prepared for the end of the third-party cookies?	• Not as much as we want • Capgemini Invent is a huge and complex firm and there are many **different aspects to consider when preparing our website and many people who are involved and contribute** to decision making processes
9. What do you think are the most important platforms for Consumer Behavior in the future?	• For us definitely our **Website, Instagram, LinkedIn but are also thinking about opening a TikTok business account.** This is **crucial to get known by the current generation** who will be in the workforce we want to target in a few years • Generally, I believe that **facebook is losing its presence**, because the ads people get there are poorly personalized
10. In which way does personalization impact Generation Z?	• Many of them shop online a lot and they are **used to seeing personalized content.** They also expect personalization in other aspects in live. In fashion, for instance it is possible to put your initials on many products, even at large chains. • Huge, exclusive brands started off with this and Zara and others followed this trend, making **mass customization** possible for large audiences without any waiting times.

Name: Marco Gröschel
Position: Consultant Marketing and Project Manager at Wunderman Thompson, a marketing agency

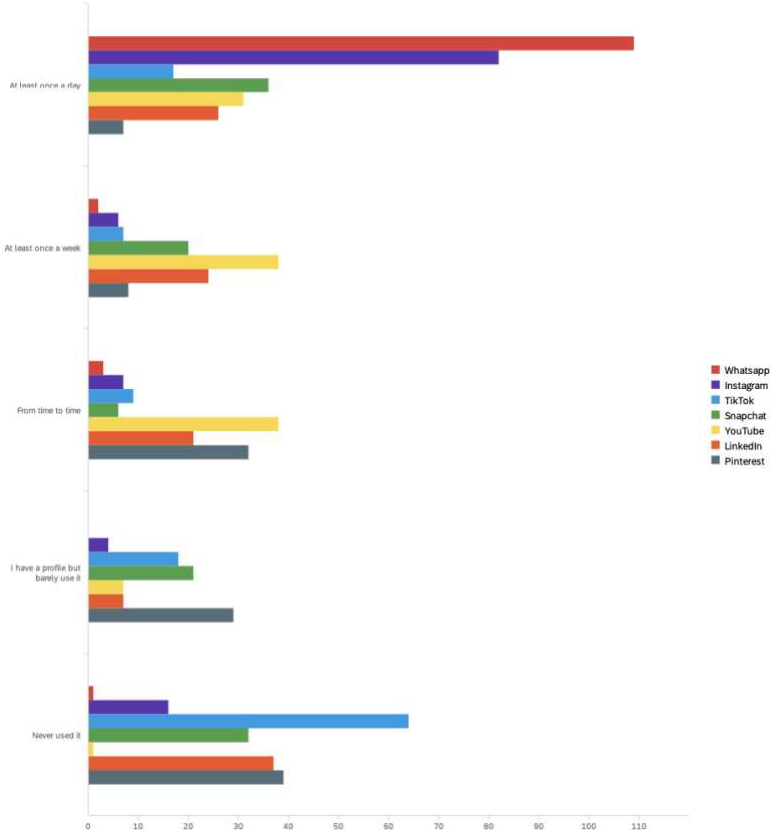
1. Do you have any experience in with targeted advertising in your professional life?	• Yes, at Capgemini Invent and am **responsible for the Social Media** • We operate different channels, such as **LinkedIn, TikTok, Employer branding portals and our homepage**. For some accounts, we have partner companies that do the posts for us and send **weekly reports** about the marketing efficiency. The numbers tell us exactly which strategies are successful and then we adjust them in our weekly meetings

2. There are many reasons why companies use targeted advertising – Which one are the most important ones for you?	• For us, it is mainly to **increase the allocation of the marketing budget**. This way we **ensure to meet only the target group**. When we post jobs for **graduates** for example, we learned that the most successful and efficient way was to post on L**inkedIn for the right age group and to post recruiting events on Instagram**.
3. There are many reasons why companies use targeted advertising – Which one are the most important ones for you?	• A higher level of personalization is demanded nowadays. **Increased brand marketing ROI on marketing spend**; for us it is even more important to achieve KPIs so we can measure the results
4. What do you think are the main concerns consumers raise when they get sponsored ads?	• That consumers sometimes think they **cannot trust** the companies, as they try to buy them
5. Do you think targeted advertising is an invasion of privacy?	• Not really • In the past years, the **boundaries of privacy** got shifted in all aspects of life. The **'transparent citizen'**, as some people like to call it is revealing so much about habits, relationship and almost every aspect of their life. So I would say **revealing buying behavior and thus conducting which advertisement one wants to see, is only such a small part** of all the data generated
6. Do you use ad tracking?	• Yes • We have **advertising tracking tools** we regularly rely on, depending on the context across all touchpoints. We connect single **customer profiles for insights, analytics, segmentation, including modern technology such as AI**
7. Do you have any tips for companies to promote purchase in virtual commerce?	• In a fully virtual world, it is of utmost importance to still give the consumer the feeling of **being individually addressed**. This means companies should use existing client relationships and integrate them into the virtual commerce via cross- and upselling. • Personalization is also a main factor of success here: **individual discounts are even easier to integrate**, when everything is trackable. **Personalized offers and automated, individualized texts** are also easing the way to success.
8. What do you think is the most dangerous factor here?	• **Losing its own brand identity** in this 'world' of even bigger competition
9. How can companies ensure to keep the trust of consumers?	• **Communicating openly**. • For this reason we developed a privacy-first personalization technology. Without disclosing their personal information or utilizing third-party tracking, it enables marketers to recognize their clients and personalize their interactions with them.
10. Are you already prepared for the end of the third-party cookies?	• Indeed • Our big market advantage is an own technology called **Resolve**. Resolve is our **privacy-first personalization tool that uses AI to assist brands in better identifying and connecting** with consumers so they can **tailor CRM, media, and e-commerce experiences without** disclosing their data or utilizing third-party tracking.

11. What do you think are the most important platforms for Consumer Behavior in the future?	• **Instagram and TikTok** • **Possibly also BeReal**, which is currently not pursuing this purpose, but **gaining in importance is going to introduce a way for personalized advertisement**
12. What do you think is changing with the shift from more traditional platforms like Facebook to Instagram to TikTok and the Metaverse?	• Opportunities of the firms and the target groups • Companies need to **adapt and only one social media strategy** is not enough anymore.
13. In which way does personalization impact Generation Z?	• They **require it a lot more than older generations**, as they grew up in this environment
14. Do you think some people can be better influenced by personalized advertisement than others?	• Definitely, this goes in both ways • Some people do **like personalized advertisement, whereas others are more conservative** and do not like it

Appendix B – Consumer Survey

Q1 - How often do you use the following types of Social Media?

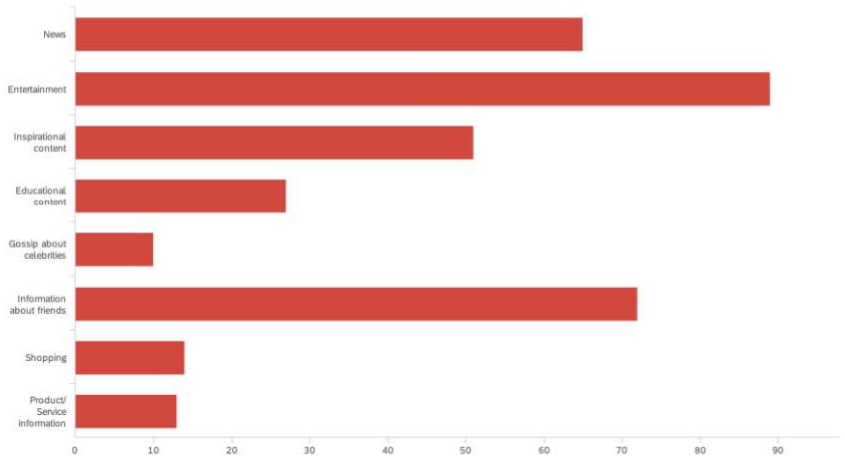


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Whatsapp	1.00	5.00	1.10	0.50	0.25	115
2	Instagram	1.00	5.00	1.83	1.46	2.14	115
3	TikTok	1.00	5.00	3.91	1.48	2.20	115
4	Snapchat	1.00	5.00	2.94	1.65	2.72	115
5	YouTube	1.00	5.00	2.21	0.94	0.88	115
6	LinkedIn	1.00	5.00	3.04	1.57	2.46	115
7	Pinterest	1.00	5.00	3.74	1.17	1.38	115

#	Field	At least once a day	At least once a week	From time to time	I have a profile but barely use it	Never used it	Total
1	Whatsapp	94.78% 109	1.74% 2	2.61% 3	0.00% 0	0.87% 1	115
2	Instagram	71.30% 82	5.22% 6	6.09% 7	3.48% 4	13.91% 16	115
3	TikTok	14.78% 17	6.09% 7	7.83% 9	15.65% 18	55.65% 64	115
4	Snapchat	31.30% 36	17.39% 20	5.22% 6	18.26% 21	27.83% 32	115
5	YouTube	26.96% 31	33.04% 38	33.04% 38	6.09% 7	0.87% 1	115
6	LinkedIn	22.61% 26	20.87% 24	18.26% 21	6.09% 7	32.17% 37	115
7	Pinterest	6.09% 7	6.96% 8	27.83% 32	25.22% 29	33.91% 39	115

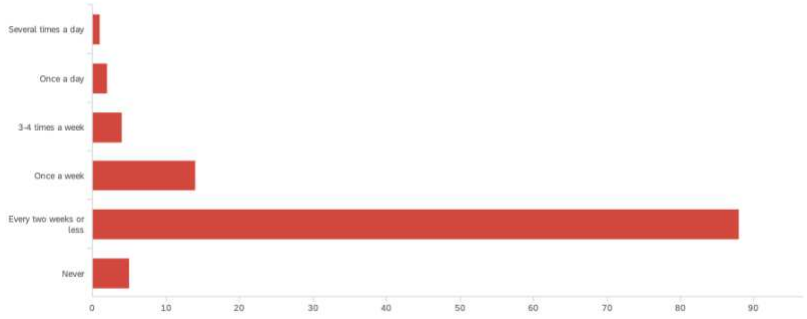
Showing rows 1 - 7 of 7

Q2 - Mark the TOP 3 kinds of content that you are looking for on Social Media!



#	Field	Choice Count	
1	News	19.06%	65
2	Entertainment	26.10%	89
3	Inspirational content	14.96%	51
4	Educational content	7.92%	27
5	Gossip about celebrities	2.93%	10
6	Information about friends	21.11%	72
7	Shopping	4.11%	14
8	Product/ Service information	3.81%	13
			341

Q3 - How often do you order something online?



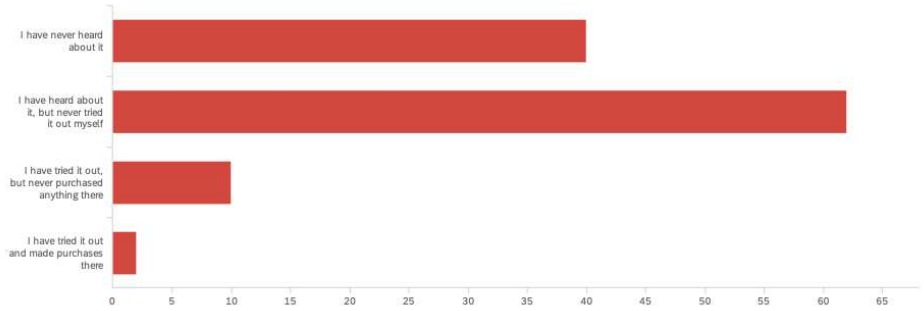
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How often do you order something online?	1.00	6.00	4.76	0.74	0.55	114

#	Field	Choice Count	
1	Several times a day	0.88%	1
2	Once a day	1.75%	2
3	3-4 times a week	3.51%	4
4	Once a week	12.28%	14
5	Every two weeks or less	77.19%	88
6	Never	4.39%	5
			114

Q4 - Where do you prefer to buy the following types of products?

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Daily food and drinks	0.00	5.00	0.59	1.02	1.04	113
2	Household and hygiene products	0.00	4.00	0.82	1.13	1.27	114
3	Electronic devices	0.00	7.00	2.25	1.70	2.89	114
4	Clothes	0.00	5.00	2.26	1.37	1.89	113
5	Luxury products (watches, bags...)	0.00	5.00	1.32	1.56	2.42	98

Q5 - How is your experience with virtual commerce (e.g. the Metaverse)?



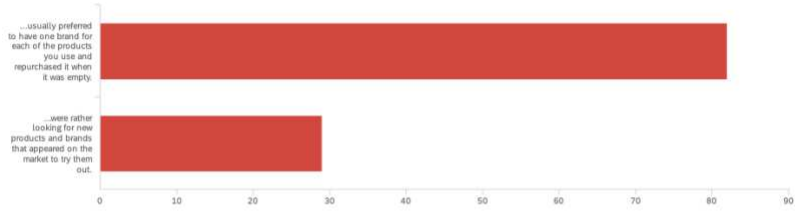
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How is your experience with virtual commerce (e.g. the Metaverse)?	6.00	9.00	6.77	0.68	0.46	114

#	Field	Choice Count
6	I have never heard about it	35.09% 40
7	I have heard about it, but never tried it out myself	54.39% 62
8	I have tried it out, but never purchased anything there	8.77% 10
9	I have tried it out and made purchases there	1.75% 2
		114

#	Field	1	2	3	4	5	Total
1	Price	21.93% 25	21.05% 24	26.32% 30	22.81% 26	7.89% 9	114
2	Quality	43.86% 50	33.33% 38	14.91% 17	7.02% 8	0.88% 1	114
3	Design	19.30% 22	21.05% 24	23.68% 27	19.30% 22	16.67% 19	114
4	Sustainability	4.39% 5	5.26% 6	15.79% 18	20.18% 23	54.39% 62	114
5	Functionality	10.53% 12	19.30% 22	19.30% 22	30.70% 35	20.18% 23	114

Showing rows 1 - 5 of 5

Q7 - Please check the statement that fits better: When you think about your behaviour in the past, you...

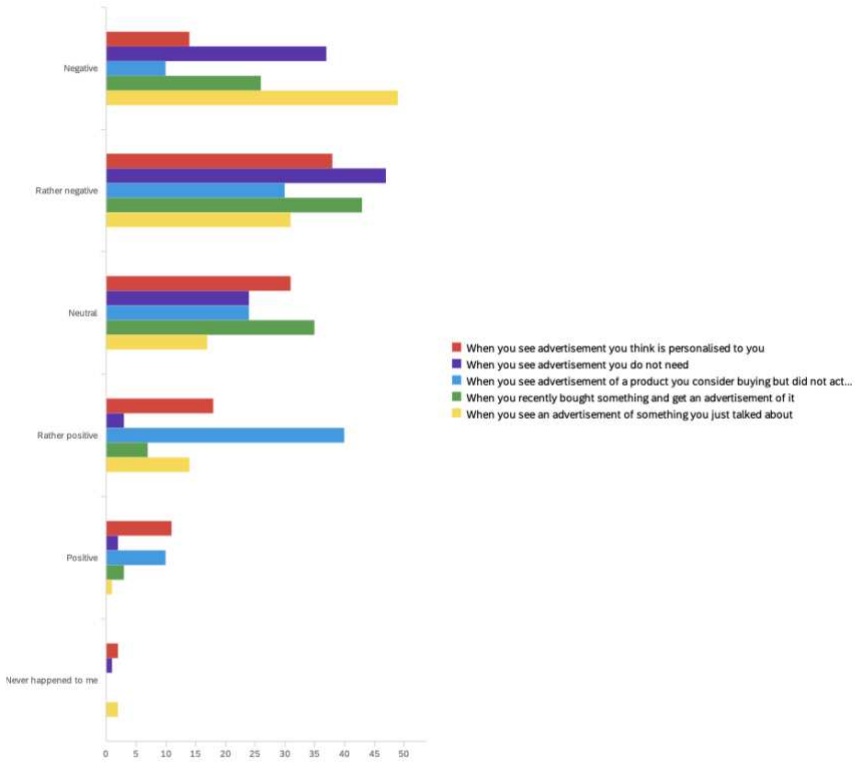


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Please check the statement that fits better: When you think about your behaviour in the past, you...	1.00	2.00	1.26	0.44	0.19	111

#	Field	Choice Count	
1	...usually preferred to have one brand for each of the products you use and repurchased it when it was empty.	73.87%	82
2	...were rather looking for new products and brands that appeared on the market to try them out.	26.13%	29
			111

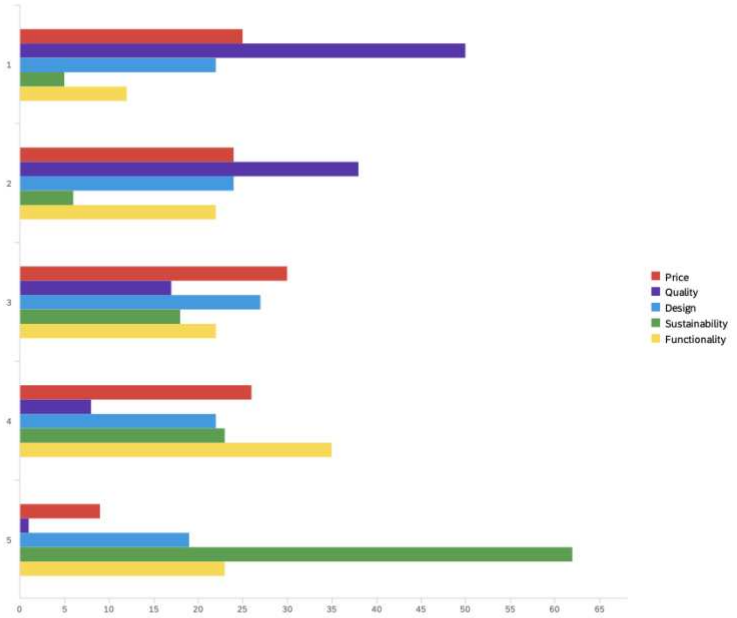
Showing rows 1 - 3 of 3

Q8 - Now imagine the following scenarios and try to imagine how you feel in each moment:



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	When you see advertisement you think is personalised to you	1.00	6.00	2.82	1.22	1.50	114
2	When you see advertisement you do not need	1.00	6.00	2.03	0.97	0.94	114
3	When you see advertisement of a product you consider buying but did not actively search for it	1.00	5.00	3.09	1.14	1.31	114

Q6 - Please rank: How important are the following attributes when you think about a brand? (1 most important, 5 least important)?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Price	1.00	5.00	2.74	1.25	1.56	114
2	Quality	1.00	5.00	1.88	0.97	0.93	114
3	Design	1.00	5.00	2.93	1.36	1.84	114
4	Sustainability	1.00	5.00	4.15	1.13	1.28	114
5	Functionality	1.00	5.00	3.31	1.28	1.63	114

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
4	When you recently bought something and get an advertisement of it	1.00	5.00	2.28	0.97	0.94	114
5	When you see an advertisement of something you just talked about	1.00	6.00	2.06	1.19	1.43	114

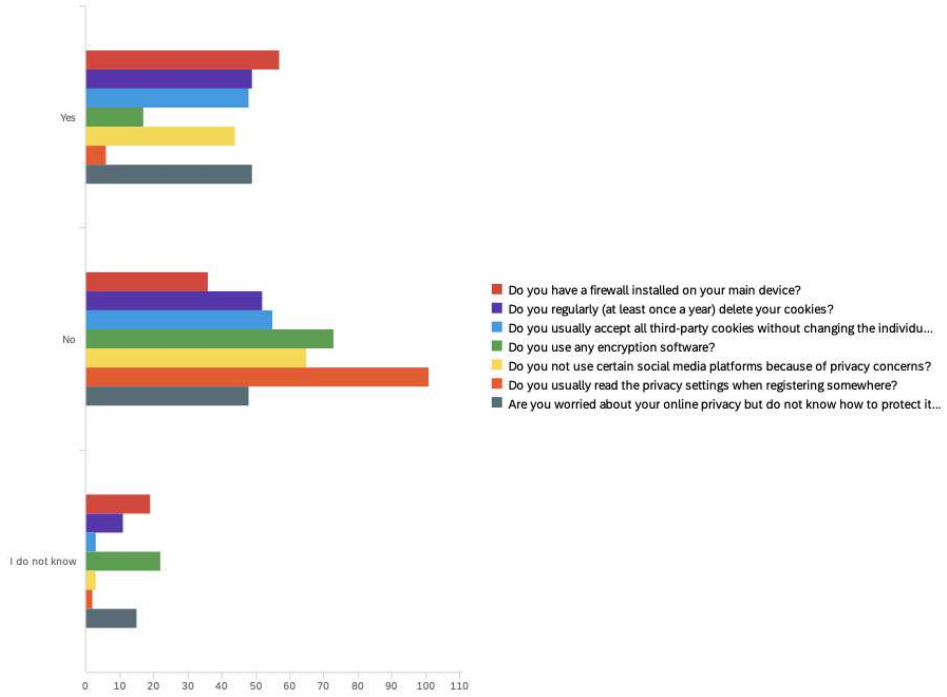
#	Field	Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
1	When you see advertisement you think is personalised to you	12.28% 14	33.33% 38	27.19% 31	15.79% 18	9.65% 11	1.75% 2	114
2	When you see advertisement you do not need	32.46% 37	41.23% 47	21.05% 24	2.63% 3	1.75% 2	0.88% 1	114
3	When you see advertisement of a product you consider buying but did not actively search for it	8.77% 10	26.32% 30	21.05% 24	35.09% 40	8.77% 10	0.00% 0	114
4	When you recently bought something and get an advertisement of it	22.81% 26	37.72% 43	30.70% 35	6.14% 7	2.63% 3	0.00% 0	114
5	When you see an advertisement of something you just talked about	42.98% 49	27.19% 31	14.91% 17	12.28% 14	0.88% 1	1.75% 2	114

Showing rows 1 - 5 of 5

Q9 - Other comments on your shopping behaviour or personalised advertisement you want to share:

Other comments on your shopping behaviour or personalised advertisement you...
Markentreu, aber preisbewusst.
.
Personalisierte Werbung ist für mich übergriffig.
ich möchte nicht mit Werbung belästigt werden nur weil ich arüber gesprochen haben
Werbung nehme ich generell nicht „positiv" auf, außer sie ist lustig gestaltet (egal welches Produkt)
Personalisierte Werbung hinterlässt stets einen negativen Effekt, weil es den Eindruck macht unterwandert zu werden/im Verhalten manipuliert zu werden

Q10 - Which of the following statements apply to you?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Do you have a firewall installed on your main device?	1.00	3.00	1.66	0.75	0.56	112
2	Do you regularly (at least once a year) delete your cookies?	1.00	3.00	1.66	0.65	0.42	112
3	Do you usually accept all third-party cookies without changing the individual settings?	1.00	3.00	1.58	0.55	0.30	106
4	Do you use any encryption software?	1.00	3.00	2.04	0.59	0.35	112
5	Do you not use certain social media platforms because of privacy concerns?	1.00	3.00	1.63	0.53	0.29	112
6	Do you usually read the privacy settings when registering somewhere?	1.00	3.00	1.96	0.27	0.07	109

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Are you worried about your online privacy but do not know how to protect it?	1.00	3.00	1.70	0.69	0.48	112

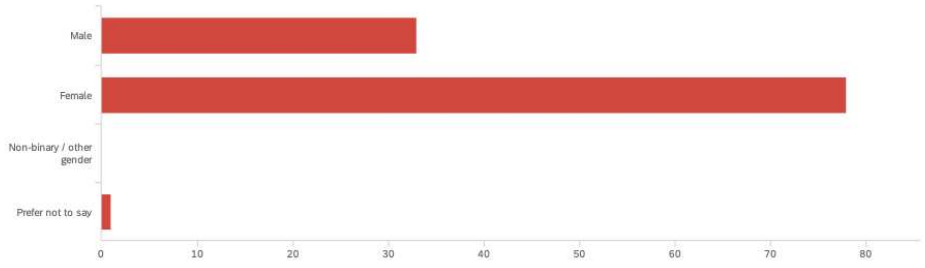
#	Field	Yes		No		I do not know		Total
1	Do you have a firewall installed on your main device?	50.89%	57	32.14%	36	16.96%	19	112
2	Do you regularly (at least once a year) delete your cookies?	43.75%	49	46.43%	52	9.82%	11	112
3	Do you usually accept all third-party cookies without changing the individual settings?	45.28%	48	51.89%	55	2.83%	3	106
4	Do you use any encryption software?	15.18%	17	65.18%	73	19.64%	22	112
5	Do you not use certain social media platforms because of privacy concerns?	39.29%	44	58.04%	65	2.68%	3	112
6	Do you usually read the privacy settings when registering somewhere?	5.50%	6	92.66%	101	1.83%	2	109
7	Are you worried about your online privacy but do not know how to protect it?	43.75%	49	42.86%	48	13.39%	15	112

Showing rows 1 - 7 of 7

Q11 - Other comments on online privacy:

Other comments on online privacy:
Digital ist immer nachvollziehbar.
keine

Q12 - Which gender do you identify yourself as?

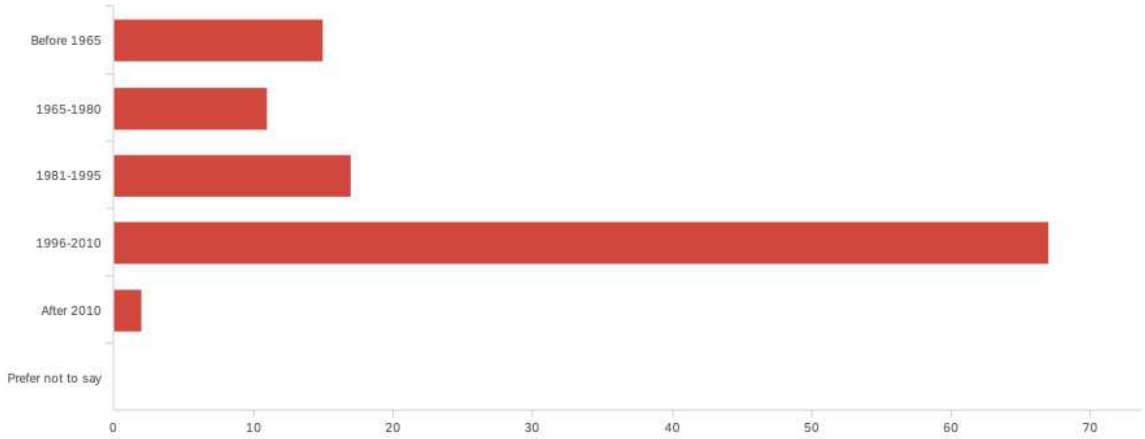


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Which gender do you identify yourself as?	1.00	4.00	1.72	0.50	0.25	112

#	Field	Choice Count	
1	Male	29.46%	33
2	Female	69.64%	78
3	Non-binary / other gender	0.00%	0
4	Prefer not to say	0.89%	1
			112

Showing rows 1 - 5 of 5

Q13 - When were you born?

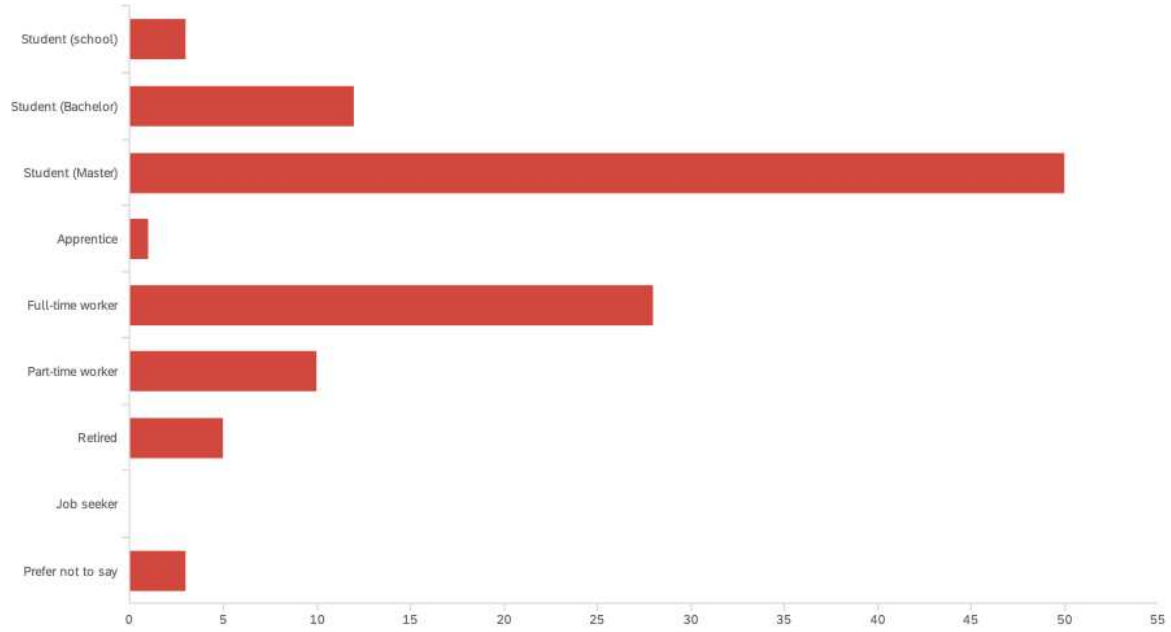


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	When were you born?	1.00	5.00	3.27	1.11	1.23	112

#	Field		Choice Count
1	Before 1965	13.39%	15
2	1965-1980	9.82%	11
3	1981-1995	15.18%	17
4	1996-2010	59.82%	67
5	After 2010	1.79%	2
6	Prefer not to say	0.00%	0
			112

Showing rows 1 - 7 of 7

Q14 - What is your current occupation?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your current occupation?	1.00	9.00	3.96	1.67	2.79	112

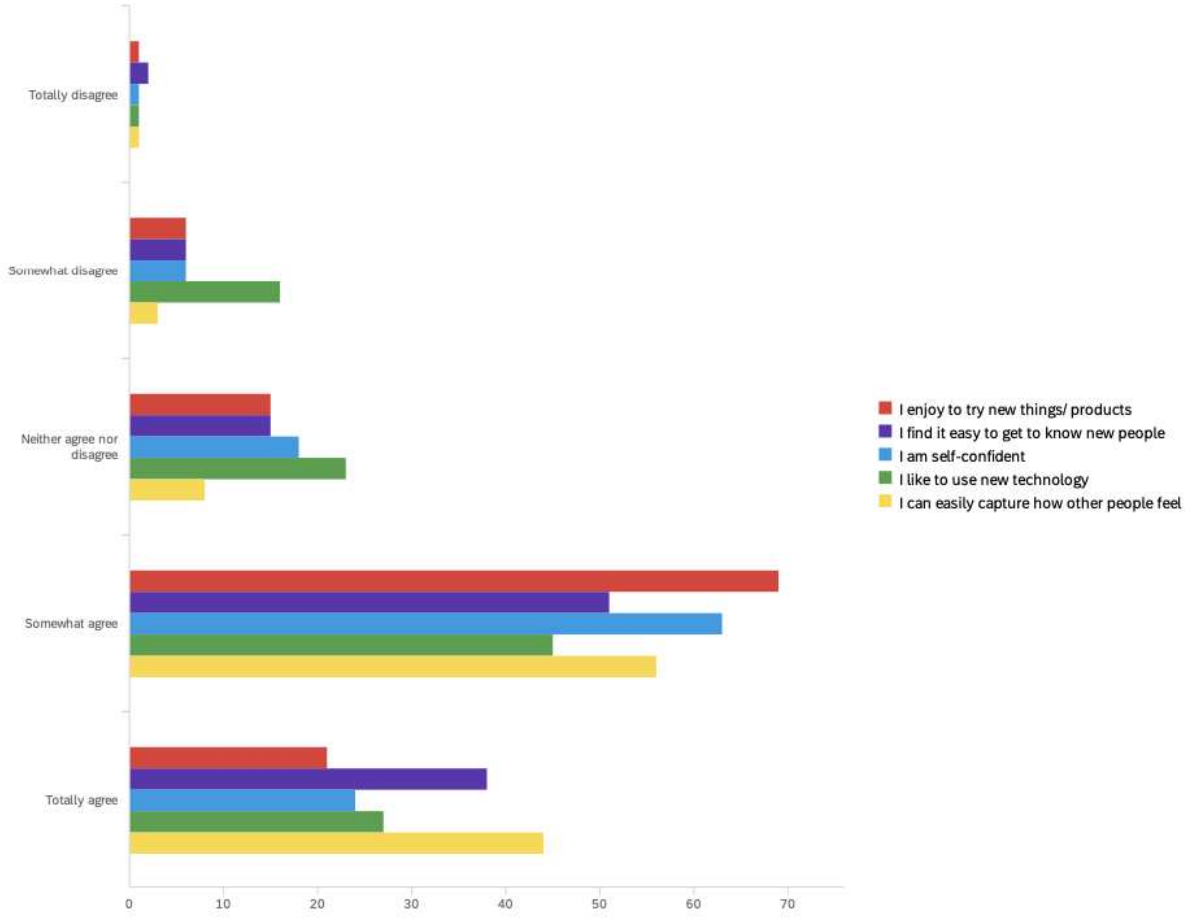
#	Field	Choice Count	
1	Student (school)	2.68%	3
2	Student (Bachelor)	10.71%	12
3	Student (Master)	44.64%	50
4	Apprentice	0.89%	1
5	Full-time worker	25.00%	28
6	Part-time worker	8.93%	10
7	Retired	4.46%	5
8	Job seeker	0.00%	0
9	Prefer not to say	2.68%	3

Q15 - Where are you from?

#	Field	Choice Count	
1	Austria	3.57%	4
2	Belgium	0.00%	0
3	Czech Republic	0.00%	0
4	Denmark	0.00%	0
5	France	0.89%	1
6	Germany	70.54%	79
7	Hungary	1.79%	2
8	Italy	2.68%	3
9	Netherlands	0.00%	0
10	Norway	0.89%	1
11	Poland	0.00%	0
12	Portugal	15.18%	17
13	Romania	0.89%	1
14	Russia	0.00%	0
15	Slovakia	0.00%	0
16	Spain	0.00%	0
17	Sweden	0.00%	0
18	Switzerland	2.68%	3
19	UK	0.00%	0
20	Other European country	0.00%	0
21	Africa	0.00%	0
22	Australia and New Zealand	0.00%	0
23	Middle East	0.00%	0
24	North America	0.00%	0
25	South America	0.89%	1
26	Southeast Asia	0.00%	0
			112

Showing rows 1 - 27 of 27

Q16 - To what extent do you agree with the following statements?

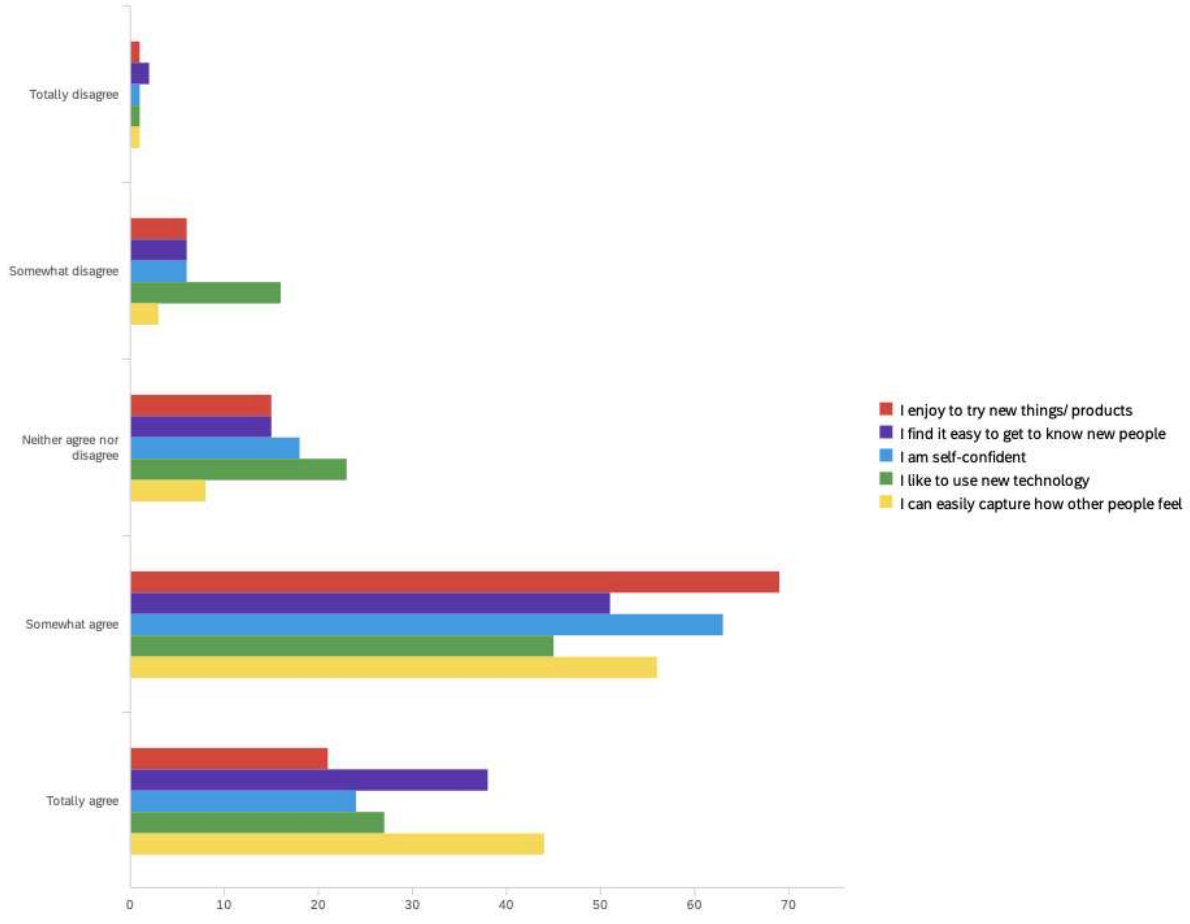


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I enjoy to try new things/ products	1.00	5.00	3.92	0.78	0.61	112
2	I find it easy to get to know new people	1.00	5.00	4.04	0.92	0.85	112
3	I am self-confident	1.00	5.00	3.92	0.81	0.66	112
4	I like to use new technology	1.00	5.00	3.72	1.01	1.02	112
5	I can easily capture how other people feel	1.00	5.00	4.24	0.77	0.59	112

#	Field	Totally disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Totally agree	Total

#	Field	Totally disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Totally agree	Total
1	I enjoy to try new things/ products	0.89% 1	5.36% 6	13.39% 15	61.61% 69	18.75% 21	112
2	I find it easy to get to know new people	1.79% 2	5.36% 6	13.39% 15	45.54% 51	33.93% 38	112
3	I am self-confident	0.89% 1	5.36% 6	16.07% 18	56.25% 63	21.43% 24	112
4	I like to use new technology	0.89% 1	14.29% 16	20.54% 23	40.18% 45	24.11% 27	112
5	I can easily capture how other people feel	0.89% 1	2.68% 3	7.14% 8	50.00% 56	39.29% 44	112

Showing rows 1 - 5 of 5



Appendix C – Data Analysis

Table 12: Chi-square test H1 association P5 and Frequency of Online Shopping

Frequency of Online Shopping * Personalization Scenario 5 Crosstabulation

Count

		Personalization Scenario 5						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
How often do you order something online?	Several times a day	0	1	0	0	0	0	1
	Once a day	0	0	1	1	0	0	2
	3-4 times a week	0	0	2	0	1	1	4
	Once a week	5	6	1	2	0	0	14
	Every two weeks or less	42	22	12	11	0	1	88
	Never	2	2	1	0	0	0	5
Total		49	31	17	14	1	2	114

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	58.798[a]	25	<.001
Likelihood Ratio	31.737	25	.166
Linear-by-Linear Association	7.704	1	.006
N of Valid Cases	114		

a. 31 cells (86.1%) have expected count less than 5. The minimum expected count is .01.

Table 13: Chi-Square test H1 association P5 and Frequency of Online Shopping Split up in More than two weeks or Less

Frequency of Online Shopping * Personalization Scenario 5 Crosstabulation

Count

		Personalization Scenario 5						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Frequency of Online Shopping	More than two weeks	8	23	14	11	5	1	62
	Two weeks or less	109	69	40	41	0	1	260
Total		117	92	54	52	5	2	322

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	37.406[a]	5	<.001
Likelihood Ratio	35.417	5	<.001
Linear-by-Linear Association	17.394	1	<.001
N of Valid Cases	322		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is .39.

Table 14: Regression P5 and Frequency in Online Shopping

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.288[a]	.083	.080	1.127	.083	28.944	1	320	<.001	.506

a. Predictors: (Constant), How often do you order something online?

b. Dependent Variable: Personalization Scenario 5

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.769	1	36.769	28.944	<.001[b]
	Residual	406.511	320	1.270		
	Total	443.280	321			

a. Dependent Variable: Personalization Scenario 5

b. Predictors: (Constant), How often do you order something online?

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	4.411	.416		10.605	<.001	3.592	5.229		
	How often do you order something online?	-.464	.086	-.288	-5.380	<.001	-.633	-.294	1.000	1.000

a. Dependent Variable: Personalization Scenario 5

Table 15: Chi-square test H2 association P2, P3 and Gender

Gender Dummy * Personalization Scenario 2

Crosstab

Count

		Personalization Scenario 2						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Gender Dummy	Female	62	118	32	6	7	0	225
	Male	29	32	31	3	0	2	97
Total		91	150	63	9	7	2	322

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	24.238[a]	5	<.001
Likelihood Ratio	25.884	5	<.001
Linear-by-Linear Association	1.762	1	.184
N of Valid Cases	322		

a. 5 cells (41.7%) have expected count less than 5. The minimum expected count is .60.

Gender Dummy * Personalization Scenario 3

Crosstab

Count

		Personalization Scenario 3					
		Negative	Rather negative	Neutral	Rather positive	Positive	Total
Gender Dummy	Female	17	52	36	88	32	225
	Male	4	20	34	29	10	97
Total		21	72	70	117	42	322

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	15.108[a]	4	.004
Likelihood Ratio	14.417	4	.006
Linear-by-Linear Association	.308	1	.579
N of Valid Cases	322		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.33.

Table 16: Chi-square test H2 association P5 and Gender

Gender Dummy * Personalization Scenario 5

Crosstab

Count

		Personalization Scenario 5						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Gender Dummy	Female	78	68	30	42	5	2	225
	Male	39	24	24	10	0	0	97
Total		117	92	54	52	5	2	322

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12.495[a]	5	.029
Likelihood Ratio	14.413	5	.013
Linear-by-Linear Association	2.178	1	.140
N of Valid Cases	322		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is .60.

Table 17: Chi-square test H4 association Attribute Ranking – Quality and P1

Personalization Scenario 1 * Attribute Ranking - Quality Crosstabulation

Count

		Attribute Ranking - Quality					
		1	2	3	4	5	Total
Personalization Scenario 1	Negative	9	3	1	1	0	14
	Rather negative	32	24	14	6	0	76
	Neutral	45	24	15	6	3	93
	Rather positive	16	36	12	8	0	72
	Positive	25	25	5	0	0	55
	Never happened to me	6	6	0	0	0	12
Total		133	118	47	21	3	322

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	38.239[a]	20	.008
Likelihood Ratio	45.208	20	.001
Linear-by-Linear Association	.554	1	.457
N of Valid Cases	322		

a. 15 cells (50.0%) have expected count less than 5. The minimum expected count is .11.

Table 18: Means H4 People who value Quality as most important attribute and P1-P5

Personalization Scenario 1 Personalization Scenario 2 Personalization Scenario 3 Personalizatio Scenario 4 Personalization Scenario 5 * People who value Quality as most important brand attribute

People who value Quality as most important brand attribute		Personalization Scenario 1	Personalization Scenario 2	Personalization Scenario 3	Personalization Scenario 4	Personalization Scenario 5
1.00	Mean	3.26	2.06	3.24	2.50	2.23
	N	133	133	133	133	133
	Std. Deviation	1.318	.919	1.162	.974	1.165
Total	Mean	3.26	2.06	3.24	2.50	2.23
	N	133	133	133	133	133
	Std. Deviation	1.318	.919	1.162	.974	1.165

Table 19: Chi-square test H5 association Technology affinity and P1, P2

Personalization Scenario 1 * To what extent do you agree with the following statements? – I like to use new technology

Crosstab

Count

		To what extent do you agree with the following statements? – I like to use new technology					
		Totally disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Totally agree	Total
Personalization Scenario 1	Negative	0	4	4	2	4	14
	Rather negative	0	10	16	40	8	74
	Neutral	0	15	21	21	33	90
	Rather positive	0	4	16	32	20	72
	Positive	5	0	0	35	15	55
	Never happened to me	0	6	0	6	0	12
Total		5	39	57	136	80	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	99.892[a]	20	<.001
Likelihood Ratio	111.485	20	<.001
Linear-by-Linear Association	1.762	1	.184
N of Valid Cases	317		

a. 12 cells (40.0%) have expected count less than 5. The minimum expected count is .19.

Personalization Scenario 2 * To what extent do you agree with the following statements? – I like to use new technology

Crosstab

Count

		To what extent do you agree with the following statements? – I like to use new technology					
		Totally disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Totally agree	Total
Personalization Scenario 2	Negative	0	19	11	40	21	91
	Rather negative	5	15	24	69	35	148
	Neutral	0	3	19	19	19	60
	Rather positive	0	0	3	3	3	9
	Positive	0	2	0	5	0	7
	Never happened to me	0	0	0	0	2	2
Total		5	39	57	136	80	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	40.610[a]	20	.004
Likelihood Ratio	44.338	20	.001
Linear-by-Linear Association	1.616	1	.204
N of Valid Cases	317		

a. 18 cells (60.0%) have expected count less than 5. The minimum expected count is .03.

Table 20: Chi-square test H5 association Technology affinity and P3, P5

Personalization Scenario 3 * To what extent do you agree with the following statements? – I like to use new technology

Crosstab

Count

		To what extent do you agree with the following statements? – I like to use new technology					
		Totally disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Totally agree	Total
Personalization Scenario 3	Negative	0	0	2	9	10	21
	Rather negative	5	10	11	29	17	72
	Neutral	0	8	12	19	31	70
	Rather positive	0	17	29	49	17	112
	Positive	0	4	3	30	5	42
Total		5	39	57	136	80	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	62.513[a]	16	<.001
Likelihood Ratio	61.430	16	<.001
Linear-by-Linear Association	1.708	1	.191
N of Valid Cases	317		

a. 7 cells (28.0%) have expected count less than 5. The minimum expected count is .33.

Personalization Scenario 5 * To what extent do you agree with the following statements? – I like to use new technology

Crosstab

Count

		To what extent do you agree with the following statements? – I like to use new technology					
		Totally disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Totally agree	Total
Personalization Scenario 5	Negative	0	9	25	39	42	115
	Rather negative	5	8	14	53	12	92
	Neutral	0	4	11	15	21	51
	Rather positive	0	16	7	24	5	52
	Positive	0	0	0	5	0	5
	Never happened to me	0	2	0	0	0	2
Total		5	39	57	136	80	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	83.844[a]	20	<.001
Likelihood Ratio	77.224	20	<.001
Linear-by-Linear Association	10.056	1	.002
N of Valid Cases	317		

a. 14 cells (46.7%) have expected count less than 5. The minimum expected count is .03.

Table 21: Chi-square test H6 association P1 and Firewall, Encryption Software

Which of the following statements apply to you? – Do you have a firewall installed on your main device? * Personalization Scenario 1 Crosstabulation

Count

		Personalization Scenario 1						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Which of the following statements apply to you? – Do you have a firewall installed on your main device?	Yes	10	44	42	24	20	6	146
	No	2	24	30	24	25	6	111
	I do not know	2	6	18	24	10	0	60
Total		14	74	90	72	55	12	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	27.987[a]	10	.002
Likelihood Ratio	30.158	10	<.001
Linear-by-Linear Association	7.995	1	.005
N of Valid Cases	317		

a. 4 cells (22.2%) have expected count less than 5. The minimum expected count is 2.27.

Which of the following statements apply to you? – Do you use any encryption software? * Personalization Scenario 1 Crosstabulation

Count

		Personalization Scenario 1						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Which of the following statements apply to you? – Do you use any encryption software?	Yes	3	10	12	12	5	6	48
	No	8	54	57	52	25	6	202
	I do not know	3	10	21	8	25	0	67
Total		14	74	90	72	55	12	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	40.492[a]	10	<.001
Likelihood Ratio	37.000	10	<.001
Linear-by-Linear Association	.695	1	.405
N of Valid Cases	317		

a. 4 cells (22.2%) have expected count less than 5. The minimum expected count is 1.82.

Table 22: Chi-square test H6 association P1 and Reading Privacy Settings, Not sure how to protect it

Which of the following statements apply to you? - Do you usually read the privacy settings when registering somewhere? * Personalization Scenario 1 Crosstabulation

Count

		Personalization Scenario 1						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Which of the following statements apply to you? - Do you usually read the privacy settings when registering somewhere?	Yes	0	8	0	0	5	6	19
	No	14	62	81	72	50	6	285
	I do not know	0	0	6	0	0	0	6
Total		14	70	87	72	55	12	310

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	70.669[a]	10	<.001
Likelihood Ratio	57.801	10	<.001
Linear-by-Linear Association	5.903	1	.015
N of Valid Cases	310		

a. 11 cells (61.1%) have expected count less than 5. The minimum expected count is .23.

Which of the following statements apply to you? - Are you worried about your online privacy but d not know how to protect it? * Personalization Scenario 1 Crosstabulation

Count

		Personalization Scenario 1						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Which of the following statements apply to you? - Are you worried about your online privacy but do not know how to protect it?	Yes	8	44	18	28	30	0	128
	No	4	20	60	32	20	12	148
	I do not know	2	10	12	12	5	0	41
Total		14	74	90	72	55	12	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	50.972[a]	10	<.001
Likelihood Ratio	56.909	10	<.001
Linear-by-Linear Association	.626	1	.429
N of Valid Cases	317		

a. 3 cells (16.7%) have expected count less than 5. The minimum expected count is 1.55.

Table 23: Chi-square test H6 association P2 and Firewall, Cookie Deletion

Which of the following statements apply to you? - Do you regularly (at least once a year) delete your cookies? * Personalization Scenario 2

Crosstab

Count

		Personalization Scenario 2						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Which of the following statements apply to you? - Do you regularly (at least once a year) delete your cookies?	Yes	30	62	31	9	0	2	134
	No	50	71	23	0	5	0	149
	I do not know	11	15	6	0	2	0	34
Total		91	148	60	9	7	2	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	26.515[a]	10	.003
Likelihood Ratio	32.681	10	<.001
Linear-by-Linear Association	3.616	1	.057
N of Valid Cases	317		

a. 9 cells (50.0%) have expected count less than 5. The minimum expected count is .21.

Which of the following statements apply to you? - Do you regularly (at least once a year) delete your cookies? * Personalization Scenario 2

Crosstab

Count

		Personalization Scenario 2						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Which of the following statements apply to you? - Do you regularly (at least once a year) delete your cookies?	Yes	30	62	31	9	0	2	134
	No	50	71	23	0	5	0	149
	I do not know	11	15	6	0	2	0	34
Total		91	148	60	9	7	2	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	26.515[a]	10	.003
Likelihood Ratio	32.681	10	<.001
Linear-by-Linear Association	3.616	1	.057
N of Valid Cases	317		

a. 9 cells (50.0%) have expected count less than 5. The minimum expected count is .21.

Table 24: Chi-square test H6 association P2 and Encryption Software

Which of the following statements apply to you? - Do you use any encryption software? * Personalization Scenario 2

Crosstab

Count

		Personalization Scenario 2						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Which of the following statements apply to you? - Do you use any encryption software?	Yes	10	18	10	3	5	2	48
	No	59	98	40	3	2	0	202
	I do not know	22	32	10	3	0	0	67
Total		91	148	60	9	7	2	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	35.818[a]	10	<.001
Likelihood Ratio	26.851	10	.003
Linear-by-Linear Association	12.762	1	<.001
N of Valid Cases	317		

a. 8 cells (44.4%) have expected count less than 5. The minimum expected count is .30.

Table 25: Chi-square test H6 association P3 and Firewall, Accepting Third-Party Cookies

Which of the following statements apply to you? - Do you have a firewall installed on your main device? * Personalization Scenario 3

Crosstab

Count

		Personalization Scenario 3					
		Negative	Rather negative	Neutral	Rather positive	Positive	Total
Which of the following statements apply to you? - Do you have a firewall installed on your main device?	Yes	12	42	41	44	7	146
	No	4	21	21	43	22	111
	I do not know	5	9	8	25	13	60
Total		21	72	70	112	42	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	28.812[a]	8	<.001
Likelihood Ratio	30.900	8	<.001
Linear-by-Linear Association	16.159	1	<.001
N of Valid Cases	317		

a. 1 cells (6.7%) have expected count less than 5. The minimum expected count is 3.97.

Which of the following statements apply to you? - Do you usually accept all third-party cookies without changing the individual settings? * Personalization Scenario 3

Crosstab

Count

		Personalization Scenario 3					
		Negative	Rather negative	Neutral	Rather positive	Positive	Total
Which of the following statements apply to you? - Do you usually accept all third-party cookies without changing the individual settings?	Yes	4	23	37	62	18	144
	No	17	32	31	44	19	143
	I do not know	0	3	0	6	0	9
Total		21	58	68	112	37	296

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	20.182[a]	8	.010
Likelihood Ratio	23.960	8	.002
Linear-by-Linear Association	5.254	1	.022
N of Valid Cases	296		

a. 5 cells (33.3%) have expected count less than 5. The minimum expected count is .64.

Table 26: Chi-square test H6 association P3 and Encryption Software, Not sure how to protect it

Which of the following statements apply to you? - Do you use any encryption software? * Personalization Scenario 3

Crosstab

Count

		Personalization Scenario 3					
		Negative	Rather negative	Neutral	Rather positive	Positive	Total
Which of the following statements apply to you? - Do you use any encryption software?	Yes	5	7	21	10	5	48
	No	16	50	42	73	21	202
	I do not know	0	15	7	29	16	67
Total		21	72	70	112	42	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	33.567[a]	8	<.001
Likelihood Ratio	36.162	8	<.001
Linear-by-Linear Association	9.705	1	.002
N of Valid Cases	317		

a. 2 cells (13.3%) have expected count less than 5. The minimum expected count is 3.18.

Which of the following statements apply to you? - Are you worried about your online privacy but do not know how to protect it? * Personalization Scenario 3

Crosstab

Count

		Personalization Scenario 3					
		Negative	Rather negative	Neutral	Rather positive	Positive	Total
Which of the following statements apply to you? - Are you worried about your online privacy but do not know how to protect it?	Yes	8	29	18	50	23	128
	No	9	26	41	57	15	148
	I do not know	4	17	11	5	4	41
Total		21	72	70	112	42	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	25.789[a]	8	.001
Likelihood Ratio	26.983	8	<.001
Linear-by-Linear Association	8.609	1	.003
N of Valid Cases	317		

a. 1 cells (6.7%) have expected count less than 5. The minimum expected count is 2.72.

Table 27: Chi-square test H6 association P4 and Firewall, Accepting Third-Party Cookies

Which of the following statements apply to you? - Do you have a firewall installed on your main device? * Personalization Scenario 4

Crosstab

Count

		Personalization Scenario 4					
		Negative	Rather negative	Neutral	Rather positive	Positive	Total
Which of the following statements apply to you? - Do you have a firewall installed on your main device?	Yes	34	52	39	19	2	146
	No	15	42	39	7	8	111
	I do not know	15	22	23	0	0	60
Total		64	116	101	26	10	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	24.969[a]	8	.002
Likelihood Ratio	30.295	8	<.001
Linear-by-Linear Association	.418	1	.518
N of Valid Cases	317		

a. 4 cells (26.7%) have expected count less than 5. The minimum expected count is 1.89.

Which of the following statements apply to you? - Do you usually accept all third-party cookies without changing the individual settings? * Personalization Scenario 4

Crosstab

Count

		Personalization Scenario 4					
		Negative	Rather negative	Neutral	Rather positive	Positive	Total
Which of the following statements apply to you? - Do you usually accept all third-party cookies without changing the individual settings?	Yes	23	49	52	20	0	144
	No	37	65	33	6	2	143
	I do not know	0	2	7	0	0	9
Total		60	116	92	26	2	296

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	29.488[a]	8	<.001
Likelihood Ratio	31.433	8	<.001
Linear-by-Linear Association	5.743	1	.017
N of Valid Cases	296		

a. 7 cells (46.7%) have expected count less than 5. The minimum expected count is .06.

Table 28: Chi-square test H6 association P4 and Encryption Software, Not Using Certain Platforms

Which of the following statements apply to you? - Do you use any encryption software? * Personalization Scenario 4

Crosstab

Count

		Personalization Scenario 4					
		Negative	Rather negative	Neutral	Rather positive	Positive	Total
Which of the following statements apply to you? - Do you use any encryption software?	Yes	13	17	5	6	7	48
	No	32	81	69	20	0	202
	I do not know	19	18	27	0	3	67
Total		64	116	101	26	10	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	50.331[a]	8	<.001
Likelihood Ratio	54.851	8	<.001
Linear-by-Linear Association	2.022	1	.155
N of Valid Cases	317		

a. 3 cells (20.0%) have expected count less than 5. The minimum expected count is 1.51.

Which of the following statements apply to you? - Do you not use certain social media platforms because of privacy concerns? * Personalization Scenario 4

Crosstab

Count

		Personalization Scenario 4					
		Negative	Rather negative	Neutral	Rather positive	Positive	Total
Which of the following statements apply to you? - Do you not use certain social media platforms because of privacy concerns?	Yes	33	45	19	17	2	116
	No	31	71	72	9	8	191
	I do not know	0	0	10	0	0	10
Total		64	116	101	26	10	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	47.852[a]	8	<.001
Likelihood Ratio	50.274	8	<.001
Linear-by-Linear Association	6.284	1	.012
N of Valid Cases	317		

a. 6 cells (40.0%) have expected count less than 5. The minimum expected count is .32.

Table 29: Chi-square test H6 association P4 and Reading Privacy Settings, Not sure how to protect it

Which of the following statements apply to you? - Do you usually read the privacy settings when registering somewhere? * Personalization Scenario 4

Crosstab

Count

		Personalization Scenario 4					
		Negative	Rather negative	Neutral	Rather positive	Positive	Total
Which of the following statements apply to you? - Do you usually read the privacy settings when registering somewhere?	Yes	0	9	4	6	0	19
	No	64	107	87	20	7	285
	I do not know	0	0	6	0	0	6
Total		64	116	97	26	7	310

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	32.045[a]	8	<.001
Likelihood Ratio	32.144	8	<.001
Linear-by-Linear Association	1.336	1	.248
N of Valid Cases	310		

a. 8 cells (53.3%) have expected count less than 5. The minimum expected count is .14.

Which of the following statements apply to you? - Are you worried about your online privacy but do not know how to protect it? * Personalization Scenario 4

Crosstab

Count

		Personalization Scenario 4					
		Negative	Rather negative	Neutral	Rather positive	Positive	Total
Which of the following statements apply to you? - Are you worried about your online privacy but do not know how to protect it?	Yes	29	55	28	11	5	128
	No	34	47	47	15	5	148
	I do not know	1	14	26	0	0	41
Total		64	116	101	26	10	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	32.213[a]	8	<.001
Likelihood Ratio	38.271	8	<.001
Linear-by-Linear Association	3.250	1	.071
N of Valid Cases	317		

a. 4 cells (26.7%) have expected count less than 5. The minimum expected count is 1.29.

Table 30: Chi-square test H6 association P5 and Firewall, Cookie Deletion

Which of the following statements apply to you? - Do you have a firewall installed on your main device? * Personalization Scenario 5

Crosstab

Count

		Personalization Scenario 5						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Which of the following statements apply to you? - Do you have a firewall installed on your main device?	Yes	63	40	26	15	0	2	146
	No	30	30	22	24	5	0	111
	I do not know	22	22	3	13	0	0	60
Total		115	92	51	52	5	2	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	29.651[a]	10	<.001
Likelihood Ratio	33.571	10	<.001
Linear-by-Linear Association	2.104	1	.147
N of Valid Cases	317		

a. 6 cells (33.3%) have expected count less than 5. The minimum expected count is .38.

Which of the following statements apply to you? - Do you regularly (at least once a year) delete your cookies? * Personalization Scenario 5

Crosstab

Count

		Personalization Scenario 5						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Which of the following statements apply to you? - Do you regularly (at least once a year) delete your cookies?	Yes	51	33	31	19	0	0	134
	No	52	51	15	24	5	2	149
	I do not know	12	8	5	9	0	0	34
Total		115	92	51	52	5	2	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	20.780[a]	10	.023
Likelihood Ratio	23.164	10	.010
Linear-by-Linear Association	.875	1	.349
N of Valid Cases	317		

a. 6 cells (33.3%) have expected count less than 5. The minimum expected count is .21.

Table 31: Chi-square test H6 association P5 and Accepting Third-Party Cookies, Encryption Software

Which of the following statements apply to you? - Do you usually accept all third-party cookies without changing the individual settings? * Personalization Scenario 5

Crosstab

Count

		Personalization Scenario 5						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Which of the following statements apply to you? - Do you usually accept all third-party cookies without changing the individual settings?	Yes	41	43	28	31	1	144	
	No	70	33	18	21	1	143	
	I do not know	2	7	0	0	0	9	
Total		113	83	46	52	2	296	

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	25.086[a]	8	.002
Likelihood Ratio	25.593	8	.001
Linear-by-Linear Association	9.780	1	.002
N of Valid Cases	296		

a. 7 cells (46.7%) have expected count less than 5. The minimum expected count is .06.

Which of the following statements apply to you? - Do you use any encryption software? * Personalization Scenario 5

Crosstab

Count

		Personalization Scenario 5						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Which of the following statements apply to you? - Do you use any encryption software?	Yes	18	8	14	3	5	0	48
	No	75	59	27	39	0	2	202
	I do not know	22	25	10	10	0	0	67
Total		115	92	51	52	5	2	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	43.786[a]	10	<.001
Likelihood Ratio	35.589	10	<.001
Linear-by-Linear Association	1.033	1	.309
N of Valid Cases	317		

a. 6 cells (33.3%) have expected count less than 5. The minimum expected count is .30.

Table 32: Chi-square test H6 association P5 and Not Using Certain Platforms

Which of the following statements apply to you? - Do you not use certain social media platforms because of privacy concerns? * Personalization Scenario 5

Crosstab

Count

		Personalization Scenario 5						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Which of the following statements apply to you? - Do you not use certain social media platforms because of privacy concerns?	Yes	36	32	16	30	0	2	116
	No	79	54	35	18	5	0	191
	I do not know	0	6	0	4	0	0	10
Total		115	92	51	52	5	2	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	34.032[a]	10	<.001
Likelihood Ratio	39.889	10	<.001
Linear-by-Linear Association	2.853	1	.091
N of Valid Cases	317		

a. 10 cells (55.6%) have expected count less than 5. The minimum expected count is .06.

Table 33: Chi-square test H6 association P5 and Reading Privacy Settings

Which of the following statements apply to you? - Do you usually read the privacy settings when registering somewhere? * Personalization Scenario 5

Crosstab

Count

		Personalization Scenario 5						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Which of the following statements apply to you? - Do you usually read the privacy settings when registering somewhere?	Yes	4	2	8	5	0	0	19
	No	109	84	38	47	5	2	285
	I do not know	0	6	0	0	0	0	6
Total		113	92	46	52	5	2	310

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	29.535[a]	10	.001
Likelihood Ratio	27.994	10	.002
Linear-by-Linear Association	3.854	1	.050
N of Valid Cases	310		

a. 12 cells (66.7%) have expected count less than 5. The minimum expected count is .04.

Table 34: Chi-square test H6 association P5 and Not sure how to protect it

Which of the following statements apply to you? - Are you worried about your online privacy but do not know how to protec t it? * Personalization Scenario 5

Crosstab

Count

		Personalization Scenario 5						
		Negative	Rather negative	Neutral	Rather positive	Positive	Never happened to me	Total
Which of the following statements apply to you? - Are you worried about your online privacy but do not know how to protect it?	Yes	55	35	2	29	5	2	128
	No	53	31	41	23	0	0	148
	I do not know	7	26	8	0	0	0	41
Total		115	92	51	52	5	2	317

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	75.592[a]	10	<.001
Likelihood Ratio	90.213	10	<.001
Linear-by-Linear Association	.468	1	.494
N of Valid Cases	317		

a. 6 cells (33.3%) have expected count less than 5. The minimum expected count is .26.

Appendix D – Hypotheses Conclusion

Table 35: Hypotheses Conclusions

Hypothesis		**Conclusion**
H1	Frequency in online shopping is positively related to reaction of advertisement that was not actively searched for.	Not supported
H2	Personalized advertisement has a different effectiveness depending on the gender.	Supported, but only partially
H3	Age is positively related to brand loyalty.	Not supported
H4	People that value quality as the highest brand attribute are less likely to be impacted by personalized advertisement.	Supported
H5	Affinity to new technology is positively related to responsiveness of personalization.	Supported
H6	Concern for online data privacy is negatively related to reaction on personalized advertisement.	Supported, but only partially