THE DARK AGE OF ADVERTISING: AN EXAMINATION OF PERCEPTUAL FACTORS AFFECTING ADVERTISING AVOIDANCE IN THE CONTEXT OF MOBILE YOUTUBE

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ABSTRACT

This study explored the perceptual factors affecting consumers' advertising avoidance on social networking sites (SNSs) in the context of mobile YouTube by relying on the psychological theory of reversal theory. The study employed an exploratory survey methodology via surveys adapted from prior research. The investigation then empirically tested these factors. The findings highlighted the need for SNSs platform owners and online advertisers that subscribe to online paid advertising to consider their options for mitigating the consequences of consumer advertising avoidance by understanding the bi-dimensional psychological profiles of target audiences. This would enable video-based SNSs platform owners and online advertisers that use these platforms to appreciate the heterogeneous and dynamic nature of consumers' frames of mind and to personalize advertising content to cater for their individual psychological profiles.

Keywords: Advertising avoidance; Perceptual factors; Reversal theory; Mobile YouTube

1. Introduction

Advertising clutter and media fragmentation in the traditional media arena have long been recognised as the primary reasons for consumers' over-exposure to commercial messages (Goldman & Papson, 1994, 1996; Klopfenstein, 2011; McAllister, 1996). Consequently, advertisers have faced a negative consumer perception of advertising, as advertisements interfere with the media experience and are seen as unwanted, undesirable, and excessive (Ha, 1996). The advertising messages that a typical consumer is exposed to in a given day far exceeds the information-processing ability and results in their acting to filter the surplus visual and aural communication stimuli; these are predominantly messages that are of no significance to the consumer but intended for consumers in different demographic, psychographic, geographic or behavioral market segment categories (Gritten, 2007). To avoid being inundated with a plethora of advertising messages, the consumer in the postmodern era often engages "ad avoidance" strategies to aid in the maintenance of sovereignty over his or her psychic space (Speck & Elliott, 1997).

Since their introduction in the late 1990s, social networking sites (SNSs) have experienced a similar media evolution (Boyd & Ellison, 2007). Despite the novel targeting capabilities that SNSs provide, the placement of advertisements on these platforms is also affected by consumers' negative attitudes, to some extent. For example, a recent survey conducted by Duke's Fuqua School of Business, in collaboration with the American Marketing Association and Deloitte, found that 74% of people are tired of SNSs ads (World Market Watch, 2017). These attitudes, as expected, have been reflected in significant user behaviors. For example, by 2015 there were roughly 198 million monthly active desktop AdBlock users worldwide, causing major SNSs advertising revenue losses—in the order of $21.8 billion in the twelve months leading to the end of the year (PageFair & Adobe, 2015). In light of the advent of advertising circumvention technology, scholars and practitioners have recognised the need to understand the factors affecting consumers' advertising avoidance (Simon & Joshua, 2011).

After an initial boom in popularity, the growth of desktop AdBlock plugins plateaued. However, this was not a reflection of a change in consumer attitudes towards advertisements but a consequence of consumers' migration to mobile devices. Currently, mobile ad-blocking usage duplicates that on desktops, with around 527 million people using mobile browsers that block ads (PageFair, 2020). This data suggests that as consumers migrated from desktop to mobile, their negative attitudes towards ads also migrated. However, even if many consumers share a similarly dismissive attitude towards ads via both desktop and mobile, their avoidance behaviors and the antecedents of these can be very different. Mobile device usage has been associated with portability, dynamism, and being on the move (Church & Oliver, 2011). Research has shown that, for example, mobile browser queries are mostly determined by contextual factors, such as conversations or the user's location (Sohn et al., 2008). Ads insert themselves in the lives of users in a different manner on a desktop as opposed to a mobile device. For instance, getting a YouTube ad on your phone while on the bus is very different to getting one at home on the same platform. Factors such as a user's goals, motivations, contexts, and time constraints, can differ significantly, so ad avoidance behaviors are not expected to work along similar lines.

Thus, given the differentiated characteristics of mobile advertising, there is a need to examine the mechanisms of consumers' avoidance of advertising in different contexts. Drawing upon extant literature on ad avoidance in both traditional and online media, this study identified the perceptual factors relating to consumers' ad avoidance. By building on previous research, this study provides a valuable addition to the still-nascent body of research on advertising avoidance on SNSs.

This study particularly examined the factors that are vital to consumers' intention to avoid advertisements on mobile YouTube. YouTube was selected as the SNS context for two reasons. First, YouTube is a quintessential SNS, with a user base of two billion, lagging only behind Facebook (Statista, 2020). Despite this, YouTube is comparatively neglected in the research arena, with a *Web of Science* search returning a total of 3,187 entries for the word "Youtube" as a title, keyword, or abstract for articles in the last five years, compared to 12,076 for "Facebook" (and 3,743 vs. 11,534 in *Scopus* respectively). Second, YouTube content has increasingly been recognized to entail advertisements (mainly pre-roll, but more and more mid-roll and even post-roll). YouTube has incorporated advertisements as a natural part of the user experience with the platform, despite its adoption of the alternative for consumers to be able to "skip" video advertising in the late 2010s in a partially successful attempt to manage consumer negative reactions (Belanche et al., 2017; Pashkevich et al., 2012). Consequently, YouTube is a natural focus for a study, such as this, that intends to shed light on advertising avoidance on SNSs.

This paper consists of four main sections. The first section explores the extant literature relating to advertising avoidance in traditional and online media domains. This part of the study aimed to develop a framework that would help explore consumer ad avoidance behavior and its determinants. The second section describes the research method employed to empirically test the proposed hypotheses. The third section reports the findings of the study along with the statistical analyses. The fourth section begins with a discussion of the findings of the study before the managerial and practical implications for marketing and advertising practitioners are discussed. The purpose of this was to better

inform marketing and advertising strategies on SNSs to help reduce the overall incidence of advertising avoidance by consumers and to provide better value for marketing and advertising budgets. Finally, the fourth section briefly describes the limitations of the study as well as future research avenues.

2. Literature Review and Theoretical Framework

2.1. Advertising Avoidance and Reversal Theory

Ad avoidance refers to the techniques that consumers employ to avoid exposure to a form of advertisement (Kelly et al., 2010; Seyedghorban et al., 2015; Speck & Elliott, 1997). It is more precisely defined as "all actions by media users that differentially reduce their exposure to ad content" (Speck & Elliott 1997, p. 61). In SNSs, advertising avoidance is a coping mechanism for consumers and is exhibited in several ways including cognitively (e.g., ignoring the ad), behaviorally (e.g., leaving the room) and mechanically (e.g., closing an app) (Kelly et al., 2010). The consumer may also avoid an advertisement either partially (e.g. skipping an ad on YouTube after five seconds as allowed by the skip function) or completely (e.g., playing another video on YouTube instead of waiting) (Prendergast et al., 2014).

In this study, reversal theory (Apter, 1984) was employed as a theoretical approach to examine consumers' ad avoidance, particularly towards advertising content exposure on the SNS YouTube. Reversal theory is a psychological theory that can be employed to obtain dual dimensional insights into the paradoxical motivational states driving consumers' decisions to avoid advertisements. Reversal theory captures the dynamic nature of psychological experience by positing pairs of opposite metamotivational states. A pivotal idea of the theory is that people regularly transition into and out of these states. For instance, someone can focus on achieving a goal (e.g., winning a chess game) and then suddenly transition to a state where the goal is the enjoyment of the activity itself (e.g., playing chess); or, engage in a competitive behavior (e.g., training to become the league's top-scorer) and later in a cooperative one (e.g., forgetting about scores and helping teammates). Metamotivational states as advocated by reversal theory can be categorized as *telic* (serious-minded) versus *paratelic* (playful-minded), conformist (compliant) versus negativistic (defiant), mastery (competitive) versus sympathy (friendly) and *autic* (selfish) vs *alloic* (altruistic) (Apter, 2001; Bang et al., 2018). In this study, the focus was on the first pair of metamotivational states, telic and paratelic. Apter's (2001) characterization further clarifies the contrast between these psychological states:

Telic: serious, goal-oriented, cautious, valuing tranquillity and calmness.

Paratelic: playful, activity-oriented, looking for fun and enjoyment, valuing stimulation. (p.12)

These metamotivational states are *frames of mind* that explicate the motives of people at any given point in time (Apter, 2001). Given the mutually exclusive stance of the two metamotivational states, individuals can never be in both states of mind simultaneously, even though they switch regularly between them (Potocky & Murgatroyd, 1993). Reversal theory contends that reversals can be induced by three factors (Apter, 2001): environmental situations or events (e.g., a police siren tends to induce a telic state), frustration (e.g., seeking entertainment, a paratelic state, after getting frustrated in a goal-directed activity), or satiation (e.g., seeking entertainment after hours of sustained focus). A reversal will occur only if "the strength of the factors for change, taken together, is strong enough to override the factors working against change" (Apter, 2001, p. 27).

Reversal theory also recognizes the predispositions of individuals, in that they may tend to gravitate towards some states of mind as opposed to others (Apter, 1984). These predispositions are conceptualized as dominance. Hence, the intensity of the inducing factors that trigger a frame of mind needs to be stronger to effectuate a reversal in the frame of mind of a person dominated by a certain metamotivational state. Furthermore, conventional wisdom suggests that a person "will contingently reverse easily into his or her dominant state, and will satiate more slowly and become frustrated less easily in that state" (Frey, 1999, p. 13).

Reversal theory was considered to be a theory of good fit that can be applied to explore the phenomenon of advertising avoidance. It provides the basis to explore how consumers may change their motivations regarding Internet usage during the act of using the Internet, such as using YouTube in a frame of mind tainted by privacy concerns and then being exposed to entertaining YouTube ads. Extant literature has indicated that consumers' motives change quite frequently when using the Internet compared to more traditional media (Jung et al., 2014). Hence, it is worth investigating this phenomenon further, especially in relation to ad avoidance on a site such as mobile YouTube. The following sub-sections describe the perceptual factors of ad avoidance based on a comprehensive literature review. These factors were employed to inform hypotheses development through the lens of reversal theory.

2.2. Perceived Privacy Concerns

Privacy is "the ability to control and limit physical, interactional, psychological, and informational access to the self or one's group" (Burgoon et al., 1989, p. 132). Perceived privacy concerns are the worries consumers have about their inability to control the collection, storage, access, distribution, and use of their personal information (Baek & Morimoto, 2012). With the availability of a range of methods for tracking consumer activity, the personalisation of advertisements is today a common practice amongst marketers on SNSs. Facebook's Business Manager tool is an

example of an application that gives a firm's posts and ads the ability to be automatically directed to consumer market segments with matching demographic, geographic, psychographic, and behavioral attributes via algorithmically-mediated systems (Aguilar & Garcia, 2018; Caplan & Boyd, 2018; Singaraju et al., 2016; Zhou, 2012; Zimmerman & Ng, 2015). Facebook recorded $39.94 billion in revenue for advertising in 2017, in part due to its algorithmic and data-driven practices in advertisement placement via Business Manager (Atkinson, 2017; Caplan & Boyd, 2018). However, the large amount of information harvesting to enable more efficient advertising placement systems in SNSs has fueled serious concerns for consumer privacy (Larsson, 2018; Shanahan et al., 2019).

Research has demonstrated that privacy concerns are related to lower purchase intentions and trust, higher e-mail subscription cancellations, and providing incomplete information to websites (Bues et al., 2017; Miyazaki & Fernandez, 2001). In terms of reversal theory, consumers who are worried about their privacy experience a state of mind characterized by many telic properties, such as planning and being concerned about the future. In a straightforward sense, they are concerned about how the personal information collected by companies could bring undesirable consequences for them. Reversal theory further suggests that individuals in a telic state of mind value calmness and the avoidance of anxiety, which suggests that if they perceive their privacy as being threatened, they are likely to avoid advertisements (which themselves have become a source of valuable customer information and not just the beneficiaries of it). Based on this, the following hypothesis was proposed:

H1: *Perceived privacy concerns relating to advertisements is positively related to consumers' intention to avoid advertisements on mobile YouTube.*

2.3. Perceived Goal Impediment

The paradoxical reality that editorial and advertising content exist side-by-side in online environments means that Internet users are often concurrently exposed to goal-directed primary content (e.g., news articles or YouTube videos) and unsolicited secondary content (i.e., advertising) (Drèze & Hussherr, 2003). Consumers are known to be goal-oriented when engaging in the activity of browsing the Internet (Cho & Cheon, 2004; Edwards et al., 2013). As advertising is predominantly incongruent with editorial content, it can be argued that advertising content—given its intrusive nature—is a hindrance to consumers on the internet and actively deviates their attention and cognitive resources away from their primary tasks when browsing the Internet (Burns & Lutz, 2006; Cho & Cheon, 2004). This phenomenon, introduced as "perceived goal impediment", is expounded as "the degree to which a person deems the presentation of information as contrary to his or her goals" (Edwards et al., 2013, p. 85). Several other scholars concur that perceived goal impediment is the most significant antecedent in predicting advertising avoidance (Cho & Cheon, 2004; Prendergast et al., 2014; Shin & Lin, 2016).

In contrast, other studies have suggested that SNSs—particularly MySpace and Facebook—are not considered to be goal-directed platforms by some of their users (Kelly et al., 2010). This is because these SNSs are predominantly being used as a source of entertainment to counter boredom, which may suggest that perceived goal impediment by advertisements might not be relevant for SNSs, including YouTube. Users of these sites will predominantly experience a paratelic state of mind and, correspondingly, would not consider ads to be particularly disrupting. However, studies of YouTube have indicated that many users employ the platform instrumentally (e.g., to instruct themselves), and not simply for fun (Moghavvemi et al., 2018). If ads interrupt users during a goal-directed activity, they might consider ads disrupting. Therefore, further investigation into the influence of perceived goal impediment on YouTube and mobile advertisements is required to inform the literature on advertising avoidance. Therefore, the following hypothesis was proposed:

H2: *Perceived goal impediment by advertisements is positively related to consumers' intention to avoid advertisements on mobile YouTube.*

2.4. Perceived Entertainment and Perceived Informativeness

Arguably one of the most published constructs involved in ad avoidance is perceived entertainment—the "how" of advertisement (Ducoffe, 1995; Ha & McCann, 2015)—which is the hedonistic value a consumer receives from being exposed to an advertisement (Shin & Lin, 2016). This construct can be dated back to Bauer and Greyser (1968) who began examining the entertainment an advertisement provides to a consumer, and has since been used to measure the value consumers receive from an advertisement (Shin & Lin, 2016; Tsang et al., 2014; Zhang & Mao, 2016). Recent studies have suggested that an advertisement's entertainment value is more important than personalising the advertisement for the consumer in improving advertisement viewership (Ha et al., 2018). Different aspects associated with perceived entertainment, including humour, positive valence, and emotions, have been shown to reduce the skipping of ads (Campbell et al., 2017; Goodrich et al., 2015). A negative association has also been observed between this construct and ad avoidance for pop-up ads (Edwards et al., 2013), while it positively influences attitudes for mobile advertisements (Tsang et al., 2014; Xu et al., 2009). The extant literature provides clear, empirical evidence pointing to influences of entertainment as an element of consumers' responses to advertisements (Edwards et al., 2013; Shin & Lin, 2016; Tsang et al., 2014; Xu et al., 2009; Zhang & Mao, 2016). However, as far as is known, there has

been little to no research into the influence of perceived entertainment on ad avoidance in the context of social media platforms. The present study will look to fill this gap.

Entertainment and information are some of the reasons why consumers watch media. Consumers who see an advertisement as entertaining are less likely to perceive high advertising clutter (Ha & McCann, 2015). This argument lends additional support to the predisposition of reversal theory that consumers who are in a paratelic frame of mind at a given point in time tend to be task-oriented rather than goal-oriented and, therefore, perceive advertisements as entertaining (Fan et al., 2015; Jung et al., 2014). Ducoffe (1995) demonstrated entertainment as having an indirect influence on advertising value through its connection with informativeness. Perceived informativeness, *often measured with* perceived entertainment (Tsang et al., 2014; Zhang & Mao, 2016), is the "what" of advertisements (Ducoffe, 1995). Higher informativeness and entertainment were both found to be associated with lower intrusiveness (Goodrich et al., 2015). In measuring advertisement value, higher perceived informativeness scores were associated with increased positive perceptions of an advertisement (Tsang et al., 2014). This alludes to the argument that advertisements with less information lead to consumers experiencing more negative attitudes towards advertising, leading to ad avoidance behaviors (Lee & Lumpkin, 1992). In SNSs, perceived informativeness was found to have a significant impact on ad clicks, indicating that the more information a consumer received from an advertisement the more likely they were to click on the advertisement (Zhang & Mao, 2016). These findings suggest that perceived informativeness and entertainment are related to reduced ad avoidance on SNSs. On this basis, the following hypothesis was postulated:

H3*: Perceived entertainment and informativeness of advertisements is negatively related to consumers' intention to avoid advertisements on mobile YouTube.*

It should be noted that the fact that consumers may perceive an ad as entertaining and informative could be an *environmental factor* that leads customers who are worried about the privacy of their information or engaged in goal-directed activities (i.e., in a telic frame of mind) to a reversal. In this sense, even if a consumer is worried about his or her privacy or trying to achieve a particular goal by using YouTube, due to a reversal phenomenon, the sudden appearance of an ad might not trigger a strong ad avoidance reaction if the advertising content happens to be entertaining and informative. Therefore, the following hypotheses were formulated:

H3a*: Perceived entertainment and informativeness moderates the relationship between privacy concerns and ad avoidance. Particularly, the more entertaining and informative an ad is, the weaker the relationship between privacy concerns and ad avoidance.*

H3b*: Perceived entertainment and informativeness moderates the relationship between goal impediment and ad avoidance. Particularly, the more entertaining and informative an ad is, the weaker the relationship between goal impediment and ad avoidance.*

2.5. Perceived Personalization

Personalization can be defined as the elicitation of the consumer's personal preferences to deliver targeted marketing communications to that particular consumer (Peppers & Rogers, 1997). In an online media context, personalization is conceptualized as "the process of preparing an individualized communication for a specific person on the basis of stated or implied preferences" (Baek & Morimoto, 2012, p. 64). This involves the manipulation of, or changes in, the content of advertisements, which are then better suited to the interests of the intended target audience (Kazienko & Adamski, 2007). In short, perceived personalization refers to the ability of online advertisers to optimize advertising content to match consumer interests and preferences and, therefore, increase the relevance of advertisements (Baek & Morimoto, 2012). Based on the quality and variety of consumer information available to them, advertisers have never been in a better position to target their advertising content with such a high degree of precision, catering to consumers' needs and wants at a more granular level (Hoy & Milne, 2010; Kelly et al., 2010; Nyheim et al., 2015; Sundar & Marathe, 2010). A consumer's metadata, such as their demographics, preferences, purchase history, context, interests, needs, content and browser history, provides the digital footprint left behind by a consumer through their activities on SNSs (Johnson, 2013; Kim & Han, 2014; Xu, 2006). These types of metadata captured on SNSs provide advertisers with a rich source of information about individual consumers, allowing for more precise targeting and presentation of advertising content to consumers on these digital platforms (Bernd et al., 2017; Johnson, 2013). In the age of the mobile Internet, consumers' real-time location and activities are information dimensions available to SNSs and advertisers to achieve unprecedented precision in personalizing advertising content (Hoy & Milne, 2010; Jelassi & Enders, 2004; Kim & Han, 2014; Sundar & Marathe, 2010; Xu, 2006).

The benefits of personalized advertisement content include increased informativeness, credibility, and entertainment (Kim & Han, 2014), reduced time for consumers to find desired content (Srinivasan et al., 2002), and better customer relationship management and satisfaction (Jaewon et al., 2017; Vesanen, 2007; Vesanen & Raulas, 2006). On the advertisers' side, personalization of content is one of the most effective ways to deliver context-relevant advertisements (Kim & Han, 2014) and has been associated with less ad avoidance (Kelly et al., 2010). Due to the

nature of personalised advertising and its use of data, consumers who perceive ads to be personalised may have concerns about the security of their personal information. Understandably, firms may prefer additional consumer information, whereas consumers may perceive additional targeting as a privacy violation (Johnson, 2013). This link between perceived personalization and perceived privacy concerns—also known as the privacy-personalisation paradox—has been suggested in the literature (Baek & Morimoto, 2012). Johnson (2013) addresses this issue by stating that the blocking of ads by consumers may result in one of two outcomes: more blocking will occur due to privacy concerns or less blocking will occur due to increased value perceptions. These contrasting outcomes make further investigation of the relationship between perceived personalization and ad avoidance important, this time in the context of mobile YouTube. Reversal theory further elucidates this phenomenon because it suggests the possibility of consumers switching back and forth between and open and relaxed state of mind (paratelic) and one where peace of mind and the reduction of anxiety are central (telic); between a state of mind where personalization is seen as exciting and one where it is seen as worrying and privacy-threatening. In this study, given that the literature suggests that there is a negative relationship between personalization and ad avoidance, the following hypothesis was suggested:

H4: *Perceived personalization of advertisements is negatively related to consumers' intention to avoid advertisements on mobile YouTube.*

Similarly to entertainment and informativeness, consumers' perception of an ad as relevant to their particular situation, or as personalized, can be an *environmental factor* that can lead them to worry about the privacy of their information. Or, if they are engaged in goal-directed activities (i.e., in a telic frame of mind), lead to a reversal. Once again, even if a consumer is worried about his or her privacy or trying to achieve a particular goal by using YouTube, due to a reversal phenomenon, the sudden appearance of an ad might not trigger a strong ad avoidance reaction if the advertising piece happens to be personalized. Accordingly, the following hypotheses were formulated:

H4a: *Personalization moderates the relationship between privacy concerns and ad avoidance. Particularly, the more personalized an ad is, the weaker the relationship between privacy concerns and ad avoidance.*

H4b: *Personalization moderates the relationship between goal impediment and ad avoidance. Particularly, the more personalized an ad is, the weaker the relationship between goal impediment and ad avoidance.*

2.6. Perceived Utility

Perceived utility is recognized as one of the strongest antecedents for the acceptance of mobile advertising among consumers (Bauer et al., 2005; Bauer & Greyser, 1968; Merisavo et al., 2007). Perceived utility can be described as the benefits consumers derive from a form of advertising (Shin & Lin, 2016). The observed acceptance of mobile advertisements due to perceived utility suggests that increases in perceived utility can decrease the likelihood of someone engaging in ad avoidance behavior, as the more utilitarian value the consumer derives from the advertising, the less likely they are to seek out methods of avoiding the advertisement (Bang & Wojdynski, 2016). This notion is supported by more recent research in the context of mobile advertisement, specifically location-based advertising (Bang & Wojdynski, 2016).

Although it could be argued that the value of advertising to consumers is derived from the *information* and *entertainment* received from advertisements, in this paper the entertainment and informativeness construct intended to capture mainly the hedonic component of advertisements (Tsang et al., 2014). Perceived utility, on the other hand, refers to utilitarian aspects, detached from hedonic considerations (Bauer et al., 2005). However, it is recognized that even if these aspects of advertisement are conceptually different, in practice they are constantly side-by-side. It is unlikely that anyone would be interested in researching the avoidance of ads that offer a hedonic experience but no utilitarian value; advertisers are not in the entertainment business exclusively. Conversely, there has been extensive research into the effectiveness of emotional appeals in advertising (Mogaji, 2018); ads that limit themselves to listing the benefits a customer can expect from a product, ignoring the hedonic component altogether, are increasingly rare.

Based on the literature on perceived utility, the following hypothesis was postulated:

H5: *Perceived utility of advertisements is negatively related to consumers' intention to avoid advertisements on mobile YouTube.*

Utility, just like entertainment and informativeness and personalization, is a perceived advertisement feature that can trigger a reversal. In doing so, a user who is worried about his or her privacy or is in a goal-directed mood could potentially abandon a telic state of mind and engage in the activity of watching an ad that they perceive as useful. Therefore, the following hypotheses were advanced:

H5a*: Perceived utility moderates the relationship between privacy concerns and ad avoidance. Particularly, the more an ad is perceived as useful, the weaker the relationship between privacy concerns and ad avoidance.*

H5b*: Perceived utility moderates the relationship between goal impediment and ad avoidance. Particularly, the more an ad is perceived as useful, the weaker the relationship between goal impediment and ad avoidance.*

3. Method

3.1. Sampling and Data Collection

A quantitative survey methodology was employed in this study. The data were drawn from a mixed consumer panel via a Qualtrics panel database. Participants were provided with a URL to complete the survey. The use of an online questionnaire was appropriate as this study was largely centered on the use of an Internet media sharing platform (i.e., YouTube); this approach was highly relevant and allowed for the rapid gathering of information at minimal cost (Cho & Cheon, 2004). Ethics approval was obtained from the University's ethics committee and due process was followed. Participants were informed of the purpose of the study before they provided their consent to participate.

An effective sample size of 229 participants responded to the questionnaire, most of them from the state of Victoria in Australia (Gender: M = 53, F = 129, Trans = 1. Age range: 18–59. Education: High School = 47, Certificate = 32, Degree = 65, Postgraduate = 38). Mahalanobis distance was used to identify 12 outliers ($X2(53) = 90.573$, $\alpha = 0.001$), which were excluded. Listwise deletion was also performed for missing data, which removed an additional 33 respondents leaving a working sample size of 183 respondents.

3.2. Questionnaire Development

The survey for this study was based on measurement items adapted from previous studies. The changing of previously published questionnaire questions to fit the context of this study is supported by Baek and Morimoto (2012). Once the relevant questions from extant literature had been adjusted to fit the context of the study, they were combined into a single questionnaire (see Appendix A). The questionnaire for this study consisted of 51 Likert-scale (1 = strongly disagree to 7 = strongly agree) questions regarding the constructs associated with advertising avoidance as per Table 1, below (see also Cheng et al., 2009; Lastovicka, 1983; Taylor et al., 2011; Zhang & Mao, 2016) and an additional six questions on demographics. The use of a self-reporting measure for mundane media behaviors, such as using YouTube on a mobile, is supported by Ferguson (1992).

Table 1: Literature on Measurement Guidelines

Measurement items	**Reference**
Ad avoidance	Speck and Elliott (1997), Seyedghorban et al. (2015); Nyheim et al. (2015); Baek and Morimoto (2012); Bang et al. (2018)
Perceived goal impediment	Bang et al. (2018); Seyedghorban et al. (2015)
Perceived personalization	Baek & Marimoto (2012); Kim & Han (2014); Nyheim et al. (2015); Baek & Marimoto (2012)
Perceived privacy concerns	Baek & Morimoto (2012); Nyheim et al. (2015); Bues et al. (2017)
Perceived entertainment	Ducoffe (1995); Shin & Lin (2016); Kim et al. (2016); Martins et al. (2019)
Perceived informativeness	Ducoffe (1995); Kim & Han (2014); Goodrich et al. (2015); Kim et al. (2016); Martins et al. (2019)
Perceived utility Perceived sacrifice	Merisavo et al. (2007); Shin & Lin (2016) Shin & Lin (2016); Merisavo et al. (2007)

Questions were also adapted from the literature to identify problems associated with video ads on YouTube and ad avoidance. The lack of measurement questions related to ad blocker usage was an unfortunate limitation in extant literature. As there were no published 7-point Likert-scale questions that have been proven reliable in measuring ad blocker usage, no questions were used to measure this aspect of the study.

4. Data Analysis and Findings

4.1. Exploratory Factor Analysis

An exploratory factor analysis (EFA) was initially performed on the data. The appropriateness of EFA was established by the Barlett's test ($p = 0.00001$) and the Kaiser-Meyer-Olkin (KMO) test value ($KMO = 0.89485$), which was over the required value of 0.5. After an initial principal component analysis (PCA) based on the Kaiser criterion (retaining factors with eigenvalues > 1) suggested an eight-factor solution, data were retested using a more accurate method to decide the number of factors to retain (Costello & Osborne, 2005; Velicer & Jackson, 1990), particularly parallel analysis based on minimum rank factor analysis (PA-MRFA) (Timmerman & Lorenzo-Seva, 2011). In PA-MRFA, the proportion of explained common variance (ECV) of observed common factors is compared with ECV values randomly generated. The number of factors to retain is determined by the number of factors with larger ECV

values than the corresponding random ECV values. PA-MRFA was performed using the FACTOR program (James, 2014; Lorenzo-Seva & Ferrando, 2006), and revealed that six dimensions should be retained, as shown in Table 2:

Table 2: PA-MRFA

	Real data % of variance	Mean of random % of variance
1	32.6107*	4.9883
2	12.3351*	4.6711
3	7.0263*	4.4362
4	6.4536*	4.2214
5	4.2598*	4.0408
6	3.9533*	3.8744
7	2.9368	3.7172
8	2.1169	3.5711
9	1.8899	3.4344
10	1.5483	3.3124
11	1.5016	3.1876
12	1.4379	3.074
13	1.3369	2.9578
14	1.1722	2.8464
15	1.1265	2.7414
16	1.0726	2.6381
17	1.0261	2.5433
18	1.0137	2.4405
19	0.9573	2.3498
20	0.9303	2.2569
21	0.8848	2.1668
22	0.8665	2.0839
23	0.8355	1.9996
24	0.7935	1.9166
25	0.7669	1.8338
26	0.7292	1.7524
27	0.7152	1.6746
28	0.6908	1.5988
29	0.6585	1.5293
30	0.6361	1.453
31	0.6015	1.3775
32	0.5703	1.3086
33	0.5101	1.2361
34	0.4997	1.1662
35	0.4447	1.0997
36	0.4139	1.0335
37	0.3697	0.9670
38	0.3337	0.9007

39	0.3209	0.8371
40	0.2766	0.7728
41	0.2744	0.7067
42	0.2175	0.6429
43	0.2101	0.5759
44	0.1754	0.5093
45	0.1471	0.4426
46	0.1298	0.3745
47	0.1074	0.3006
48	0.0586	0.2215
49	0.0536	0.1413
50	0.0027	0.0734

As shown in Table 1, the PA-MRFA recommended a six-factor solution (see asterisks). After this, a principal axis factoring (PAF) extraction procedure (setting the extraction number to six factors) with oblique Promax rotation was performed using SPSS Version 25. PAF and oblique rotation methods, at least for the social sciences, are suggested as best practice methodologies in the literature on EFA, as they are far superior to PCA plus varimax rotation — unfortunately ubiquitous in social science research (Costello & Osborne, 2005).

The EFA pattern matrix is displayed in Table 3, excluding factors that loaded on a variable below the 0.4 threshold value (Stevens, 2012).

Table 3: EFA Pattern Matrix

	Factor					
	1	2	3	4	5	6
Ent1	0.698					
Ent2	0.850					
Ent3	0.787					
Ent4	0.919					
Ent5	0.772					
Ent6	0.731					
Ent7	0.754					
Ent8	0.901					
Ent9	0.837					
Ent10	0.840					
Av1			0.689			
Av2			0.702			
Av3			0.736			
Av4			0.970			
Av5			0.960			
Av6			*0.581*			
Av7			0.874			
Av8			0.957			
Pri1					0.687	
Pri2					0.834	

Pri3					*0.525*	
Pri4					0.897	
Pri5					0.869	
Pri6					0.701	
Pers1						0.760
Pers2						0.789
Pers3						0.950
Pers4						0.721
Pers5						0.858
Goal1				0.818		
Goal2				0.697		
Goal3				0.879		
Goal4				0.887		
Goal5				0.821		
Goal6				0.819		
Goal7				0.*624*		
Sacri1						
Sacri2						
Sacri3					0.466	
Sacri4				0.570		
Sacri5						
Sacri6						
Util1		0.754				
Util2		0.*642*				
Util3		0.829				
Util4		0.860				
Util5		0.923				
Util6		0.721				
Util7		0.796				
Util8		0.927				
Util9		0.725				

Extraction method: Principal axis factoring. Rotation method: Promax with Kaiser normalization.

Questions with loadings below 0.65, italicized in Table 2, were excluded from further analyses. Perceived sacrifice questions were also excluded from further analyses, as shown.

4.2. Confirmatory Analysis

Once EFA had been performed, partial least squares structural equation modelling (PLS-SEM)—a causal-predictive SEM approach—was chosen as the statistical technique to test the hypotheses of this study. Other SEM techniques, such as covariance-based SEM (CB-SEM)—usually carried out in AMOS SPSS, or multiple linear regression, were considered inadequate because of their parametric nature (the DV data in this study are negatively skewed). PLS-SEM does not assume a normal distribution of data, allows the consideration of formative constructs and is ideal for small sample sizes (Hair et al., 2019). Additionally, PLS-SEM software, particularly SmartPLS, includes authoritative validity and reliability analysis, such as the discriminant validity heterotrait-monotrait (HTMT) ratio, not included in AMOS. Finally, Smart-PLS is a powerful software to test moderation and mediation relationships (Hair Jr et al., 2016).

First, reliability and validity test outputs are reported. Two values were computed to ascertain the reliability of the constructs: composite reliability (internal consistency) and Cronbach's alpha. Composite reliability values should be ≥ 0.7 (Bagozzi & Yi, 1988; Hulland, 1999), and Cronbach's alpha should be ≥ 0.8. These values are reported in Table 4.

Table 4: Reliability Values: Cronbach's Alpha and Composite Reliability

	Cronbach's alpha	Composite reliability
Ad avoidance	0.949	0.958
Entertainment and info	0.956	0.962
Goal impediment	0.915	0.935
Personalization	0.915	0.935
Privacy concerns	0.894	0.922
Utility	0.943	0.953

Convergent validity was tested using the average variance extracted (AVE) (Bagozzi & Yi, 1988). AVE values should be > 0.5 (see Table 5).

Table 5: Convergent Validity Test: Average Variance Extracted Values

	Average variance extracted (AVE)
Ad avoidance	0.767
Entertainment and info	0.717
Goal impediment	0.705
Personalization	0.744
Privacy concerns	0.703
Utility	0.717

The Fornell-Larcker assessment (Fornell & Larcker, 1981) along with the HTMT ratio (Henseler et al., 2015) were employed to establish discriminant validity. The Fornell-Larcker criterion states that the square root of the AVE of each variable should be larger than any possible correlation between the variables of the model, while the HTMT requires values < 0.9. The results of both tests are displayed in Table 6.

Table 6: Discriminant Validity Tests: Fornell-Larcker Criterion and Heterotrait-Monotrait Ratio (HTMT)

	Fornell-Larcker criterion						Heterotrait-monotrait ratio (HTMT)				
	Avoid	Ent	Goal	Pers	Priv	Util	Avoid	Ent	Goal	Pers	Priv
Avoid	*0.876*										
Ent	–0.55	*0.847*					0.566				
Goal	0.320	–0.18	*0.840*				0.343	0.198			
Pers	–0.20	0.349	–0.03	*0.863*			0.206	0.370	0.073		
Priv	0.334	–0.14	0.263	–0.14	*0.838*		0.357	0.142	0.285	0.145	
Util	–0.40	0.524	–0.29	0.389	–0.10	*0.847*	0.424	0.551	0.309	0.404	0.108

With the validity and reliability of the measurement model established, the structural analysis was conducted.

4.3. Structural Analysis and Hypotheses Testing

The R^2 obtained for the model was 0.413. The model fit was good, as indicated by the standardized root mean square residual (SRMR) of 0.062 (< 0.08 is recommended by Hu and Bentler (1999)). Path and bootstrapping analyses were run in SmartPLS to determine how much causal influence other variables had on ad avoidance and whether these influences were significant. For moderation analyses, interaction terms were created using the two-stage approach by Chin et al. (2003). The multiple moderation model is displayed in Diagram 1 with the corresponding path values; significant paths are represented by the unbroken lines. Table 7 shows the path coefficients with their associated p-values and the corresponding hypotheses and outcomes.

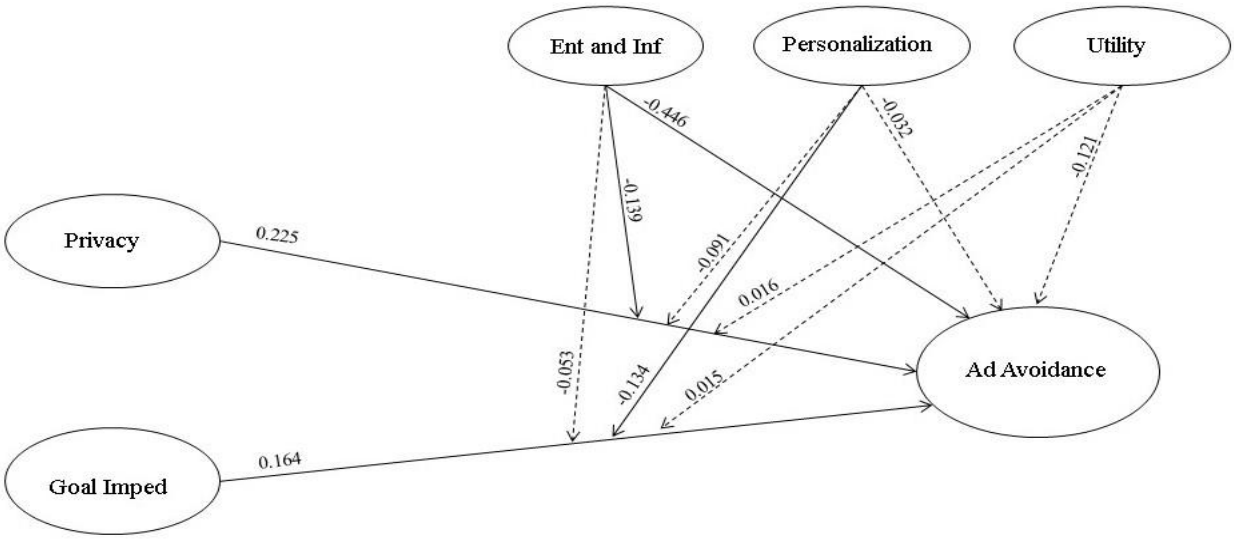

Diagram 1: PLS-SEM Path Mode

Table 7: Paths with P-Values and Hypotheses Outcomes

	Ad avoidance paths	p-values	Hypothesis/outcome
Privacy concerns	0.225	0.003	H1/Supported
Goal impediment	0.164	0.049	H2/Supported
Entertainment and info	–0.446	0.000	H3/Supported
Personalization	–0.032	0.595	H4/Not supported
Utility	–0.121	0.161	H5/Not supported
Moderation effects			
Priv - Ent - Av	–0.139	0.004	H3a/Supported
Goal - Ent - Av	–0.053	0.483	H3b/Not supported
Pri - Pers - Av	–0.091	0.269	H4a/Not supported
Goal -Pers -Av	–0.134	0.043	H4b/Supported
Pri - Util - Av	0.016	0.823	H5a/Not supported
Goal - Util - Av	0.015	0.789	H5b/Not supported

Finally, Diagrams 2 and 3 illustrate the statistically significant moderation hypotheses, H3a and H4b. It can be seen that the dotted lines have lower slopes than those of the continuous lines, which shows that: (i) for higher levels of entertainment and informativeness, the relationship between privacy concerns and ad avoidance was weaker (H3a), and (ii) for higher levels of personalization the relationship between goal impediment and ad avoidance was weaker (H4b).

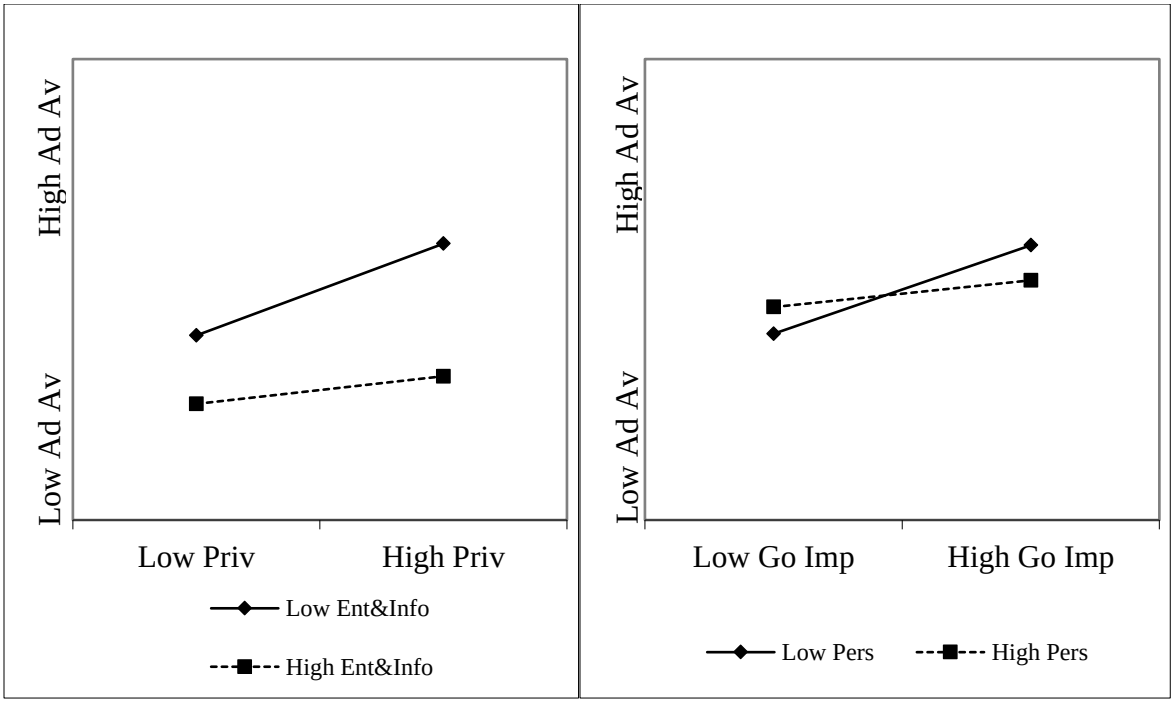

Diagram 2 (Left): Moderation Effect of Entertainment and Informativeness. Diagram 3 (Right): Moderation Effect of Personalization.

5. Discussion

The purpose of this study was to examine the impact of perceptual factors (perceived privacy concerns, goal impediment, entertainment and informativeness, personalization and utility) on consumers' advertising avoidance intention on the YouTube mobile platform. As in previous literature (Bang et al., 2018; Goodrich et al., 2015; Lee & Lumpkin, 1992; Shin & Lin, 2016; Speck & Elliott, 1997), this study found a positive relationship between perceived privacy concerns and perceived goal impediment and ad avoidance (H1 and H2 supported) and a negative relationship between entertainment and informativeness and ad avoidance (H3 supported). The PLS-SEM model showed that the higher percentage of variance for the dependent variable was explained by entertainment, followed by privacy concerns and ad avoidance (see paths in Table 7**).** Importantly, this research did not find a negative relationship between personalization and utility and ad avoidance (H4 and H5 not supported), in disagreement with previous findings (Bang et al., 2018; Shin & Lin, 2016). However, personalization was found to have a significant moderation effect on the relationship between goal impediment and ad avoidance (H4b supported). Particularly, the findings of this study indicated that users in a goal-directed state of mind avoided ads less when they perceived them to be personalized compared to when they did not. The other significant moderation effect found by this study was that a user worried about their privacy would avoid ads less if they are entertaining (H3a supported). These moderation findings indicate that ads on mobile YouTube *that possess certain features* are effective in bringing about a change in the state of mind of the app's users. In terms of reversal theory, personalized, entertaining and informative ads are environmental elements that trigger reversals in users who are in goal-oriented, telic frames of mind and, accordingly, stand a chance of garnering consumer attention in an environment where this cognitive resource is a valuable asset (Davenport & Beck, 2001).

On the other hand, this study suggested that the potential for ads to effect reversals when users are in telic frames of mind is highly limited. Most of the moderation effects investigated in this study were not significant, which should set off alarm bells among advertisers. Users worried about their privacy or focused on achieving certain goals displayed a tendency to remain in telic frames of mind so that even the exposure to useful, entertaining, or personalized

ads was not, in many cases, enough to overturn these states. This highlights the necessity of considering a classical concept in advertising: *timing* (Strong, 1977). An ad, even if perceived as useful, would be avoided if a user is trying to reach a specific goal that is not related to the ad. For example, even if users perceive a vacuum cleaner ad to be useful and relevant for their situation, they would engage in avoidance behaviors if their goals *at that moment* have nothing to do with house chores (e.g., if they are watching news highlights on YouTube while on the train). Similarly, timing suggests that if privacy issues are occupying a significant share of a user's cognitive space at a specific moment, they will probably perceive personalized ads as threatening. For example, Facebook's Cambridge Analytica scandal has recently received extensive coverage from leading news outlets, such as *The Guardian* or *The New York Times* (Cadwalladr & Graham-Harrison, 2018; Granville, 2018), which would surely affect the privacy concerns of the wider Internet user population. In this context, attempting a reversal of people's frame of mind through personalized advertising would be ill-advised. In short, reversals are not easily accomplished.

For H4 and H5, where the findings indicated that personalization and utility were not significantly related, there are two potential reasons for this. First, personalization—as previously discussed—requires access to personal data which, in turn, can easily trigger privacy concerns. Not finding a relationship here was not surprising, especially in a study where privacy concerns were shown to have a positive relationship with ad avoidance. Second, the on-the-move feature—the frequently enabled location-based capabilities of mobile devices—of mobile platforms can make utility a secondary concern when it comes to avoiding advertisements on YouTube. Again, timing might be of the essence here. If someone is on a short bus trip watching YouTube and suddenly is presented with an ad that is perceived to be useful (e.g., an ad about the perks of investing in Contracts for Differences), they might skip it as they are not in a position to take action (e.g., download an app, answer several questions about investment knowledge before adding money to the account, picking investments, etc.). Therefore, the perception of usefulness can demand a specific context to stop users from avoiding the ads, something that clashes with the nature of mobile platform use.

5.1. Managerial Implications

From a managerial perspective, it will become increasingly important for marketing and advertising practitioners to develop a bi-dimensional psychological understanding of their target audiences for a given marketing campaign so that a higher level of precision advertising is achieved on video-based platforms like YouTube. Advancements in digital technology, particularly in emerging domains such as cloud-based behavioral marketing and analytics software, will enable the mapping of consumer circumstances in a more fine-grained manner so that advertisements can be fed at the proper time while taking into account the likely frame of mind of a consumer (e.g., telic, paratelic).

Considering reversal theory will make advertising less and less intrusive as it will take into account the real-time psychological reality of Internet users and the state of flux of consumers' frame of mind (Jung et al., 2014). Accordingly, advertising practitioners will become more attuned to the different online experiential structures of consumers—as influenced by contextual factors such as time, place, and circumstances—in tailoring the advertisement content to increase the likelihood of eliciting a positive or intended response from them (Jabbar et al., 2020; Singaraju, Forthcoming). Keeping advertisements close to the particular frame of mind of a user at a specific moment will require the gathering of personal information, something that can trigger privacy concerns and backlash. However, reversal theory shows that relevant targeting information need not be particularly specific or privacy-threatening, as the state of mind of a consumer can easily be inferred from general content tags. For example, if someone is watching a Premiere League video on mobile YouTube they are likely in a paratelic state of mind (and should be fed advertisements accordingly). Advertisers working based on general psychological principles can then overcome the need for highly specific information in their targeting efforts, simultaneously avoiding any consumer concerns about privacy (though maybe not all of them).

This is important as the current advertising model of companies such as Facebook and Google, where information and exposure to advertisements are the currency users pay for the free use of Internet platforms, starts to crumble (Arrieta-Ibarra et al., 2018; Lanier, 2018; Zuboff, 2015). Internet users are beginning to realize that the price they are paying for free access to a multitude of platforms might be too high. Advertising content delivery that is underpinned by firm psychological bases can progressively erode the need for highly specific data while simultaneously mitigating users' privacy concerns.

5.2. Limitations and Further Research

This study was not without its limitations. First, it is suggested that future experimental studies on this topic employ methods to induce paratelic and telic states of mind; this would enable the effects of the perceptual factors identified in this study on consumers' bi-dimensional metamotivational states to be evaluated. Jung et al. (2014) and Seyedghorban et al. (2015) are the only empirical studies that have employed reversal theory to examine the role of Internet users' metamotivational states in the context of interactive ads. However, unlike the context and aim of this study, Jung et al. (2014) conducted a field experiment to examine how online consumers' user mode (telic/paratelic) influence their evaluation of advertisements that varied in interactivity (high vs. low arousal), while Seyedghorban et

al. (2015) explored the impact of consumers' user mode in replicating and extending the model by Cho and Cheon (2004). Second, the present study used a multiple moderation model that assumed *no interaction* between the moderators. Future studies should attempt to explore how advertisements that tick several boxes simultaneously (e.g., being entertaining, useful and personalized) fare in terms of operating cognitive reversals. This would require the use of multiplicative moderation models which, as far as is known and because of software limitations, can only be tested using repeated-measures designs (Montoya, 2018). Finally, future studies should integrate reversals in the context of avoidance of different types of ads. For instance, research findings have suggested that ads can be highly irritating when played right before the beginning of a video that the user intends to watch (Campbell et al., 2017). Again, the state of mind of the user can change over a few minutes and the stability of a particular frame of mind could change during a short YouTube video, making the user more open to the acceptance of an interruption in the middle of watching a video (mid-roll ad) than immediately before doing so (pre-roll ad). Other ad features that research suggests are important, such as congruity with the content (Pelsmacker et al., 2019), could also be investigated in future studies.

Acknowledgement

This research was supported in-kind by La Trobe University.

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APPENDIX A

Appendix A: Survey Questions

Ent1: On a mobile device, video ads on YouTube are fun to watch.
Ent2: On a mobile device, video ads on YouTube are clever and quite entertaining.
Ent3: On a mobile device, video ads on YouTube do not just sell – they also entertain me.
Ent4: On a mobile device, video ads on YouTube are often amusing.
Ent5: On a mobile device, video ads on YouTube are a valuable source of product/service information.
Ent6: On a mobile device, video ads on YouTube are a convenient source of product/service information.
Ent7: On a mobile device, video ads on YouTube help keep me up to date.
Ent8: On a mobile device, video ads on YouTube are entertaining.
Ent9: On a mobile device, video ads on YouTube are enjoyable.
Ent10: On a mobile device, video ads on YouTube are pleasing.

Av1: On a mobile device, I intentionally ignore any personalised advertising on YouTube.
Av2: On a mobile device, I hate any personalised advertising on YouTube.
Av3: On a mobile device, it would be better if there were no personalised advertising on YouTube.
Av4: On a mobile device, I immediately skip ads on YouTube without watching them.
Av5: On a mobile device, I ignore video ads on YouTube.
Av6: On a mobile device, I don't watch any video ads on YouTube, even if some draw my attention.
Av7: On a mobile device, If I receive too many video ads on YouTube, I stop watching them.
Av8: On a mobile device, I Skip video ads on YouTube without watching them.

Pri1: I feel uncomfortable when information is shared without permission.
Pri2: I am concerned about misuse of personal information.
Pri3: It bothers me to receive too much advertising material of no interest.
Pri4: I feel fear that information may not be safe while stored.
Pri5: I believe that personal information is often misused.
Pri6: I think companies share information without permission.

Pers1: On a mobile device, I think that the personalised advertising on YouTube makes purchase recommendations that match your needs.
Pers2: On a mobile device, I think that the personalised advertising on YouTube enables me to order products that are tailor-made for me.
Pers3: Over all, on a mobile device, the personalised advertising on YouTube is tailored to my situation.
Pers4: On a mobile device, the personalised advertising on YouTube makes me feel that I am a unique customer.
Pers5: On a mobile device, I believe that the personalised advertising on YouTube is customized to my needs

Goal1: On a mobile device, video ads on YouTube make it harder to watch intended videos on YouTube.
Goal2: On a mobile device, when halfway watching videos on YouTube, video ads on YouTube disrupt the flow of watching intended videos.
Goal3: On a mobile device, video ads on YouTube disrupts or hinders me from watching intended videos on YouTube.
Goal4: On a mobile device, video ads on YouTube disrupts receiving desired incoming content.
Goal5: Video ads on YouTube infringes on my control over mobile devices.
Goal6: On a mobile device, video ads on YouTube intrudes on my search for desired information.
Goal7: On a mobile device, when expecting an intended video on YouTube, receiving a video ad on YouTube distracts me.

On a mobile device, to what degree do you consider the following as a problem associated with video ads on YouTube:

Sacri1: YouTube ads make it difficult to use my mobile devices.
Sacri2: Loss of control
Sacri3: Loss of privacy.
Sacri4: Time consuming.
Sacri5: Feel annoyed or irritated.
Sacri6: Blurring distinction between home, work, and leisure.

On a mobile device, video ads on YouTube can help in the following aspect:
Util1: Raise our standard of living.
Util2: Find products that match my personality and interests.
Util3: Buy the best brand for a given price.
Util4: Save money.
Util5: Save time.
Util6: Provide an entertaining experience.
Util7: Provide useful product/service/brand information.
Util8: Increase effectiveness in managing information.
Util9: Provide incentives for purchasing products or services.