“We know what you see, so here’s an ad!”

Online Behavioral Advertising and Surveillance on Social Media in an Era of Privacy Erosion.

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Abstract

Technology has helped creating new opportunities for advertisers to better reach their audiences online. Online Behavioral Advertising is one of these strategies that is being used to target specific audiences with personalized messages to specific consumers based on their online behavior and personal information. However, this personalization has impacted how consumers respond to these personalized ads because they may feel that they are continuously monitored and watched by these brands. This feeling is called perceived surveillance. I explain the relationship between the levels of personalization of the ad based on the brand (match vs. mismatch in ad with previous search) and levels of personalization of the ad based on the product (match vs. mismatch in ad with previous search) and advertising effectiveness (i.e., ad avoidance, attitudes and purchase intentions) through perceived surveillance. By using the Social Contract Theory, I suggest that higher levels of personalization (i.e., match in brand and/or product with previous online search) illustrate a breach in the social contract between brands and consumers. Furthermore, I explain the relationships between perceived surveillance and the advertising outcomes through the Reactance Theory where higher level of perceived surveillance would lead to more avoidance of the persuasive message and more negative attitudes and lower purchase intention because of the threat to freedom that surveillance creates. This thesis contributes to theory by looking at perceived surveillance as an antecedent to these advertising outcomes and present a framework to understand consumers' perceptions to increased levels of personalization. Practically, this study amplifies the need to safeguard consumers' privacy; thus, advertisers need to align their strategies to better serve their customers.

Keywords: Online Behavioral Advertising (OBA), Personalization, Avoidance, Surveillance, Social Media.

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CHAPTER 1: INTRODUCTION

Advertising is founded on creativity and loves innovation. It is why the industry of advertising has been in a constant change, adjusting, adapting, expanding and always looking for the next big thing. Technology has helped create this change. Indeed, technological advancements have given marketers and advertisers opportunities to use online data to target the right audience with the right message (Huh and Malthouse, 2020). The accessibility to consumer data allows marketers to craft a personalized message to their consumers (Kalyanaraman and Sundar, 2006). It is not surprising that the interest in personalized advertising from companies worldwide has increased in the past few years (Poon and Jevons, 1997; Gal-Or and Gal-Or, 2005). This interest in the use of personalized advertising is guided by the benefits perceived by practitioners in comparison with traditional mass advertising such as better targeting their audiences and minimizing ad clutter (Ha, 1996; Anand and Shachar, 2009). Previous research has shown that personalized advertising can improve advertising effectiveness (Kalyanaraman and Sundar, 2006) such as a better reach to their targeted audiences while minimizing the costs of exposure and reach. In other words, targeted advertising offers a better Return on Investment (ROI) to advertising campaigns. For these reasons, companies and organizations have long relied on targeting, mainly using demographic variables such as gender, geographic location, and psychographic variables such as values, personality and interests (Poon and Jevons, 1997; Gal-Or and Gal-Or, 2005). Nowadays, the Internet and social media, precisely, have given advanced tools for a more specific targeting that tracks online behavior, such as consumers' interests, geographical

location, transactional information and past online search which has been used as input for Online Behavioral Advertising.

Online Behavioral Advertising (OBA) is a targeting strategy that makes use of consumers' online information and interactions such as their past purchases or browsing history. This information is pieced together to create a profile that determines the types of ads displayed online to consumers. The OBA ads are tailored to the specific profile based on the information collected (Yan et al. 2009). Online behavioral advertising is advanced and unique because the ads displayed to consumers are based on inferences that marketers have made based on the profile of the consumer (Kim and Huh, 2017). For instance, OBA makes use of consumers' past online search to target them with ads that would match their interests based on the keywords used. A consumer searching for a smartphone for example, would receive ads from different bands selling smartphones or other electronics.

While Online Behavioral Advertising provides many opportunities to both advertisers and consumers such as a better match to consumers' interests and needs, there are many challenges that arise from this increased personalization. Indeed, the increased specificity of the persuasive message that is tailored based on the information collected might raise privacy concerns (Smit, Van Noort, and Voorveld 2014). Consumers nowadays are becoming more skeptical and sensitive about their usage of their data. The Wunderman Thompson Report, The Privacy Era (2020) highlights that 89% of Americans believe that the way that companies gather and use their data is sneaky. The increased worry about data privacy following the repetitive data breaches by social media platforms might have increased this sort of resentment towards the marketing and

advertising strategies such as online behavioral advertising. Past research has shown that when consumers identify their personal data or behavior being used for persuasive purposes such as ads, they tend to feel that they are watched. This feeling is called "perceived surveillance" (Xu et al., 2012). This concept is important because it influences consumers' responses to these ads (Moore et al., 2015).

In this study, I investigated how level of personalization of the ad based on the brand (match vs. mismatch of the brand in ad with previous search) and level of personalization of the ad based on the product (match vs. mismatch of the product in ad with previous search) in the context of online behavioral ads influence consumers' responses to these ads through perceived surveillance. Specifically, I look into how perceived surveillance affects advertising avoidance, consumers' attitudes to the ad, product and brand advertised, and their purchase intention. I conceptualize an increased level of personalization of the ad when the brand matches the consumers' past online search in terms of brand and/or when the product in the ad matches the consumers' past online search. I argue that an increased level of personalization of the ad based on the brand and/or product (match) leads to increased level of perceived surveillance as explained by the Social Contract Theory. This theory states that there is a moral commitment between companies and consumers, and a violation of the contract would lead consumers to cut their relationships with the company. In line with this theory, I suggest that highly personalized ads present a sort of a breach of this social contract since the persuasive message has been created based on consumers' past behavior and therefore lead to more perceived surveillance.

This current thesis looks into consumers' responses to increased levels of personalization of the ad based on the brand and/or product mediated by perceived surveillance. I look into perceived surveillance as an antecedent to advertising avoidance, attitudes (i.e., ad, product, brand), and purchase intention. This study makes use of the Reactance Theory to explain the relationship between perceived surveillance and these advertising outcomes. Brehm (1996) posits that people are motivated to resist a commercial message if they feel that their freedom and autonomy is threatened as explained by the Reactance Theory. In fact, the increased criticism towards the use of personal information through social media for advertising purposes can create resistance and thus people tend to avoid these ads, and might have fewer positive attitudes, and lower purchase intentions.

This research extends theoretical knowledge by studying the relationship between and the levels of personalization of the ad based on the brand and/or product (match vs. mismatch) and perceived surveillance using the Social Contract Theory. To my knowledge, this is the first study to look into the relationship between the levels of personalization of the ad based on the brand and/or product and perceived surveillance through the Social Contract Theory. Moreover, this thesis investigates perceived surveillance, a new concept in online advertising, as an antecedent to advertising avoidance and other advertising outcomes i.e., attitudes and purchase intentions. Thus, this research will advance theoretical knowledge into a better understanding of advertising responses in a context of increased level of personalization of the ad based the brand and/or product. An understanding of what drives consumers to avoid personalized

ads and how they shape their attitudes can help advertising scholars develop a theoretical framework to understand consumers' responses to highly personalized ads.

On the practical level, this research aims to provide guidelines for advertising practitioners to help them fine-tune their online marketing strategies by reducing avoidance of personalized ads as well as help shaping more positive attitudes towards OBA ads. Understanding how perceived surveillance influences consumers' attitudes towards the brand and the advertised product might provide practitioners with directions to better understand their customers and adjust their targeting strategies. Furthermore, in this era of privacy erosion, brands and companies need to have a better understanding of the perceived privacy concerns of consumers and make sure to align to their preferences and well-guard their information.

CHAPTER 2: LITERATURE REVIEW

Personalized advertising

Personalization of persuasive messages in marketing and advertising is defined as "creating persuasive messages that refer to aspects of a person's self" (Masłowska, Smit, and van den Putte 2011). Indeed, personalized advertising relies on creating specifically tailored messages to the specific individual that would fit with their interests, characteristics, and behaviors (Bol et al., 2018). Personalization of the persuasive messages has been used extensively in direct marketing such as email marketing where the content of the email is adjusted to the receiver's interests as well as using the receiver's personal information such as their first and last name (Masłowska, Smit, and van den Putte 2011; Postma and Brokke 2001; White et al. 2008; Yu and Cude 2009).

The development of technology and the access to personal and behavioral information about consumers has shifted the industry of advertising. The accessibility of relevant information that helps in creating, delivering, and measuring the effectiveness of the campaigns have helped enormously brands in growing their audiences and sales (Lustria et al., 2016; Kim and Huh, 2017). Indeed, marketers have access to consumers' information such as their personal credentials, demographics, interests, shopping habits, transactions history, and geographical location (Phelps, Nowak, and Ferrell 2000; Unni and Harmon 2007; White et al. 2008). Personalized advertising is being used because it brings many advantages to both advertisers and consumers, such as perceived relevance and increased attention (Lustria et al., 2016) as well as cost-effectiveness (Kim and Huh, 2017). For these reasons, advertisers and marketers around the world have been using

these strategies extensively in the past few years. In the current study, I will focus on Online Behavioral Advertising, a specific form of personalized advertising.

There are several definitions of the Online Behavioral Advertising (OBA) – also referred to as "online profiling" and "behavioral targeting" (Bennett 2011). The Federal Trade Commission defined Online Behavioral Advertising (OBA) as: 'the tracking of a consumer's activities online – including the searches the consumer has conducted, the web pages visited, and the content viewed – in order to deliver advertising targeted to the individual consumer's interest' (Stallworth 2010, p. 481). The definition of OBA in the scientific literature has evolved throughout the years to be more precise and detailed. For example, McDonald and Cranor (2010, p. 2) defined OBA as "the practice of collecting data about an individual's online activities for use in selecting which advertisement to display", then Smit, Van Noort and Voorveld (2014, p. 15) defined OBA as "adjusting advertisements to previous online surfing behavior", then Ham and Nelson (2016, p. 690) defined it as "a technology-driven advertising personalization method that enables advertisers to deliver highly relevant ad messages to individuals". Boerman et al. (2017) define OBA as "the practice of monitoring people's online behavior and using the collected information to show people individually targeted advertisements". In this study, I refer to the definition of Boerman et al. (2017) as it is more inclusive to the concept of OBA, in the sense that it provides detailed information about OBA as a process from monitoring behavior to collection of data to showing the ad to consumers.

Online Behavioral Advertising has been given a lot of attention because of its advantages compared to other techniques of targeting. OBA is different from other targeting techniques because it relies on the personal information collected on the

consumer and that personalizes the message based on this information collected (Yan et al., 2019). Indeed, OBA intends to provide relevance to online consumers by using consumer's past online behavior, personal information and interests and goes beyond other forms of personalized advertising such as using the consumer's name (Bang and Wojdynski, 2016) or showing ads based on geographical location (e.g., Ketelaar et al. 2017). OBA relies on the consumer's online behavior (e.g., past online search or past online transaction), meaning that OBA uses very specific online behavioral data to create and send the persuasive message to the specific consumer. For instance, if a consumer has shopped online from a specific brand, this consumer might receive ads from the same brand, or a competitor brand in the same product category. This online behavior ranges from an online search, media consumption such as interacting with online content, online shopping, use of apps, what people write in their emails to what they post on their social media platforms (Zuiderveen Borgesius 2015a). An example of this behavior could be a consumer liking a post on Facebook about a specific product from a particular brand, then receiving an ad from the same brand, whether on the same social media platform, or on other platforms. Receiving an ad based on these past online behaviors is an example of Online Behavioral Advertising.

To collect this specific information, most companies use "cookies", others use fingertips (Altaweel, Good, and Hoofnagle 2015) or facial recognition (Doss, 2016). For example, firms are able to collect information on consumers' websites viewings, clicking patterns, searches, transactional history and social media use (Yan et al., 2019). Cookies are bits of code that websites and other digital entities put on consumers' browsers and devices. Advertisers have been using these cookies for the past twenty-five years to track

consumers' behavior and also to make predictions about future consumers' behavior (Wunderman Thompson Resolve, 2021). According to the Statista Digital Advertising Market Outlook (2020), over $100 billions of advertising spend a year is invested in targeted marketing using cookies and other tracking parties. As a matter of fact, online advertising revenues are skyrocketing every year (Interactive Advertising Bureau, 2016), and OBA has been central to this growth (eMarketer 2010; Chen and Stallaert 2014). In fact, advertisers and marketers argue that OBA has helped them create memory and persistence and most importantly identify profitable customers (Wunderman Thompson Resolve, 2021). All these advantages highlight the prominent role of cookies and targeted advertising.

Because each person has a different pattern of searching the web and different interests, ads displayed to each person are very specific to the consumer (Kim and Huh, 2017). Therefore, by varying different data inputs, the level of personalization can differ in each ad. Thus, it is believed that OBA provides different levels of personalization of online ads. We next discuss how the level of personalization of online behavioral ads are seen. To create an OBA ad, advertisers choose what data to include for one ad, meaning that the amount of information used from OBA varies from one ad to another. Because of this, the level of personalization varies.

Level of Personalization

Level or depth of personalization is considered as a consumer-oriented strategy used in marketing to provide consumers with the right content at the right time to maximize the effectiveness of the message (Tam and Ho, 2006). In other words, the level of personalization describes the extent to which advertisers use consumers' data to

provide a personalized and specific ad as if it is personally crafted to the specific individual. Boerman et al. (2017) suggested that the level of personalization is based on two aspects; first the type of information that is being used such a search history or the browsing keywords, and second the amount of information that is used for example a combination of a search term and search history or focusing on one specific keyword.

In the current study, I look at how varying the data input to craft a more personalized ad creates different levels of personalization based on the conceptualization of Boerman et al. (2017). More specifically, I use the stated conceptualization to define a higher level of personalization of the ad based on the brand and/or product match and a lower level of personalization of the ad is when the brand and/or product mismatch the ones in the past search. In other words, because OBA ads rely on the personal information collected about the consumer (e.g., previous brand or product search), varying the extent to which an ad uses consumers' information creates different levels of personalization. In essence, the more personal and behavioral information is used to create a persuasive message, the more personalized the ad is. For instance, a consumer searching for a particular product from a particular brand, say Nike shoes. Following this search on a web browser, the consumer receives an ad about the same Nike shoes on their social media feed. This ad is considered as highly personalized because it matched the information that was collected on the consumer; keywords entered in the search engine: Nike shoes. In this case, we have a brand and product match. The consumer might also receive an ad about Adidas shoes (product match and a brand mismatch), or a Nike sweater (brand match and a product mismatch). All these suggestions of ads present different possibilities of ad personalization. Here the different suggestions of ads shown

to the consumer are based on varying the input that the consumer has used in their search: Nike shoes. This means that the consumer is interested in the brand, or the product category based on their past behavior (i.e., the search). The Nike sweater ad for example is an opportunity for the brand to show the consumer a different product that brand carries, while the Adidas shoes' ad is an opportunity for Adidas to show the consumer their products that are matching their interest in sportswear shoes. These ads are all different types of personalization of the ad based on brand and/or product.

Past research has looked at levels of personalization. Most literature has used different information input collected about the consumer and its behavior to study the different levels of personalization. For instance, past studies used age and gender, and general information such as address and phone number to manipulate the level of personalization (White et al., 2008). Van Doorn and Hoekstra (2013) for example, used transactional information such as past purchases to form the personalized ad, Aguirre et al. (2015) used age, gender and location, (Tucker, 2014) included education level, Aguirre et al. (2015) and Tucker (2014) focused on interests, Bleier and Eisenbeiss (2015) used online shopping behavior. These are all examples of different levels of personalization that are based on varying both the type and the level of input related to the consumers' behavior.

In the current study, I conceptualized the level of personalization based on the increased specificity of the ad in regard to the brand and/or product being advertised compared to the brand and product previously searched for. In other terms, I look at brand and/or product match vs. mismatch in a future Instagram ad compared to a previous search. As mentioned above, a level of personalization depends on the amount

of data used to create an ad. In this thesis, I examine the brand and/or product match as the amount of data used to create the ad based on the previous search in terms of brand and/or product used. A brand match vs. mismatch and/or product match vs. mismatch create different possibilities of ads. These different possibilities of ads give a sense of these levels of personalization. In other words, a higher level of personalization of the ad is when a consumer searches for a brand and/or product then receives an ad containing the same information as searched for. In contrast, lower level of personalization is when the brand and/or the product advertised do not match the brand and product previously searched for. By varying the brand and product match vs. mismatch between a previous search and a future Instagram ad, it resulted in four different possibilities of personalization: brand and product match, brand match and product mismatch, brand mismatch and product match, and brand and product mismatch.

As previously mentioned in the example used of Nike shoes, competitor brands like Adidas can use past online behavior of the consumer who searched for Nike shoes. Indeed, competitor brands can have access to this information and make use of it. This is made possible by programmatic advertising or also known as real-time advertising. Programmatic advertising describes the process of using consumers' online behavior and personal information and provide them to other parties for opportunities to bid on ad impressions in real-time (Bardowicks and Busch, 2013). Companies and advertisers choose where their ads would appear to their target audience which is based on their consumers' demographics, psychographic, and geographic location as well their interests and past search (Lee et al., 2015). Thus, programmatic advertising gives the opportunity to advertisers to bid for single advertising impressions, i.e., each time a consumer visits a

website, the advertiser can decide whether they would like to bid for the opportunity to be displayed to that specific user and at what price (Busch, 2016).

Indeed, programmatic advertising can be used in OBA to show consumers with ads that might match their interests based on their previous online behavior (Saura, Palos-Sánchez, and Suárez, 2017). This interest could be translated into the product previously searched for, or a related product from the same brand, or a competitive brand that is offering similar goods or services. To illustrate this concept, let's take the example previously used of the Nike shoes. Nike can also take the opportunity of this consumer's interest in sportswear and show them another product that Nike is offering such as sweatshirts (brand match, product mismatch). Nike and Adidas are competitors since they both offer the same product category, which is sportswear. When a consumer searches for Nike shoes, Adidas can take the advantage of the interest that the consumer has shown in sports shoes by targeting this consumer with their sports shoes (i.e., brand mismatch, product match). Another example of ad could be Adidas, a competitor to Nike in sportswear, showing the same consumer an ad about their shoes (product match and brand mismatch), or it could be that Adidas would show the consumer an ad about their sweatshirts (product and brand mismatch). These examples of possible ads are based on the initial Nike shoes search, and they illustrate different levels of personalization that are central to the current research. Again, these different possibilities of ad are based on the idea that personalized OBA ads rely on the amount of data used on the consumer. In this study, we are only relying on the brand and product previously searched for which can both either match or mismatch in the ad with the previous search.

Perceived Surveillance and Social Contract Theory

One of the most prevailing concerns of consumers regarding receiving personalized ads is related to privacy issues (Boerman et al., 2017). These privacy issues refer to people's beliefs about the possibility of risks and negative consequences linked to sharing information (Cho, Lee, and Chung, 2010; Zhou and Li, 2014). Indeed, online privacy related to technological communication has been a big concern among Internet users in the past few years (Federal Trade Commission, 2000; Metzger and Docter, 2003; UCLA Center for Communication Policy, 2000, 2001, 2003, 2004). This current study looks at privacy in the context of OBA as the degree to which a consumer feels that companies are watching them (i.e., perceived surveillance) and using their personal information on different websites such as social media.

Because OBA uses data collected throughout the digital consumer journey, the OBA ad allows the creation of a very specific ad that is sent to the consumer on different platforms such as social media. When consumers are exposed to these ads, they may feel that they are being watched and surveilled which makes them perceive personalized advertising as a negative practice (Moore et al, 2015). This feeling of being watched is called perceived surveillance (Xu et al., 2012). Phelan, Lampe, and Resnick (2016) have defined it "as if there is someone looking over your shoulder". This feeling is triggered when consumers identify and recognize personal information being used for advertising or marketing purposes (White et al., 2008). Online Behavioral Advertising uses past consumers' online behavior such as their past search, websites they opened or social media pages they interacted with. With the rise of computer-based communications, consumers feel that they are constantly watched when they are online (McDonald and

Cranor, 2010). This feeling of being observed is extremely invasive and therefore, consumers tend to have negative perceptions regarding online behavioral targeting. In this thesis, I suggest that these negative perceptions are explained by the Social Contract Theory.

The Social Contract Theory has been used mainly to explain the relationships between people and their governments; a sort of a social order that governs this relation (Okazaki, Li, and Hirose, 2009). In the context of marketing, Social Contract Theory refers to a similar social order or engagement that ties consumers and companies in regard to the personal information shared with the organizations (Fogel and Nehmad, 2009; Martin, 2016; Pan and Zinkhan, 2006). The social contract is defined as "the commonly understood obligations or social norms for the parties involved" (Li, 2012, p. 474). In other words, the social contract is a theoretical or notional contract that consumers expect from companies to abide by, when they share their data with. The Social Contract Theory posits that consumers trust organizations to provide them with safe products and services, to perform as expected and clearly communicate the risks of usage (Donaldson, 1982). This social contract forms a sort of commitment that organizations have to abide by. An example of this contract could be a label placed on the packaging of a product that indicates all the necessary information that consumers would need to know about it.

While adhering to the regulations and rules imposed by the social contracts or agreements can help companies grow (Donaldson, 1982; Smith, 1995), failing to do so can bring huge challenges to these companies. Indeed, when consumers feel that the companies are breaching the perceived social contract, consumers will tend to cut their

relationships with the organizations such as not engaging in future transactions. The social contract suggests a moral commitment that incorporates the real and perceived relationships between the organizations and consumers (Donaldson, 1982).

In the past decades, researchers have looked at the Social Contract Theory in the context of online marketing and targeting (Fogel & Nehmad, 2009; Martin, 2016). Consumers share their personal information with online organizations and trust them to handle their personal information with care and expect them to safeguard them because consumers believe that there is a moral commitment to protect their personal credentials as implied by the social contract. In different terms, consumers believe that it's within their rights that their personal information is respected by the parties that are going to use that information and that this use does not cross the mutual accepted conditions between the two parties (Okazaki et al., 2009).

When consumers feel that the companies are not respecting this social contract, they feel that these brands are dishonoring that commitment which can influence their online behavior, such as adjusting their behavior to protect their privacy (Martin, 2016; Pan and Zinkhan, 2006). However, because this social contract is hypothetical, and most people have different understanding on how these companies collect data online (e.g., McDonald and Cranor, 2010; Smit, Van Noort, and Voorveld, 2014; Ur, Leon, Cranor, Shay, and Wang, 2012), the Social Contract Theory depends on each person's perception on the extent to which a company is respecting that contract. In other words, deciding if the social contract is respected or not, depends on the consumers' perceptions.

In the current study, I use the Social Contract Theory to explain the relationship between level of personalization and perceived surveillance. OBA ads rely on past

searches and other personal information collected, then this information is shared with other platforms such as social media to create the personalized ad and target it to the specific consumer. Thus, some users might feel that this moral commitment has been violated when the personal information has been transferred from the brand's website to an ad on social media. Moreover, when the ad contains extremely relevant information or matches the information previously searched for on a browser, this may highlight a breach to this social contract in the eyes of the consumer. I suggest that when the ad has brand and/or product that match the previous search, it would increase the feeling of being watched compared to a brand and/or product mismatch as it increases the personalization of the ad because it relies on more data used to create the ad compared to a brand and /or product mismatch. Moreover, it is expected that the level of personalization of the ad based on the brand and product interact, in which more matches result in higher perceived surveillance. Thus, I hypothesize the following:

H1a: Consumers exposed to an ad that has a brand match with the brand in the previous search will perceive higher levels of surveillance than consumers who received an ad that has a brand mismatch with the brand in the previous search.

H1b: Consumers exposed to an ad that has a product match with the product in the previous search will perceive higher levels of surveillance than consumers who received an ad that has a product mismatch with the product in the previous search.

H1c: The level of personalization of the ad based on the brand (match vs. mismatch) and the level of personalization of the ad based on the product (match vs. mismatch) interact in such a way that levels of surveillance are the highest when they both match, followed

by one match (either product or brand), and the levels of surveillance are the lowest when they both mismatch.

Responses to Perceived Surveillance in the OBA context: Reactance Theory

In an era of privacy erosion and increased surveillance amplified by the cookies used for OBA ads, consumers tend to feel that they lost their autonomy and control over the data they share and even the data that they are not aware of that is being shared (Wunderman Thompson, 2020). Past literature looked at how these privacy issues can negatively influence advertising effectiveness. For example, privacy issues could lead to more avoidance towards the personalized ad (Baek and Morimoto, 2012) but also negative like impact consumers attitudes or purchase intentions (Phelps, D'Souza, and Nowak, 2001)

In this current study, I look at perceived surveillance as part of these privacy issues and challenges that OBA is bringing and how it affects advertising effectiveness. I build on past literature to look into the responses of increased level of personalization of the ad based on the brand and/or product (match vs. mismatch to the brand and/or product previously searched for) mediated by perceived surveillance on avoidance, attitudes, and purchase intentions. I explain to the relationship between perceived surveillance and these advertising responses using the Reactance Theory.

The Reactance Theory (Brehm, 1996) posits that when individuals feel that any of their behaviors is threatened or eliminated, resistance to the message will be aroused. The Psychological Reactance Theory states that resistance happens if people feel that their autonomy of making decisions is controlled (Brehm,1996). According to the theory, when consumers feel that their behavior is being jeopardized in the sense that they feel

that they are closely monitored and controlled, they will resist the persuasive message (Fransen et al., 2015). Indeed, past research has looked at the threats to freedom and their relationship to the responses. These responses are mainly contesting the messages or in other words how to resist that message (Fransen et al., 2015). Resistance is a way to restore this freedom. As explained by Brehm (1996), consumers will tend to look to restore their control by eliminating that threatening behavior (Brehm, 1996).

When consumers feel that the persuasive message is threatening their freedom, they are more likely to get back to the state where they are autonomous (Brehm and Brehm, 1981). In essence, when consumers restore their autonomy, it often leads to behaviors and attitudes that are contrary to those wanted by advertisers. When reactance is activated, consumers might overact and thus lead to irritation to the persuasive message (Brehm and Brehm, 1981). For example, if Nike would show an ad containing the same exact shoes that the consumer has looked for previously, on this consumer's Instagram feed, this consumer might feel that they lost their autonomy, or this ad is threatening to their privacy. In this case, the consumer might resist the message and would lead them to develop resistance responses. These responses could be behavioral such as avoid the ad or related to their attitudes such as disliking the ad, the product or the brand.

In the context of privacy, reactance can lead consumers to resist the message they find coercive, by behaving the opposite way. For instance, Bleier and Eisenbeiss (2015) posit that personalized ads cause consumers to feel that these ads are intrusive which lead them to resist the persuasive message. In their study, they looked at how repetition of personalized ads in the long run, or as they conceptualized it; "over personalization", would lead consumers to feel that these ads are intrusive. Additionally, White et al.

(2008) looked at how personalized emails can trigger reactance. In their study, the authors postulated that when the ads contained identifiable personal information, they would feel that their autonomy is being threatened. Furthermore, Farman et al. (2020) found that people who were exposed to behavioral advertising felt that they were surveilled which increased the feeling of being threated and thus increased reactance and led to more negative attitudes toward the ad and lower willingness to buy. In sum, these studies showed that consumers develop resistance strategies to the personalized message.

In the current study, I argue that increased perceived surveillance would lead people to resist the persuasive message because it mediates the relationship between the message (i.e., personalized message based on consumer's personal information) and the response to it. I argue that in the case of the Nike shoes' ad, for instance, consumers would resist the message because of they feel that they are watched and monitored. This feeling would amplify the threat to consumers' freedom and therefore they will be more likely to avoid the ad and develop negative attitudes toward the ad, product and brand advertised, as well as purchase intention. Thus, I look at perceived surveillance as an antecedent to these resistance outcomes. In essence, perceived surveillance which is a negative perception, influences people's attitudes and behaviors to resist the message. I suggest that perceived surveillance predicts avoidance, attitudes (i.e., attitude toward the ad, the product and brand advertised) and purchase intentions.

Advertising Avoidance

Why do people avoid ads? For years, this question has been studied enormously by both researchers and practitioners to understand the reasons that stand behind this behavior. Its magnitude and importance highlight the extensive research that has been

conducted about it. Advertising avoidance is defined as a response against advertisements from consumers. It is considered as a challenging behavior from consumers because it blocks the communication between consumers and brands (Fransen et al., 2015). Speck and Elliot (1997, p.61) define advertising avoidance as "all actions by media users that differently reduce their exposure to ad content". In other words: avoidance is resistance to persuasive messages.

Past research has looked at the causes and consequences of advertising avoidance and mainly looked at avoidance within traditional media channels such as newspapers (Bellamy and Walker, 1996), radio (Heeter and Greenberg, 1985) and TV (Clancey, 1994). For example, Clancey (1994) postulated that people avoid TV advertisements in three different ways: cognitive, physical, and mechanical. She suggested that cognitive avoidance occurs when people avoid a TV ad by ignoring it, while physical avoidance occurs when people leave the room to avoid the ad, and mechanical avoidance happens when people switch the channel.

Recent research has looked at ad avoidance on the Internet. For instance, Cho and Cheon (2004) found that perceived goal impediment, perceived ad clutter, and prior negative experiences are antecedents of advertising avoidance online. Other studies have looked at perceived relevance and perceived personalization as potential determinants of avoidance behavior (Kim and Huh, 2017). In fact, they found the more the ad is relevant and more personalized, consumers would tend to avoid the ad. For instance, Kelly, Kerr, and Drennan (2010) found that expectations of negative experiences of social networks, perception of relevance of the advertising message, skepticism of advertising claims, and skepticism of social media could also play a role in predicting advertising avoidance.

They found that these elements are present, the more likely consumers would avoid the ad. While these past studies have looked at different antecedents to advertising avoidance, in this study, I look at perceived surveillance as an antecedent or a predictor of avoidance.

In the context of the increased personalization that the Internet might offer in creating and displaying ads to consumers, Cho and Cheon (2004) posit that consumers' ad avoidance online consist of three components of avoidance: cognition, affect, and behavior. They suggest that the cognitive component of avoidance is related to the consumer's belief regarding the advertisement stimulus (e.g., I do not believe the claims in the ad), while the affective component is linked to the consumer's feeling or emotional reaction (e.g., liking or disliking Internet ads). Finally, the behavioral component is related to the consumer's actions to avoid the ad (e.g., leaving the room, or switching the TV channel). In past research as well as in this current study, I am using the conceptualization of advertising avoidance that includes these three components.

In this thesis, I looked into perceived surveillance as a possible new possible antecedent of advertising avoidance in the context of OBA ad. Because of the negative perceptions that can be created by the feeling of being watched, consumers will be more likely to resist the message. I argue that this is because perceived surveillance amplifies the feeling of being controlled and monitored. As explained by the Psychological Reactance Theory, consumers will tend to gain back their autonomy and thus, would avoid these personalized ads (Figure 1). I sum, I hypothesize the following:

H2: *The relationship between the level of personalization of the ad based on the brand and/or product, and advertising avoidance is mediated by perceived surveillance in that a higher level of perceived surveillance leads to more avoidance.*

Attitude towards the ad, product, brand advertised, and purchase intention

Besides advertising avoidance, I will also examine how the level of personalization of the ad based on brand and/or product (matches vs. mismatches with the brand and/or product previously searched for) will affect attitudes towards the ad, product, brand, and purchase intention, mediated by perceived surveillance. The concept of attitude has been evolving during the past decades (Schwarz and Bohner, 2001). Early literature defined attitudes as "a mental and neural state of readiness, organized through experience, exerting a directive and dynamic influence upon the individual's response to all objects and situations with which it is related" (Allport, 1935, p. 810). In later years, the concept of attitude has been reduced to “likes and dislikes” as mentioned by Daryl Bem (1970, p. 14). Eagly and Chaiken (1993) define attitudes as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (p. 1). In this study, I use the definition by Eagly and Chaiken (1993) for the attitude toward the ad, the product, and the brand advertised. In fact, most research has focused on this favorable vs. unfavorable evaluations when defining the concept of attitude. For instance, attitudes towards the ad, product, and brand are defined as a positive or negative response in regard to a particular ad, product, or brand during a particular exposure situation (Mackenzie et al., 1986; Burke and Edell, 1989; Biehal et al., 1992; and Wahid and Ahmed, 2011; Ranjbarian et al., 2011). In fact, Mowen and Minor (2001) posit that this attitude toward the ad refers to consumers’ likes and dislikes

to a particular advertisements' stimulus. A similar logic can be applied to the product or brand in the advertised message. Purchase intention is defined as a future plan of making a purchase of a certain good or service and that does not necessarily translate into action because it is impacted by the ability to make that specific action (Warshaw and Davis, 1985). In other terms, purchase intentions represent the thoughts and willingness to buy of consumers in regard to a certain product (Blackwell et al., 2001).

As stated in a previous section, resistance to the persuasive message can affect consumers' responses to the persuasive message. According to the Reactance Theory, persuasive messages can arouse message resistance or rejection when people feel that their freedom of choice is threatened (Brehm & Brehm, 1981). In fact, past research has also looked at how personalization of the persuasive message can increase feelings of intrusiveness which can lead to lower purchase intentions (Van Doorn and Hoekstra, 2013). In their study, they argued that when the ad is highly personalized, it would increase perceived intrusiveness which has implications for consumers' intentions to buy from that particular brand. In the same context, Cronin and Menelly (1992) argue that consumers reject the advertising technique rather than the content of the message.

While past research has looked at many factors influencing consumers' attitudes and purchase intentions, in a context of online ads, in the current study, I posit that perceived surveillance impacts attitudes toward the ad, product, brand, and purchase intention as suggested by the Reactance Theory. Although these dependent variables (including avoidance) can also be related to each other, the focus of this study is to examine the relationship between the level of personalization of the ad based on brand and/or the level of personalization of the ad based on the product on these variables

mediated by perceived surveillance. Indeed, past research has looked extensively at different predictors of attitudes and purchase intentions. This study sheds the light on a new antecedent of consumers' attitudes and purchase intentions which is perceived surveillance in the context of OBA ads.

In the context of OBA, I posit that higher levels of personalization of the ad based on the brand and/or product (match with brand/product in ad based on previous search), would make consumers feel that they are monitored and watched (Figure 1), and using the Reactance Theory, I hypothesize the following:

H3: *The relationship between the level of personalization of the ad based on the brand and/or product, and attitudes towards the ad is mediated by perceived surveillance in that a higher level of perceived surveillance leads to more negative attitudes towards the ad.*

H4: *The relationship between the level of personalization of the ad based on the brand and/or product, and attitudes towards the product advertised is mediated by perceived surveillance in that a higher level of perceived surveillance leads to more negative attitudes towards the product advertised.*

H5: *The relationship between the level of personalization of the ad based on the brand and/or product, and attitudes towards the brand advertised is mediated by perceived surveillance in that a higher level of perceived surveillance leads to more negative attitudes towards the brand advertised.*

H6: *The relationship between the level of personalization of the ad based on the brand and/or product, and purchase intentions is mediated by perceived surveillance in that a higher level of perceived surveillance leads to less purchase intention*

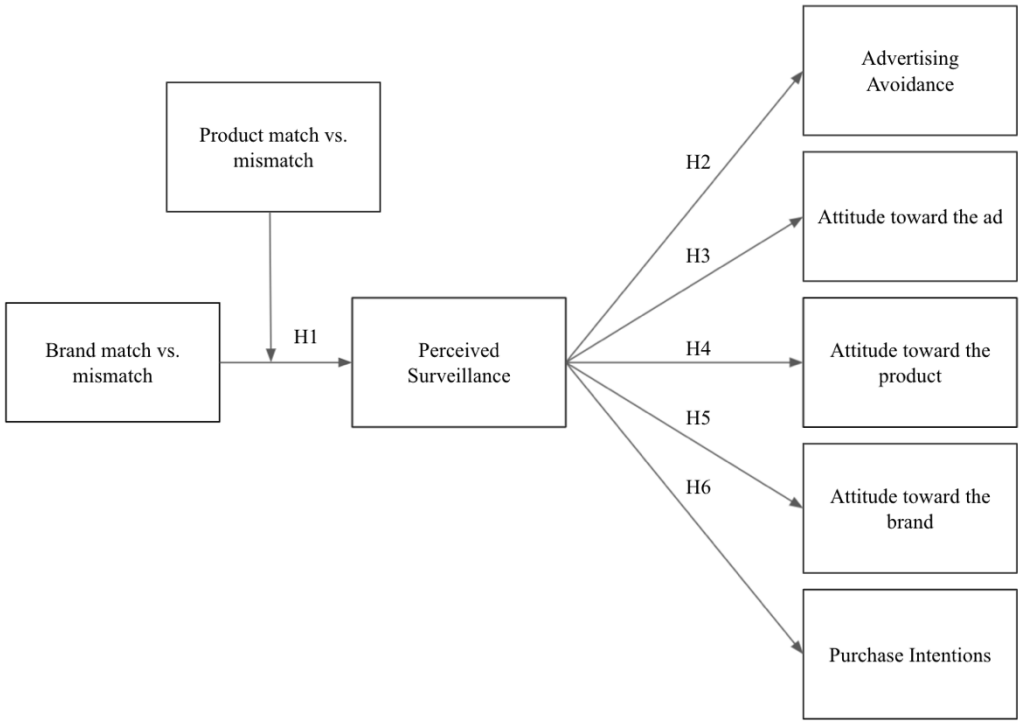


Figure 1: Conceptual Model

CHAPTER 3: METHOD

Experimental Design

A scenario-based online experiment was conducted using a 2 (level of personalization of the ad based on the brand: match vs. mismatch) x 2 (level of personalization of the ad based on the product: match vs. mismatch) between-subject design. I note that scenario-based experiments are common in advertising research (Fisher and Dubé, 2005, Mitra and Lynch, 1995, White et al., 2008). To investigate the proposed effects of the level of personalization of the ad based on the brand and product, I manipulated the brand and product searched for that were either a match or mismatch from the brand and product in the ad. I operationalized the brand match when the participant has read the scenario that has the same brand in the advertisement shown in the Instagram post as in the previous search. A brand mismatch is when the participant has read the scenario that has a different brand in the advertisement shown in the Instagram post as in the previous search. Similarly, a product match is when the product in the ad was the same as the product in the search scenario, and a product mismatch when the product is different. By varying the brand and product match vs. mismatch with the brand and product in the previous search, I examined the relationship of the level of personalization of the ad based on the brand and/or product.

Sample Characteristics

The experiment was administered online using Qualtrics. In this study, participants were recruited through Prolific. Prolific is a platform that is used to recruit participants online. The participants were invited after providing a set of criteria to Prolific; Participants had to be at least 18 years old, living in the U.S. and have used

Instagram in the last 6 months. The average age of the participants was 30.20 years (*SD* = 10.01), ranging from 18 to 60 years. The gender distribution was reasonably balanced with 53 percent female. In terms of education, a majority of the participants were college graduates (39.8%) or had some college education (28.8%). In total, 81.4 percent of the participants indicated that they spend less than two hours on Instagram daily on an average day.

Procedure of the Main Study

Once participants were invited to take part of the survey through Prolific, they were given the link to the survey. When a participant clicked on the survey link to participate in the study, they were moved to the introduction page of the study where the consent was given. Participants then read the introduction page and upon agreeing, they were taken to the survey questions. Participants were randomly assigned to one of four conditions: Condition where the brand and the product are a match (*n*=59), a condition where the product is a match and the brand is a mismatch (*n*=60), a condition where the brand is match, but the product is a mismatch(*n*=59), and a condition where both the brand and the product are a mismatch (*n*=58) from the search scenario.

The scenarios asked participants to imagine themselves browsing a particular product from a particular brand, then visiting the brand's website. Then, participants were asked to imagine themselves logging into their Instagram account and while they were scrolling into the feed, they were exposed to an Instagram ad that showed a product of a brand (See stimulus material attached in the Appendix). The Instagram ad was the same for all four groups while the search scenario (the text they have read at the beginning) differed depending on the condition they were in. The ad remained constant for the four

conditions. The choice of manipulating the search scenario instead of the advertisement is backed by the argument that it is important to limit the differences between the different situations seen by the participants. In other words, keeping the advertisement the same minimizes possible confounding factors that might influence the results of this study: such as the picture of the advertisement, the copy, etc. Thus, the decision to manipulate the scenarios (texts only) reinforces this argument (Geuens and De Pelsmacker, 2017). Then, participants were asked to answer a questionnaire about their attitude, purchase intention, perceived surveillance, and ad avoidance. Brief demographic questions were also asked. At the end of the survey, participants were debriefed about the purpose of the study. The study took about 15-20 minutes to complete.

Stimuli Material

The stimulus material consisted of a search scenario; a text that presents a particular situation to the participants and a picture of an Instagram ad.

Instagram as the Social media platform for advertising

According to Voorveld et. al (2018), each social media platform is different in content context, engagement levels, and experience. For the purpose of this study, I chose Instagram as the social network for various reasons. The choice to use Instagram for this research was based on the fact that Instagram has been growing extensively in the U.S. and the world. Indeed, Instagram has 140 million U.S users and is being used by 1 billion people around the world every month (Hootsuite, 2021). Furthermore, Instagram has grown a reputation of being 'the platform' for advertising. Indeed, 130 million users use it for shopping every month (Hootsuite, 2021) which highlights the role of organizations in targeting their audiences through their official Instagram accounts and influencers.

Besides, the latest feature that Instagram added, the "Shop" reinforces this social platform's positioning. Additionally, it is noted that 81% of the Instagram users use Instagram to look for products and services (Hootsuite, 2021). Therefore, this study has used this platform to investigate the level of personalization of advertisements on social media.

Instagram offers advertisers many options to advertise their products and brands. Whether it is on their feed, their stories, or as pop-up notifications linking the ad to the "Shop" tab, advertisers have ample choices of attracting the attention of their target audience on this platform. Furthermore, Instagram suggests different ad formats such as a regular Instagram post, a carousel, or a video so that advertisers can create content for their brand. This study used an in-feed regular post with one picture. This is mainly because it is easier to create and ensure that this post will be functioning and uploaded on Qualtrics quickly. Furthermore, the in-feed post has a more realistic appearance as it presents the name of the company, the logo, the caption, and the picture of the product advertised. Indeed, because I conducted an online experiment for this study, I wanted to make sure that the stimulus material has a sense of reality and would help in immersing the participants in a credible and realistic context.

Choice and Creation of the Stimuli

A pre-test was conducted to choose the brands and products to be used for the stimulus of the main study. This includes the product categories, the products to be advertised, and the fictitious brand names to be used. The pretest asked participants to provide their opinions on different product categories, products, and brand names.

For the pretest, an online questionnaire was used with a sample size of 80 adults recruited through Amazon MTurk. Participants had to be 18 years old or older and live in the U.S with a good command of the English language. After data cleaning, two participants were removed because they did not meet these stated criteria, and thus, only 78 responses were retained. The sample had a mean age of 37.31 (*SD*= 10.56) and consisted of 62.8% of males. Participants were asked to answer questions about attitude/familiarity toward fictitious brand names, familiarity/attitude towards products categories that might be advertised on social media. The study took about 5-10 minutes to complete.

I pretested two product categories: electronics and sportswear. I chose these categories because they are more relevant to a larger audience regarding gender, financial situation, and preferences. Indeed, the products associated with these categories appeal to a more significant segment and thus increase the familiarity with the categories and products offered within these categories. Furthermore, for each category, six products were considered for the pretest. Moreover, the pretest tested fictitious brand names: six names were tested for each category. This study used fictitious brand names to limit pre-existing perceptions and attitudes towards the organizations (Geuens and De Pelsmacker, 2017)

Results of the pretest

Choice of the product category.

The choice of the product categories to be tested was limited to two categories, namely sportswear and electronics. To choose between these two categories: electronics or sportswear, a repeated measure ANOVA was conducted to look at the difference between

the different categories in terms of the likelihood of each category appearing on Instagram. I chose the category that was more likely to be advertised on Instagram in order to have a more credible and realistic stimulus material for the study.

The repeated measures ANOVA results showed a marginally significant difference between the two categories in terms of likelihood of that particular category being advertised on Instagram ($F(1,72) = 7.082$, $p = .010$). When looking at the means of each category, results showed that the electronics category had a higher mean (M=3.88, SD=1.11) than the sportswear's (M=3.45, SD= 1.39). This means that it is more likely that the electronics category will be advertised on Instagram compared to sportswear. Thus, I decided to choose the electronics category for the main study.

Choice of the products within the electronics category

Six products within the electronics category were suggested: Headphones, Smartphones, Mouse, HDMI cables, Smartwatch and a Selfie Stick. To choose two products among the six suggested products among the electronics category, I looked at the attitude toward the product, products more likely to be advertised on Instagram, willingness to buy in the next six months, and their preferences between the different products. Participants indicated their preferences by ranking the suggested products.

First, a repeated-measure ANOVA was conducted for attitude toward the different products as within factor. Results showed that there was a significant difference between the different products in terms of attitude (F (5,385) = 16.43, $p < .001$). When looking at the means of each category, results showed that the smartphone had the highest mean (M=4.33, SD=1.03) followed by the headphones (M=4.23, SD= 0.88) than some of the other products. Furthermore, these two products do not significantly differ from each

other (95% BCBCI [-.46, .26]). We conclude that the smartphone and the headphones had more positive attitudes towards them and they are not statistically different from each other.

Second, I conducted a repeated-measure ANOVA to look at the likelihood that the products suggested would be advertised on Instagram specifically. Results showed that there was a difference between the different products in terms of likelihood of advertising ($F(5,385) = 18.33$, $p < .001$). When looking at the means of each product, it appeared that the smartphone had a higher mean (M=4.54, SD=0.98) followed by the headphones (M=4.40, SD= 0.92). Furthermore, these two products do not significantly differ from each other (95% BCBCI [-.50, .22]). This means that the smartphone and the headphones are more likely to be advertised on Instagram compared to the other products suggested.

Third, I conducted a repeated-measure ANOVA to look at the willingness to buy in the next six months of the six products suggested. Results showed that there a difference between the different products in terms of willingness to buy (F (5,385) = 12.17, p <.001). When looking at the means of each product, it appeared that the headphones had the highest mean (M=3.56, SD=1.37). Additionally, the smartphone (M = 3.23, SD = 1.51) did not significantly differ from the headphone in terms of willingness to buy (95% BCBCI [-.11, .75]).

Finally, I looked at the preferences between the six products suggested. Participants were asked to rank the products according to their preferences. To look at the most preferred products, I run a frequency analysis to look at how many times the products were ranked as most preferred (rank=1). Results showed that the smartphone

was ranked top 48 times followed by the headphones as top choice 17 times. In sum, based on the attitude towards the product, likelihood that the product would be advertised on Instagram, willingness to buy, and preference, I chose the headphones and the smartphone as products for the search scenario and Instagram ad.

Choice of the brand names.

Six fictitious brand names for the electronics category were suggested: Scoop, Oivo, Nuevap, Digiglobe, WonderTech and Elviveplus. To choose two names among the six suggested brand names, I looked at the attitude toward the brand name, familiarity and fit with the electronics' category. First, a repeated-measure ANOVA was conducted for the attitude toward the brand names. Results showed that there was a difference between the different brand names in terms of attitude ($F(5,385) = 2.52$, $p = .029$). When looking at the means of each category, results showed that WonderTech had a mean close to 4 on a 7 Likert scale, which is the neutral ($M=3.56$, $SD=1.03$) followed by the Digiglobe ($M=3.35$, $SD= 1.01$). Furthermore, these two brand names do not significantly differ from each other (95% BCBCI [-.68, .24]). I conclude that WonderTech and Digiglobe had more neutral attitudes and they are not statistically different from each other.

Second, I conducted a repeated-measure ANOVA to look at the familiarity of the brand names suggested. Results showed that there was a difference between the different brand names in terms of familiarity (F (5,385) =2.76, p = .018). When looking at the means of each product, it appeared that all brand names suggested are unfamiliar with means ranging from 2.15 to 2.50 on a 7-point Likert scale.

Finally, I conducted a repeated-measure ANOVA to look at brand name fit with the electronics' category. Results showed that there was a difference between the different brand names in terms of fit (F (5,385) = 21.81, p <.001). When looking at the means of each brand name, it appeared that WonderTech had the highest mean or better fit (M=4.12, SD=1.019) followed by Digiglobe (M=3.62, SD= 1.198). This means that WonderTech and Digiglobe have, as brand names, better fit with the electronics' category compared to the other brand names suggested. According to attitude, familiarity, and fit criteria, I chose WonderTech and Digiglobe as brand names. The Instagram post was then created based on the pretest (See Appendix 3). The Instagram ad featured headphones of WonderTech. The smartphone and Digiglobe only featured in the text to manipulate level of personalization with the ad. Therefore, the measures (e.g., attitude, purchase intention) were direct towards (product) and WonderTech only.

Measurements

Perceived Surveillance. Perceived surveillance was measured by asking participants to indicate the extent to which they agree with four statements starting "When I imagined seeing ad after the search, I had the feeling that advertisers were …" followed by 1) looking over my shoulder, 2) entering my private space, 3) watching my every move, and 4) checking up on me (1=totally disagree, 7= totally agree) (Segijn and van Ooijen, 2020). The measurement scale of perceived surveillance was created by averaging the multiple items (Cronbach's alpha = 0.96, M=4.59, SD=1.63)

Advertising Avoidance. Advertising avoidance was measured using the scale used by Chinchanachokchai et al. (2020), which is based and adjusted of the Cho and Chan (2014)'s scale of online advertising avoidance. The adjusted scale included the context of

social media. I have adjusted the scale to make it related to Instagram specifically. Participants were asked to indicate their extent to which they agree on a 7-point Likert scale to the following statements: “I intentionally ignore any ads on Instagram”, I hate seeing ads on Instagram just like the one mentioned in the scenario, I scroll down past ads on Instagram”. The measurement scale of advertising avoidance was created by averaging the multiple items (Cronbach’s alpha = 0.95, *M*=4.37, *SD*=1.60)

Attitudes. Attitude towards the ad, the product advertised, and the brand advertised were measured using a 4-point semantic differential scale based on Chang and Thorson (2004) using Unappealing vs Appealing”, “Bad vs. Good”, “Not Attractive vs. Attractive”, “Not Interesting vs. Interesting”. The measurement scale of attitude toward ad, product and brand advertised were created by averaging the multiple items respectively. For attitude toward the ad (Cronbach’s alpha = 0.94, *M*= 4.31, *SD*= 1.53), for attitude toward the product advertised (Cronbach’s alpha = 0.95, *M*=4.57, *SD*=1.67), and for attitude toward the brand advertised (Cronbach’s alpha = 0.95, *M*=4.22, *SD*=1.51).

Purchase Intention. Purchase intention was measured using the scale used by Voorveld, Neijens, and Smit (2011). Participants were asked to answer the following questions: “If I were going to purchase Headphones from WonderTech, I would consider buying this brand”, If I were shopping for Headphones from WonderTech, the likelihood I would purchase this brand is high, My willingness to buy this brand would be high if I were shopping for Headphones from WonderTech, The probability I would consider buying this brand is high”. The measurement scale of purchase intention was created by averaging the multiple items (Cronbach’s alpha = 0.97, *M*=3.79, *SD*=1.63)

CHAPTER 4: DATA ANALYSIS AND RESULTS

Data Cleaning

Before analyzing the data, cleaning the data set is essential. For the sake of making sure that participants who took part in the study followed the pre-established criteria that I shared with Prolific (criteria of participants: Country of Citizenship, Age and Instagram use), a set of other criteria were also taken into account. These criteria include participants indicating their approval of data use by answering a 7-scale question (1= "Definitely Do not Use my Data", 7= "Definitely use my data"). Participants who answered 1 or 2 on this scale were removed from the study. Furthermore, the criteria included failing the two attention checks in the questionnaire and spent less than 300 seconds completing the survey. Attention checks were items that were included in the survey asking participants to choose a specific answer. These items are used to make sure that participants are reading all the elements of the questionnaire. If all these criteria are met, participants shall be removed. According to these pre-established criteria, no response was deleted. I note that participants who mentioned a different country of citizenship, other than the US, were removed and replaced with other participants through Prolific. Thus, the final sample consists of 236 participants (See method for sample characteristics).

Randomization Check

A set of randomization checks were conducted to make sure that the randomization across the different conditions was successful and examine any potential confounding variables. For the tests, I looked at age, gender, and Instagram use to ensure

an effective randomization between the groups. First, a between-group comparison for age was conducted using a one-way ANOVA. Results of this test showed that there is no significant difference between the four conditions in age $F(3,232)=1.46$, $p=.227$. This means that participants from different ages were randomly assigned to the different conditions and thus was not included as control factor.

Second, a randomization check for gender was performed using Chi-square to see if there are differences between the conditions in terms of gender. Before conducting the test, I note that the items for the gender question included: “Male”, “Female”, “Other” and “Prefer not to say”. For the purpose of conducting the chi-square test, the item of “Prefer not to say " was marked as missing because the number of participants who indicated this option is very small ($n=2$). Furthermore, “Other” was also marked as missing because of the same reason as “Prefer not to say” ($n=4$). Results of the Chi-square test showed that there are no significant differences between the conditions in terms of gender (chi-square (5) =5.51, $p=.138$). This means that taking into account gender, the participants were assigned evenly to the different conditions of the experiment. Thus, gender was not included as control variable.

Third, the daily frequency of Instagram use was tested as a possible confounding variable. We note that the question for Instagram use included four items: “None”, “Less than one hour”, “Between 2 and 5 hours” and “More than 5 hours”. The results of the Chi-square test showed that there is no significant difference between the four conditions of the experiment on the basis of daily Instagram usage (chi-square (9) =6.59, $p=.680$). This means that the randomization check was successful; participants in the four

conditions were assigned evenly in regard to their Instagram use. Therefore, the daily usage of Instagram was not used as a control variable.

Manipulation Check

Participants were randomly assigned to one of four conditions in a 2 (level of personalization of the ad based on the brand: match vs mismatch) x 2 (level of personalization of the ad based on the product: match vs. mismatch) between-subjects design. Manipulation checks are used in experimental research to make sure that participants in the different conditions understand and/ or react according to the conditions they were part of (Hoewe, 2017). To test the effectiveness of the manipulation in this experimental design, I included two questions in the questionnaire that asked participants to verify their understanding and awareness of the condition they were assigned to; one question asked them about the brand and another one about the product they saw in the ad in comparison to the ones mentioned in the search scenario.

To test whether the manipulation was successful, I conducted two Chi-square tests to investigate the differences between the four conditions that participants were randomly assigned to and what condition participants believed they were in. The perceived level of personalization of the ad based on the brand (match vs. mismatch) was measured as a dichotomous variable: 1 for brand match (scenario vs. ad) and 0 for brand mismatch (scenario vs. ad). Same goes for the perceived level of personalization of the ad based on the product (match vs. mismatch), which included 1 for product match (scenario vs. ad) and 0 for product mismatch (scenario vs. ad). Because I included a “I don’t remember” option, I marked this item as missing for the two questions. For the purpose of running statistical tests, I needed to look at the differences between the assigned conditions and

perceived conditions. Thus, the decision to remove the “I don’t remember” option was made.

First, I ran a Chi-square test to investigate whether or not there are differences between the conditions assigned to vs. perceived in terms of the brands used in the experiment. Results showed that manipulation check was successful, chi-square (3) =122.73, $p<.001$) meaning that there are significant difference between the conditions. In fact, 90.7% of those who were assigned to the condition where the brand and the product in the ad matched the ones in the search scenario, indicated that they saw the same brand (brand match). Furthermore, 88.7% of those who were in the brand match, product mismatch condition answered that they saw the same brand (brand match). These results confirm that most participants remembered and were aware of the situation they were in, which highlights the success of the manipulation.

Second, I ran Chi-square tests to see whether or not there are differences between the conditions assigned to vs. perceived in terms of the products. Results showed that the condition that participants think they were in, was the same as the one they were assigned to, chi-square (3) =122.73, $p<.001$. In other words, there were significant differences between the conditions in terms of whether participants thought they had seen the same versus different product in the ad in relation to what they searched for. In fact, 95.9% of the participants assigned to the condition where the brand and the product in the ad matched the ones in the search scenario, indicated that they saw the same product in the ad as in the search scenario (product match). Moreover, 86.3% of those who were in the condition where the product matched and the brand mismatched from the ones the ones in the search scenario (product match), also said that they saw the same product in the ad

and the search scenario. Thus, we can conclude that the manipulation check for the product was successful.

Participants who did not remember which condition they were assigned to were kept in the analysis because of their small number in relation to the size of the sample (Meyvis et al., 2017). Furthermore, because this question was at the end of the survey, memory could have played a role in this.

Hypotheses Testing

Level of personalization of the ad and perceived surveillance (H1)

To test the first hypothesis on the relationship between the level of personalization of the ad and perceived surveillance, a two-way ANOVA was conducted on the influence of the level of personalization of the ad based on the brand (match vs. mismatch of the brand in the ad with the brand in the previous search) and the level of personalization of the ad based on the product (match vs. mismatch of the product in the ad with the product previously searched for) on perceived surveillance (Figure 1). The results showed that the main effect of the level of personalization of the ad based on the brand (match vs. mismatch) showed a significant difference between the brands, F (1, 232) = 10.18, p=.002. More specifically, when the brand shown in the ad matched with the brand shown in the search scenario then perceived surveillance was significantly higher (M=4.92, SD=1.53) than when the brand in the ad did not match with the brand in the search scenario (M=4.26, SD=1.66). However, the results showed that the main effect of the level of personalization of the ad based on the product was not significant F (1, 232)=0.29, p=.592, meaning that there is no significant difference in perceived

surveillance whether the product shown in the ad matched the search scenario (*M*=4.64, *SD*= 1.63) or not matched with the product shown in the search scenario (*M*=4.54, *SD*=1.64). Furthermore, I note that the interaction effect of level of personalization of the ad based on the brand and product was not significant *F* (1, 232)=.1.42, *p*=.235).

According to these results, I conclude that H1a was supported while H1b and H1c were not supported. As expected, when the brand in the ad matches the brand previously searched for, perceived surveillance is higher. However, we do not have enough evidence to argue that increased personalization of the ad based on the product (product match vs. mismatch with the product previously searched for) would increase perceived surveillance. Furthermore, the hypothesis is also rejected for the interaction effect meaning that we do not have enough evidence to argue that brand and product match (vs. mismatch) increase levels of perceived surveillance in conjunction.

Responses to Perceived Surveillance

For the next hypotheses (H2-H6), I ran PROCESS model 8 (Figure 1) to examine to what extent the level of personalization of the ad based on the brand (match vs. mismatch with the brand previously searched for) and level of personalization of the ad based on the product (match vs. mismatch with the product previously searched for) would lead to more avoidance, attitude towards the ad, product, brand, and purchase intention through perceived surveillance. In total, I ran five different models, one for each dependent variable (i.e., advertising avoidance, attitude toward the ad, attitude toward the product advertised, attitude toward the brand advertised, and purchase intention). Below the results of the tests for each hypothesis. Given that the results of the independent variables (level of personalization of the ad based on brand and product) on perceived

surveillance are the same as in the analysis for H1, I will focus in the next part on the relationship between perceived surveillance and the dependent variables.

Perceived Surveillance and Advertising Avoidance (H2)

To test the second hypothesis related to the relationship between the level of personalization of the ad based on brand and/or product (match vs. mismatch) and advertising avoidance mediated by perceived surveillance, a moderated mediation with PROCESS model 8 was conducted. Results showed that the moderating mediation is not supported (95% BCBCI [-.51, .11]). This means that we have no evidence to argue that there is an effect of moderated mediation because of the relationship between the independent variables on perceived surveillance. This could be explained by the non-significant relationship of the level of personalization of the ad based on the product (match vs. mismatch; see H1b) and the absence of an interaction effect between the level of personalization of the ad based on the brand and product (see H1c). However, the results showed that perceived surveillance predicts advertising avoidance. In line with our expectations, I note that when perceived surveillance increases, advertising avoidance also increases (b=0.36, p<.001). In sum, perceived surveillance predicts advertising avoidance in that higher levels of perceived surveillance led to increased advertised avoidance and thus **H2 is supported**. Thus, when there is brand match (vs. mismatch), perceived surveillance will increase which will lead to higher advertising avoidance.

Perceived Surveillance and Attitude toward the ad (H3)

To test the third hypothesis that investigates the relationship between the level of personalization of the ad and attitudes toward the ad mediated by perceived surveillance,

I ran model 8 of PROCESS to test the moderated mediation. Similar to the previous analyses, the results indicated that the moderating mediation is not supported (95% BCBCI [-.07, .34]) because of the relationship between the independent variables on perceived surveillance (See H1b and H1c). However, results showed that perceived surveillance predicts the attitude toward the ad. Indeed, there is a negative relationship between perceived surveillance and attitude toward the ad; we note that when perceived surveillance increases, attitude toward the ad decreases (b=-0.23, p<.001). In sum, perceived surveillance predicts the attitude toward the ad; when the level of perceived surveillance increases, the attitude towards the ad is more negative and thus **H3 is supported**. Thus, when there is a brand match (vs. mismatch), it will lead to more perceived surveillance which will lead to more negative attitudes toward the ad.

Perceived Surveillance and Attitude toward the Product Advertised (H4)

I ran a moderated mediation analysis using PROCESS model 8 to test the relationships between the level of personalization of the ad and the attitudes toward the product advertised mediated by perceived surveillance (H4), mainly to look at the relationship between perceived surveillance and the attitudes toward the product advertised. Results showed that the moderating mediation is not supported (95% BCBCI [-.07, .34]) because of the relationship between the independent variables on perceived surveillance (See H1b and H1c). Results showed that perceived surveillance predicts the attitude toward the product advertised. Indeed, there is a negative relationship between perceived surveillance and attitude toward the product advertised; we note that when perceived surveillance increases, attitude toward the product advertised decreases (b=-0.23, p<.001). In conclusion, perceived surveillance predicts the attitude toward the

product advertised in that higher levels of perceived surveillance led to more negative attitudes towards the product advertised and therefore **H4 is supported.** Thus, when there is a brand match (vs. mismatch), it will lead to more perceived surveillance which will lead to more negative attitudes toward the product advertised.

Perceived Surveillance and Attitude toward the Brand Advertised (H5)

To test the relationship between the level of personalization of the ad and attitudes toward the brand advertised mediated by perceived surveillance (H5), a moderated mediation analysis was conducted using PROCESS model 8. Results showed that the moderating mediation is not supported (95% BCBCI [-.06, .03]) because of the relationship between the independent variables on perceived surveillance (See H1b and H1c). However, the results showed that perceived surveillance does predict attitude toward the brand advertised (p=.002) and we note that there is a negative relationship between perceived surveillance and the attitude toward the brand. In fact, when perceived surveillance increases, attitudes toward the brand decreases (b=-0.75). In conclusion, perceived surveillance predicts the attitude toward the brand advertised in that higher levels of perceived surveillance led to more negative attitudes towards the brand advertised and therefore **H5 is supported.** Thus, when there is a brand match (vs. mismatch), it will lead to more perceived surveillance which will lead to more negative attitudes toward the brand advertised.

To test the sixth hypothesis related to the relationship between the personalization of the ad and purchase intentions mediated by perceived, I ran PROCESS model 8. Results showed that the moderating mediation is not supported (95% BCBCI [-.06, .32])

because of the relationship between the independent variables on perceived surveillance (See H1b and H1c).

However, results showed that perceived surveillance does predict purchase intention (p=.002). We also note that there is a negative relationship between perceived surveillance and purchase intention. In fact, when perceived surveillance increases, purchase intention decreases (b=-0.20). In sum, perceived surveillance does predict consumers' purchase intention, in that when perceived surveillance increases, purchase intentions decrease and thus **H6 is supported.** Thus, when there is a brand match (vs. mismatch), it will lead to more perceived surveillance which will lead to lower purchase intentions.

CHAPTER 5: SUMMARY AND DISCUSSION

The digital age has brought many tools and advantages to advertisers to better reach their target audiences online through social media. Online Behavioral Advertising (OBA) is one of these techniques that allow advertisers to target their audiences with personalized persuasive messages based on behavioral information collected on consumers. The increased level of personalization or specificity of the ad based on the brand and/or product (match vs. mismatch with the brand and/or product in the past search) could make consumers feel that they are being watched (Smit, Van Noort, and Voorveld 2014) or also called perceived surveillance (Xu et al., 2012) and this negative perception might influence them. This study specifically studied the role of perceived surveillance in influencing consumers' avoidance behavior, affective responses, and purchase intentions in the context of OBA.

The aim of this study was to look at how increased level of personalization of ads based on the brand and/ or product (match vs. mismatch in relation to receiving an ad based on past search) in the context of OBA would influence advertising avoidance, attitude toward the ad, attitude towards the product advertised, attitude towards the brand advertised, and purchase intention through perceived surveillance. I conceptualized a higher level of personalization of the ad in this study when the brand and/or product displayed matches the brand and/ or product previously searched for. In contrast a lower level of personalization is when the brand and/or product do not match the brand and/or product in the ad compared to what the consumer previously searched for. In essence, the

more the ad contains past data (in this context past search of the brand and product), the more the ad is personalized.

Results showed that when there is a brand match (same brand in the Instagram ad as previously searched for) perceived surveillance is higher, meaning that consumers are more likely to feel that they are watched when the brand previously searched for matches the brand advertised in an OBA advertisement. Contrary to the expectations I did not find a relationship between the personalization of the ad based on the product (match vs. mismatch) nor an interaction effect; meaning that we do not have evidence to argue that product match vs. mismatch in relation to the product in the previous search has an effect on perceived surveillance. Furthermore, there is no evidence of interaction effect between the levels of personalization of the ad based on the brand and the product. This finding brings interesting reflections in understanding consumers' perceptions. These results could be explained by how consumers differ their perceptions to the social contract. It could be that some consumers are less concerned with what is being used by advertisers to create the ad, which is also backed by the Social Contract theory (Li, 2012). Another explanation could be that the social contract is mainly associated with the company or business rather than the product itself. In other words, the increased level of personalization of the ad based on the brand (match) increased levels of surveillance because consumers might have associated the brand to the website previously searched for. In essence, consumers' perceptions linked to the social contract is mainly associated with the business and the brand, rather than the specificity of the product. Future research is needed to validate to further validate this claim.

Moreover, as expected and in line with past research, increased perceived surveillance is more likely to increase advertising avoidance. Indeed, this study confirms that perceived surveillance predicts avoidance. Furthermore, increased surveillance also negatively influences the attitudes toward the ad, the product and the brand advertised as well as purchase intentions. These results highlight once again the importance of privacy issues among consumers. This phenomenon is mainly explained by the Reactance Theory (Brehm, 1996). When people feel that their freedom or autonomy is being threatened, they are more likely to resist the message. In sum, a brand match (vs. mismatch) led to higher levels of perceived surveillance which led to more advertising avoidance, more negative attitudes toward the ad, the product and brand advertised as well as lower purchase intentions.

Theoretical Contributions

The results of this study provide insights on theoretical levels. In fact, it advances theory by studying the level of personalization of the as based on the brand and/or product (match vs. mismatch) of OBA ads based on a previous search and how this can impact perceived surveillance which in turn influences advertising outcomes (i.e., ad avoidance, attitudes, and purchase intentions). Indeed, it is interesting to look at it from a consumer-privacy perspective. This research highlights the need for further investigation into the level of personalization of online ads because an understanding of the factors that would influence consumers to avoid personalized ads and how they evaluate these ads can help advertising scholars develop a theoretical framework to understand consumers' responses to highly personalized ads. In fact, this study provided a different

conceptualization of the level of personalization of OBA ads from past literature. This new conceptualization can bring interesting implications for understanding the concept of personalization in advertising and thus could inspire new frameworks of the level of personalization of OBA ads.

Furthermore, this thesis brings to light how consumers relate perceived surveillance to the personalized ads based on brand and/or product match vs. mismatch in relation to the brand and/or product previously searched for. What consumers perceive as a breach of this social contract could inspire a new line of research in the context of personalization. This research advances knowledge in this area by showing that when a consumer receives an ad that contains the same brand as the one they searched for, they will feel more surveilled.

Moreover, this thesis maps out a conceptual framework of perceived surveillance as an antecedent to advertising avoidance as well as evaluative outcomes (i.e., attitudes and purchase intentions). While past research has looked at antecedents of advertising such as goal impediment (Cho and Cheon, 2004) or privacy concerns (Kim and Huh, 2017), this thesis has looked into perceived surveillance as a predictor of advertising avoidance. This study brought to light the importance of perceived surveillance, a newly studied concept, in shaping consumers' attitudes and behaviors. Indeed, this thesis confirms the extent to which perceived surveillance drives the relationship between brands and consumers. In fact, the results have shown that perceived surveillance predicts all these relationships: behaviors such as avoidance and attitudes. Therefore, perceived surveillance should be at the forefront of OBA. This finding could inspire new research in looking at possible responses that perceived surveillance could lead to.

Practical Implications

The advertising industry has for so long claimed that OBA brings many benefits compared to non-targeted ads (Beales, 2010; Chen and Stallaert, 2014). These benefits might be outweighed by the challenges that OBA can bring; mainly related to privacy. The findings of this thesis highlight interesting implications to practitioners. While privacy challenges have been a trending topic and concern addressed by the big four: Apple, Google, Amazon and Facebook in the past few years, further measures should be taken to protect users' personal information that are used for OBA ads. Indeed, the findings in this study highlights the how surveillance impact advertising outcomes, avoidance, attitudes and purchase intentions. This increased worry about their personal information and behavior that is being used for persuasive reasons might have implications for not only how they perceive marketing and advertising strategies such as Online Behavioral Advertising but also serious implications on how they perceive the brands using this technique and the behaviors that they might take to cut the communication between them and the company (i.e., avoidance).

Indeed, this research gives insights on the relationship between perceived surveillance and avoidance as well as attitude towards the ad, product, and brand advertised, and purchase intentions. This study gives practitioners more insights about consumers' attitudes, purchase intentions, and behavior regarding OBA in a context of increased levels of surveillance impacted by a higher personalization of the ad based on the brand (match vs. mismatch of the brand in the ad as compared to a previous search). The findings help advertisers understand how consumers perceive ads in a time where

privacy is prominent. The results suggest that perceived surveillance predicts behaviors and other advertising outcomes, in the sense that consumers will tend to have more negative attitudes towards the brand, the product and the ad when they feel watched. In addition, this gives opportunities to competitors to target potential clients because diversifying the brand in the ad lowers the level of perceived surveillance. Thus, this brings important implications for the dynamic of competitor brands and the role of programmatic advertising. In other words, competitors can take advantage of the mismatch between the brand searched for vs. the brand advertised to target consumers since this will lower consumers' perception of feeling watched and surveilled. This result brings interesting implications for programmatic advertising as it will create a competitor's dynamic that will also lead to implications on the bidding process and pricing.

Finally, the results of the current study show that consumers are more likely to avoid ads and less likely to purchase from the brand advertised because of perceived surveillance. These results highlight the importance of the downside of OBA ads. This thesis can support the idea that advertisers and marketers need to align their marketing strategies and campaigns keeping in mind what matters most to their customers: their privacy.

Limitations and Suggestions for Future Research

This thesis aimed to map out a new conceptual framework of consumers' tendency in avoidance as well their evaluative outcomes in relation to perceived surveillance in the context of personalization of ads based on brand and/or product (match vs. mismatch in relation to a the brand and/or product previously searched for).

However, there are limitations to this research that should be acknowledged. First, online scenario-based experiments have many limitations because of their fictional nature. Asking participants to imagine themselves in a particular situation could not allow them to have an immersive experience where they can really engage with the scenarios presented. While this technique is used to increase the study' internal validity, it is hard to make broad generalizations with the results presented (Mook, 1983). Thus, future research is needed to replicate the conceptual model to enhance the external validity of the results by creating an observational study for example.

Second, this thesis used a stimulus that was created using a picture. While I tried to replicate an in-feed Instagram sponsored ad, this stimulus still lacks realisticness and thus generalizability. Furthermore, it would be interesting to replicate the study while changing the format of the advertisement that are used on Instagram. It would be interesting to look at different advertising formats because of their different placements for example would in-feed advertisements differ from stories ads. Third, this study used Instagram as the social media platform which is known for its advertising content. For future research, it would be interesting to look at other social media and if perceived surveillance would be different from one platform to another (Voorveld, 2018). Finally, I did not find a significant relationship of the level of personalization of the ad based on product match vs. mismatch. I only used one type of product in this study. Future research is needed to examine whether the level of the personalization of the ad based on the product does not affect advertising effectiveness through perceived surveillance or whether it depends on the product used.

Conclusion

This thesis looked into how the level of personalization of ads based on the brand and/or product match vs. mismatch in the context of Online Behavioral Advertising influenced advertising outcomes such as ad avoidance, attitudes, and purchase intention through perceived surveillance. The findings of this thesis highlighted that higher levels of personalization of the ad based on the brand (same brand in the ad as previously search for) predicted higher levels of perceived surveillance. However, higher or lower levels of personalization of the product did not have an effect on perceived surveillance. Furthermore, results showed that higher levels of perceived surveillance led to higher ad avoidance and higher negative attitudes toward the ad, the product and brand advertised as well as lower purchase intentions. In fact, this thesis shed the light on one of the most trending topics that is currently happening which is surveillance and privacy challenges on social media. Indeed, the findings of this thesis support the conversations that are currently happening in regards of marketing surveillance and pricy issues. In January 2021, a coalition was created calling on "Ban Surveillance Advertising" (Wired, 2021). Because of these increased retaliation against the business models of these tech companies, these companies are starting to take measures to protect people's privacy. For instance, Google has decided that it will drop cookies by 2022. This new decision will impact the entire ecosystem and will bring new opportunities as well challenges to advertisers. Furthermore, it will definitely impact how OBA works which will bring new research possibilities and different implications.

Bibliography

Aguirre, E., Mahr, D., Grewal, D., De Ruyter, K., & Wetzels, M. (2015). Unraveling the personalization paradox: The effect of information collection and trust-building strategies on online advertisement effectiveness. *Journal of retailing*, *91*(1), 34-49.

Allport, G. W. (1935). Attitudes. In Murchison C. (Ed.), Handbook of social psychology (pp. 798–844). Worcester, MA: Clark University Press.

Altaweel, I., Good, N., & Hoofnagle, C. J. (2015). Web privacy census. *Technology Science*, *2015121502*.

Baek, T. H., & Morimoto, M. (2012). Stay away from me. *Journal of advertising*, *41*(1), 59-76.

Bang, H., & Wojdynski, B. W. (2016). Tracking users' visual attention and responses to personalized advertising based on task cognitive demand. *Computers in Human Behavior*, *55*, 867-876.

Bardowicks, B., & Busch, O. (2013). Diskussionspapier: Programmatic Advertising. bvdw. Org.

Beales, H. (2010). The value of behavioral targeting. *Network Advertising Initiative*, *1*, 2010.

Bellamy Jr, R. V., & Walker, J. R. (1996). *Television and the remote control: grazing on a vast wasteland*. Guilford Press.

Bem, D. J. (1970). Beliefs, attitudes, and human affairs.

Bennett, Steven C. (2011), "Regulating Online Behavioral Advertising," John Marshall Law Review, 44, 899–62.

Biehal, G., Stephens, D., & Curio, E. (1992). Attitude toward the ad and brand choice. *Journal of Advertising*, *21*(3), 19-36

Blackwell, R.D., Miniard, P.W. and Engel, J.F. (2001), *Consumer Behavior*, South Western, Fort Worth, TX.

Bleier, A., & Eisenbeiss, M. (2015). Personalized online advertising effectiveness: The interplay of what, when, and where. *Marketing Science*, *34*(5), 669-688.

Bleier, A., & Eisenbeiss, M. (2015). The importance of trust for personalized online advertising. *Journal of Retailing*, *91*(3), 390-409.

Boerman, S. C., Kruikemeier, S., & Zuiderveen Borgesius, F. J. (2017). Online behavioral advertising: A literature review and research agenda. *Journal of advertising*, *46*(3), 363-376.

Bol, N., Dienlin, T., Kruikemeier, S., Sax, M., Boerman, S. C., Strycharz, J., ... & De Vreese, C. H. (2018). Understanding the effects of personalization as a privacy calculus: analyzing self-disclosure across health, news, and commerce contexts. *Journal of Computer-Mediated Communication*, *23*(6), 370-388.

Brehm, S. S., & Brehm, J. W. (1981). Psychological reactance: A theory of freedom and control. New York: Academic

Burke, M. C., & Edell, J. A. (1989). The impact of feelings on ad-based affect and cognition. *Journal of marketing research*, *26*(1), 69-83.

Busch, O. (2016). Programmatic advertising. *The Successful Transformation to Automated, Data-Driven Marketing in Real-Time. Berlin*.

Chang, Y., & Thorson, E. (2004). Television and web advertising synergies. *Journal of advertising*, *33*(2), 75-84.

Chen, J., & Stallaert, J. (2014). An economic analysis of online advertising using behavioral targeting. *Mis Quarterly*, *38*(2), 429-A7.

Chen, J., & Stallaert, J. (2014). An economic analysis of online advertising using behavioral targeting. *Mis Quarterly*, *38*(2), 429-A7.

Mook, D. G. (1983). In defense of external invalidity. *American psychologist*, *38*(4), 379.

Chinchanachokchai, S., & de Gregorio, F. (2020). A consumer socialization approach to understanding advertising avoidance on social media. *Journal of Business Research*, *110*, 474-483.

Cho, C. H., & as-, U. O. T. A. A. I. A. (2004). Why do people avoid advertising on the internet?. *Journal of advertising*, *33*(4), 89-97.

Cho, H., Lee, J. S., & Chung, S. (2010). Optimistic bias about online privacy risks: Testing the moderating effects of perceived controllability and prior experience. *Computers in Human Behavior*, *26*(5), 987-995.

Clancey, M. (1994). The television audience examined. *Journal of advertising Research*, *34*(4), S1-S1.

Cronin, J. J., & Menelly, N. E. (1992). Discrimination vs. avoidance:“Zipping” of television commercials. *Journal of Advertising*, *21*(2), 1-7.

Donaldson, T. (1982). *Corporations and morality*. Englewood Cliffs, NJ: Prentice-Hall.

Doss, A. F. (2020). *Cyber Privacy: Who Has Your Data and why You Should Care*. BenBella Books.

Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Harcourt brace Jovanovich college publishers.

eMarketer (2010), "How Should Marketers Address Concerns about Ad Targeting?," February 16, https://www.emarketer.com/Article/How-ShouldMarketers-Address-Concerns-About-Ad-Targeting/1007514.

Farman, L., Comello, M. L., & Edwards, J. R. (2020). Are consumers put off by retargeted ads on social media? Evidence for perceptions of marketing surveillance and decreased ad effectiveness. *Journal of Broadcasting & Electronic Media*, *64*(2), 298-319.

Federal Trading Commission. (2000). Federal Trade Commission Issues Report on Online Profiling. https://www.ftc.gov/news-events/press-releases/2000/07/federal-trade-commission-issues-report-online-profiling

Fisher, R. J., & Dubé, L. (2005). Gender differences in responses to emotional advertising: A social desirability perspective. *Journal of Consumer Research*, *31*(4), 850-858.

Fogel, J., & Nehmad, E. (2009). Internet social network communities: Risk taking, trust, and privacy concerns. *Computers in human behavior*, *25*(1), 153-160.

Fransen, M. L., Verlegh, P. W., Kirmani, A., & Smit, E. G. (2015). A typology of consumer strategies for resisting advertising, and a review of mechanisms for countering them. *International Journal of Advertising*, *34*(1), 6-16.

Geuens, M., & De Pelsmacker, P. (2017). Planning and conducting experimental advertising research and questionnaire design. Journal of Advertising, 46(1), 83-100.

Ha, T., Enderle, T., Ogletree, D. F., Chemla, D. S., Selvin, P. R., & Weiss, S. (1996). Probing the interaction between two single molecules: fluorescence resonance energy transfer between a single donor and a single acceptor. Proceedings of the National Academy of Sciences, 93(13), 6264-6268.

Ham, C. D., & Nelson, M. R. (2016). The role of persuasion knowledge, assessment of benefit and harm, and third-person perception in coping with online behavioral advertising. *Computers in Human Behavior*, *62*, 689-702.

Heeter, C., & Greenberg, B. (1985). Cable and program choice. *Selective exposure to communication*, 203-224.

Hoewe, J. (2017). Manipulation check. *The International Encyclopedia of Communication Research Methods*, 1-5

Hootsuite. (2020). 44 Instagram Stats That Matter to Marketers in 2021. https://blog.hootsuite.com/instagram-statistics/

Interactive Advertising Bureau (2016), "First Quarter U.S. Internet Ad Revenues Hit Record-Setting High at Nearly $16 Billion, According to IAB," June 9, https://www.iab.com/news/first-quarter-u-s-internet-ad-revenueshit-record-setting-high-nearly-16-billion-according-iab.

Kelly, L., Kerr, G., & Drennan, J. (2010). Avoidance of advertising in social networking sites: The teenage perspective. *Journal of interactive advertising*, *10*(2), 16-27.

Ketelaar, P. E., Bernritter, S. F., van't Riet, J., Hühn, A. E., van Woudenberg, T. J., Müller, B. C., & Janssen, L. (2017). Disentangling location-based advertising: the effects of location congruency and medium type on consumers' ad attention and brand choice. *International Journal of Advertising*, *36*(2), 356-367.

Lee, Seungsin, Younghee Lee, Joing-In Lee, and Jungkun Park (2015), "Personalized e-Services: Consumer Privacy Concern and Information Sharing," Social Behavior and Personality: An International Journal, 43 (5), 729–40

Li, Y. (2012). Theories in online information privacy research: A critical review and an integrated framework. *Decision support systems*, *54*(1), 471-481.

Lustria, M. L. A., Cortese, J., Gerend, M. A., Schmitt, K., Kung, Y. M., & McLaughlin, C. (2016). A model of tailoring effects: A randomized controlled trial examining the mechanisms of tailoring in a web-based STD screening intervention. *Health Psychology,* 35(11), 1214–1224.

MacKenzie, S. B., Lutz, R. J., & Belch, G. E. (1986). The role of attitude toward the ad as a mediator of advertising effectiveness: A test of competing explanations. *Journal of marketing research*, *23*(2), 130-143.

Martin, K. (2016). Understanding privacy online: Development of a social contract approach to privacy. *Journal of business ethics*, *137*(3), 551-569.

Maslowska, E., Smit, E., & van den Putte, B. (2011). Is Personalized Communication Superior? The Effectiveness of Personalization and the Role of Consumers' Characteristics. *ACR Asia-Pacific Advances*.

McDonald, A. M., & Cranor, L. F. (2010, October). Americans' attitudes about internet behavioral advertising practices. In *Proceedings of the 9th annual ACM workshop on Privacy in the electronic society* (pp. 63-72).

McDonald, A., & Cranor, L. F. (2010, August). Beliefs and behaviors: Internet users' understanding of behavioral advertising. Tprc.

Metzger, M. J., & Docter, S. (2003). Public opinion and policy initiatives for online privacy protection. *Journal of Broadcasting & Electronic Media*, *47*(3), 350-374.

Meyvis, T., & Van Osselaer, S. M. (2018). Increasing the power of your study by increasing the effect size. Journal of Consumer Research, 44(5), 1157-1173.

Mitra, A., & Lynch Jr, J. G. (1995). Toward a reconciliation of market power and information theories of advertising effects on price elasticity. *Journal of consumer research*, *21*(4), 644-659.

Mowen, J. C., & Minor, M. (2001). Consumer behavior: A framework. *Upper Saddle River*.

Okazaki, S., Li, H., & Hirose, M. (2009). Consumer privacy concerns and preference for degree of regulatory control. *Journal of advertising*, *38*(4), 63-77.

Okazaki, S., Li, H., & Hirose, M. (2009). Consumer privacy concerns and preference for degree of regulatory control. *Journal of advertising*, *38*(4), 63-77.

Pan, Y., & Zinkhan, G. M. (2006). Exploring the impact of online privacy disclosures on consumer trust. *Journal of retailing*, *82*(4), 331-338.

Pan, Y., & Zinkhan, G. M. (2006). Exploring the impact of online privacy disclosures on consumer trust. *Journal of retailing*, *82*(4), 331-338.

Phelan, C., Lampe, C., & Resnick, P. (2016, May). It's creepy, but it doesn't bother me. In *Proceedings of the 2016 CHI conference on human factors in computing systems* (pp. 5240-5251).

Phelps, J. E., D'Souza, G., & Nowak, G. J. (2001). Antecedents and consequences of consumer privacy concerns: An empirical investigation. *Journal of Interactive Marketing*, *15*(4), 2-17.

Phelps, J., Nowak, G., & Ferrell, E. (2000). Privacy concerns and consumer willingness to provide personal information. *Journal of public policy & marketing*, *19*(1), 27-41.

Postma, O. J., and M. Brokke. 2001. "Personalisation in Practice: The Proven Effects of Personalisation." The Journal of Database Marketing 9 (2): 137–142.

Ranjbarian, B., Dabestani, R., Khajeh, E., & Noktehdan, I. (2011). An Investigation Of Influencing Factors Customers' Loyalty In A Four Star Hotel In Iran. *International Journal of Business and Social Science*, *2*(21).

Saura, J. R., Palos-Sánchez, P., & Cerdá Suárez, L. M. (2017). Understanding the digital marketing environment with KPIs and web analytics. *Future Internet*, *9*(4), 76.

Schwarz, N., & Bohner, G. (2001). The construction of attitudes. *Blackwell handbook of social psychology: Intraindividual processes*, *1*, 436-457.

Segijn, C. M., & Van Ooijen, I. (2020). Perceptions of techniques used to personalize messages across media in real time. Cyberpsychology, Behavior, and Social Networking, 23(5), 329-337.

Smith, N. C. (1995). Marketing strategies for the ethics era. *Sloan Management Review*, *36*, 85-85.

Speck, P. S., & Elliott, M. T. (1997). Predictors of advertising avoidance in print and broadcast media. *Journal of Advertising*, *26*(3), 61-76.

Stallworth, B. (2010). Future imperfect: Googling for principles in online behavioral advertising. *Fed. Comm. LJ*, *62*, 465.

Statista. (2020). Digital Advertising Report 2020. https://www.statista.com/study/42540/digital-advertising-report/

Tam, K. Y., & Ho, S. Y. (2006). Understanding the impact of web personalization on user information processing and decision outcomes. *MIS quarterly*, 865-890.

Tucker, C. E. (2014). Social networks, personalized advertising, and privacy controls. *Journal of marketing research*, *51*(5), 546-562.

UCLA Center for Communication Policy. (2000). Surveying the Digital Future.

UCLA Center for Communication Policy. (2001). Surveying the Digital Future.

UCLA Center for Communication Policy. (2002). Surveying the Digital Future.

UCLA Center for Communication Policy. (2003). *The UCLA Internet Report, Surveying the Digital Future*. UCLA Center for Communication Policy.

UCLA Center for Communication Policy. (2004). The UCLA Internet report: Surveying the digital future: Year four.

Unni, R., & Harmon, R. (2007). Perceived effectiveness of push vs. pull mobile location based advertising. *Journal of Interactive advertising*, *7*(2), 28-40.

Ur, B., Leon, P. G., Cranor, L. F., Shay, R., & Wang, Y. (2012, July). Smart, useful, scary, creepy: perceptions of online behavioral advertising. In *proceedings of the eighth symposium on usable privacy and security* (pp. 1-15).

Van Doorn, J., & Hoekstra, J. C. (2013). Customization of online advertising: The role of intrusiveness. *Marketing Letters*, *24*(4), 339-351.

Voorveld, H. A., Neijens, P. C., & Smit, E. G. (2011). Opening the black box: Understanding cross-media effects. *Journal of Marketing Communications*, *17*(02), 69-85.

Voorveld, H. A., Van Noort, G., Muntinga, D. G., & Bronner, F. (2018). Engagement with social media and social media advertising: The differentiating role of platform type. *Journal of advertising*, *47*(1), 38-54.

Wahid, N. A., & Ahmed, M. (2011). The effect of attitude toward advertisement on Yemeni female consumers' attitude toward brand and purchase intention. *Global Business and Management Research*, *3*(1), 21.

Warshaw, P. R., & Davis, F. D. (1985). Disentangling behavioral intention and behavioral expectation. *Journal of experimental social psychology*, *21*(3), 213-228.

White, T. B., Zahay, D. L., Thorbjørnsen, H., & Shavitt, S. (2008). Getting too personal: Reactance to highly personalized email solicitations. *Marketing Letters*, *19*(1), 39-50.

Wired (2021). "*This Group Wants to 'Ban Surveillance Advertising*". Retrieved from https://www.wired.com/story/ban-surveillance-advertising-coalition-launches/

Wunderman Thompson (2020). The Data Privacy and Security Report. https://www.wundermanthompson.com/insight/the-data-privacy-and-security-report

Wunderman Thompson (2021). Resolve. https://www.wundermanthompson.com/resolve

Yu, J., & Cude, B. (2009). 'Hello, Mrs. Sarah Jones! We recommend this product!'Consumers' perceptions about personalized advertising: comparisons across advertisements delivered via three different types of media. *International journal of consumer studies*, *33*(4), 503-514.

Zhou, T., & Li, H. (2014). Understanding mobile SNS continuance usage in China from the perspectives of social influence and privacy concern. *Computers in Human Behavior*, *37*, 283-289.

Zuiderveen Borgesius, F. (2015). Improving privacy protection in the area of behavioural targeting. *Available at SSRN 2654213*.

Appendices

Stimulus Material

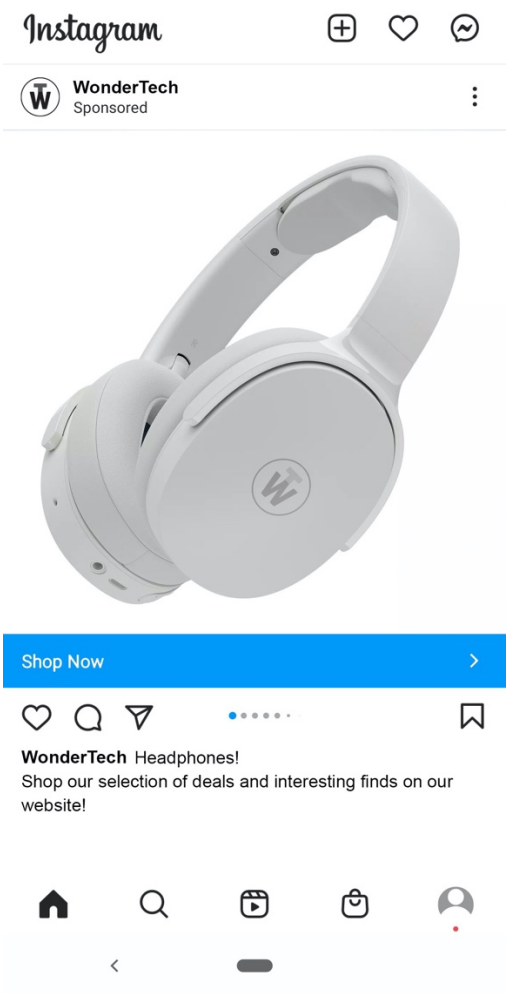
Condition 1:

Imagine that you are browsing the web looking for Headphones from the brand WonderTech.

You decide to click on their website.

The next day, you log in to your Instagram account.

The following ad is shown in your Instagram feed. See below:



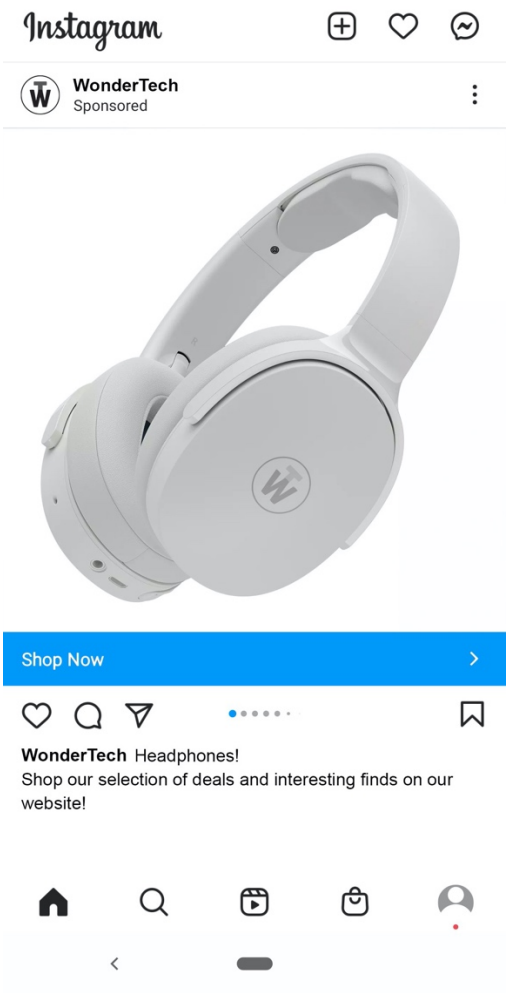
Condition 2:

Imagine that you are browsing the web looking for **Headphones** from the brand **Digiglobe**.

You decide to click on their website.

The next day, you log in to your Instagram account.

The following ad is shown in your Instagram feed. See below:



Condition 3

Imagine that you are browsing the web looking for a **Smartphone** from the brand **WonderTech**.

You decide to click on their website.

The next day, you log in to your Instagram account.

The following ad is shown in your Instagram feed. See below:

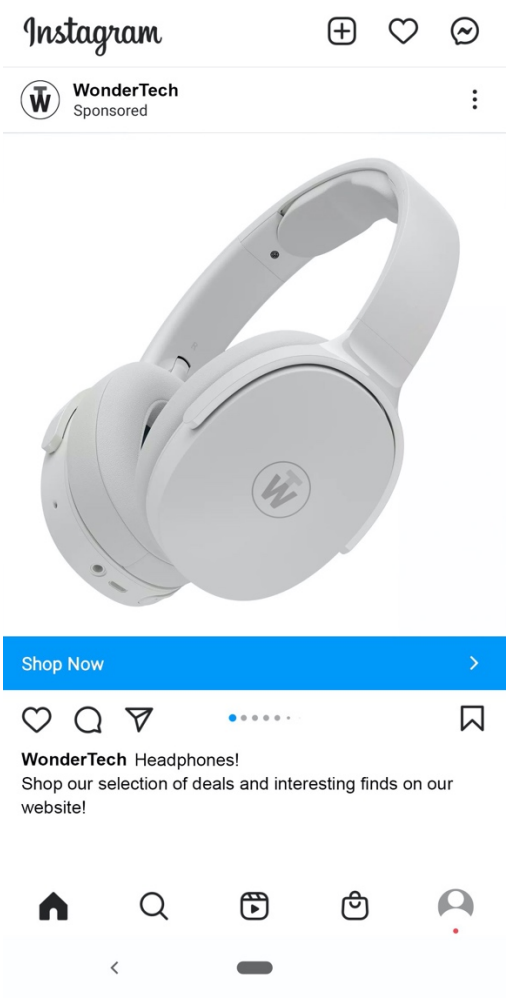
Condition 4:

Imagine that you are browsing the web looking for a **Smartphone** from the brand **Digiglobe**.

You decide to click on their website.

The next day, you log in to your Instagram account.

The following ad is shown in your Instagram feed. See below:


Instagram
WonderTech
Sponsored
Shop Now
WonderTech Headphones!
Shop our selection of deals and interesting finds on our website!