

THE INTERPLAY OF ADVERTISING CHOICE AND INVOLVEMENT ON
PSYCHOLOGICAL REACTANCE, ATTITUDES, AND INTENTIONS IN THE CONTEXT
OF ONLINE VIDEO ADVERTISING

BY

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THESIS

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ABSTRACT

Online video ads interrupt users' online video watching experiences, and can exert a significant negative impact on changes in attitudes. Allowing users to choose which ads they prefer to watch is known as the ad selector, and advertisers seek to reduce the negative impacts of ads. However, few studies have examined whether or not, and how, the ad selector works. The present study examined how ad choice and involvement independently and interactively impact users' psychological reactance, attitudes toward the ad, attitudes toward the brand, and purchase intentions in the context of online video advertising. Employing a 2 (ad choice: yes vs. no) x 2 (involvement: high vs. low) between-subject experimental design, we revealed that ad choice interacted with involvement on the attitudes toward the ad and the brand, whereas independent effects were also found on reactance and purchase intention. In particular, users' psychological reactance played a significant mediating role in the impact of each independent variable on attitudes toward the ad. Both theoretical and practical implications are discussed.

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CHAPTER 1. INTRODUCTION

The contemporary online video market is considered to be one of the most profitable markets in the digital industry. More particularly, the online video advertising (OVA) market has grown as consumption of U.S. online video has increased dramatically (comScore, 2012; Levien, 2013). Advertisers have sought to offer their companies' ads on online video websites, and have encouraged online viewers to recall and purchase their brands.

However, online viewers have expressed annoyance with OVAs that interfered with their video enjoying experience (Morrissey, 2006). Previous researchers have tested variables that trigger viewers' negative responses against ads in various media contexts (Cho & Cheon, 2004; Duff & Faber, 2011; Edward, Li, & Lee, 2002; Kelly, Kerr, & Drennan, 2010). Those studies found that it is important to understand the psychological background of consumers' negative reactions against ads. In order to take into account consumers' negative responses to ads, we focus on psychological reactance theory (PRT).

PRT accounts for how an individual develops aversive responses to objects, people, organizations, or products that are perceived to threaten one's freedom (Brehm, 1966; Clee & Wicklund, 1980; Edward, Li, & Lee, 2002). Consumer freedom in the context of OVA involves watching online videos without ad interruptions. In other words, this form of freedom involves the freedom to choose content and select the particular content of their choice without disturbances or interruptions. When an ad break (pre-roll) limits consumer freedom, consumers are likely to perceive the ad negatively. Consequently, they would develop negative attitudes toward the commercials. Thus, advertisers want to establish ad strategies that reduce the level of reactance and enhance brand attitudes.

Viewer displeasure with ads stimulated U.S. advertisers and media companies to find effective structures for advertising for use on video sharing websites (Katz, 2010). They researched the formats of video ad which encourage consumers to recall brands and improve purchase intentions to the greatest extent. The research found that consumers prefer to have ad choices which allow them to select (ad selector), rather than being forced to watch commercials. However, the research did not reveal which types of commercials were used to demonstrate the effectiveness of the ad selector model. Lee, et al. (2013) tested several variables involving the willingness to pay, including the presence of ad choice, a number of commercials, and the length of commercials. The results showed that ad choice positively affects consumers' willingness to pay for subscription fees in video sharing websites. They also demonstrated that the number and length of commercials that viewers should watch negatively influence their willingness to pay. However, they did not examine whether or not those commercials were high-involvement ads for the participants in the experiments. Moreover, most studies that covered the effects of online ads focused on attitudes or purchase intentions, but not reactance. Thus, we developed our study to fill these research gaps.

This paper identifies two fundamental features that can enhance attitudes and purchase intentions, and alleviate the level of reactance against OVA: first, the presence of ad choices (Brehm, 1956; Freedman & Steinbruner, 1964; Lee, et al., 2013; Schlosser & Shavitt, 2009) and, second, the level of involvement (Campbell & Wright, 2008; Edward, Li, & Lee, 2002; Hussain & Lasage, 2014; Pashkevich, et al., 2012; Sableman, Shoenberger, & Thorson, 2013). Our study focuses on three major points. First, we demonstrate that ad choice and involvement significantly reduce reactance, and improve attitudes toward the ad. The study also identifies an important role of involvement which encourages online viewers to favorably evaluate brands and increase their

purchase intentions. Second, in addition to the main effects of two variables, the interaction effects of two features on attitude toward the ad and brand attitudes are also found to be significant. Third, our study also shed a light on the role of reactance as a mediator which work in the context of OVA. Mediation effects from ad choice on attitude toward the ad via reactance are found to be significant (as well as mediation effects from involvement on attitude toward the ad via reactance).

This research aims to contribute to advertising theory and practices. Numerous previous studies have investigated the effects of various ad structures on ad effectiveness. However, few empirical works have systematically demonstrated the effects of various features of commercials on reactance. As mentioned above, reactance is a concept that academics and practitioners should study in order to determine how it modifies viewer attitudes. Psychological reactance theory has been used to understand the processes which underlie consumers' negative reactions against ads (Brehm, 1966; Clee & Wicklund, 1980; Fitzsimons & Lehmann, 2004). The present study attempts to systematically bridge this gap by providing insights about the effects of ad choices and involvement on reactance as well as attitudes and intentions. The purpose of this study is to find out which features can reduce reactance and improve online viewers' attitudes and intentions. This research also shows that the relationship between ad choice (and involvement) and attitude toward the ad is mediated by reactance in online video settings. This paper points out this gap, and aims to examine the role of reactance as a mediator to the context of OVA.

As regards practitioners, we attempt to offer a blueprint of interactive formats that contemporary advertisers can adopt for use in the OVA context. First, we aim to offer insights which show that empowering online viewers with user control is important feature that should be

incorporated into advertising strategies. If ad choices are provided, online viewers would perceive that they enjoy more freedom to select the preferred media contents that they want to enjoy. This would lead to reduced ad resistance and increase user satisfaction. The study also confirms that practitioners should investigate consumer needs and deliver relevant information that would stimulate consumer interests in the OVA context.

CHAPTER 2. LITERATURE REVIEW

2.1. A Developed Format of OVA: Ad Selector

Online Video Advertising (OVA) refers to “video content disturbed via the Internet to be streamed or downloaded onto compatible devices such as computers and mobile phones” (Hussain & Lasage, 2013, p. 44). The US online media market is considered to be one of the most profitable markets in the digital industry, and OVA has become a popular ad format which is used in online advertising (comScore, 2012; eMarketer, 2011). One reason why it is used is that online videos are more effective for producing stronger brand recall than television (Nielsen, 2010).

However, viewers are annoyed by commercials that disturb their video watching experiences (Morrissey, 2006). 80% of online video viewers were annoyed by OVAs that appear before the video content, and 75% of them intentionally ignored such ads. This format of OVA is known as pre-roll, and is the most common format of OVA. Today, it is quite common to find viewers who were forced to watch such ads.

Given that pre-roll has been criticized by online video viewers, various formats of OVA have been developed and tested in order to improve ad effectiveness (Katz, 2010). The Vivaki Publicis Groupe agency created a collaborative group that includes U.S. major advertisers and media companies. The group sought to discover the most effective OVA model (Learmonth, 2010). 29 different experimental OVA models, including ad selector, were tested. Ad selector refers to the OVA format that allows viewers to choose which ad they will watch before, during, or after the presentation of video contents (Katz, 2010). For instance, if a consumer is provided with two or three ad choices, that consumer can click on whichever ad is chosen and watch it. After conducting several focus groups, interviews, and surveys, they found that the ad selector

format is the winning model. It was more effective in terms of user engagement, unaided recall, and purchase intentions compared with alternative OVA formats. More particularly, the ad selector model increased unaided awareness, aided awareness, and purchase intent to a greater extent than was the case for pre-roll.

A primary factor underlying the ad selector's effectiveness is offering freedom of ad choice (Katz, 2010). Ad choice empowers viewers to engage and control ads, which is why consumers perceive the ad selector format favorably. McCoy, et al. (2008) found that viewers who were offered ad control evaluated ad messages more favorably than viewers who were not offered any form of control. Their study indicates that the format of ad control (i.e., ad selector) can result in positive attitudes. However, it is unknown whether the effect of ad choice differs depending on situational factors. The level of involvement may determine the effect of ad choice on ad effectiveness. For instance, assume that a consumer wants to purchase a bottle of milk. When that consumer watches a milk ad chosen from ad options, the consumer is more likely to favorably evaluate that ad and increase purchase intentions than other type of product ad. Therefore, it is worthwhile to investigate the effect of ad choice and involvement on ad effectiveness. Previous studies of the effects of ad choice and involvement on ad effectiveness are reviewed in the next section.

2.2. Ad Choice

The effect of choice was originally studied in the field of organizational behavior. McGregor (1960) discussed how to improve employees' work efficiency by offering employee empowerment. He recommended providing work options that individuals could control and which would enhance their intrinsic motivation toward their work. Studies of the impact of choice were extended to marketing and advertising (Brehm, 1956; Freedman & Steinbruner,

1964; Schlosser & Shavitt, 2009). Brehm (1956) examined the effect of choice on consumer attitudes. He found that consumers expressed more positive attitudes toward the chosen product than the unchosen product. He applied Cognitive Dissonance Theory (CDT) to describe the mechanism underlying his assumptions. This theory was developed by Festinger (1955), in order to explain why attitudes regarding a brand change when choices are offered. CDT describes how an individual is motivated to reduce discomfort when asked to make a choice among several alternative choices. After selecting one of the choices, the individual rationalizes that choice by making what was chosen more desirable. Freedman and Steinbruner (1964) found that offering choices increases resistance to forms of counter-communications such as negative reviews or bad experiences. In other words, allowing consumers to have choices makes consumers reluctant to accept counter-messages they receive. Providing message choices also improves ad effectiveness (Schlosser and Shavitt, 2009). Message choices lead to favorable attitudes toward the brand and the company, and subsequently increase purchase intentions. Thus, providing ad choices enhances consumer attitudes regarding advertised brands and helps induce them to make positive inferences about companies.

The effect of choices also produces positive effects on ad effectiveness by increasing empowerment and interactivity (Katz, 2010; Lee, et al., 2013; Liu & Shrum 2002; Liu & Shrum, 2009). Katz (2010) mentioned that the ad selector format empowers consumers because ad control allows them to select one of the commercials among several alternatives. Lee, et al. (2013) stated that ad choice is a form of user control. They demonstrated that willingness to pay for subscription plans on online video websites is greatly affected by ad structures. More specifically, they found that ad choice encourages viewers to pay more for subscription fees than is the case for alternative formats of advertising. They stated that the reason was that viewers had

a form of control over advertising. At this point, the question arises as to whether it is acceptable to consider ad choice a being an interactive medium. Sicilia, Ruiz, and Munuera (2005) discussed that interactivity enables consumers to remove unsolicited or unwanted information. Ad choice allows viewers to select their preferred ads among several alternatives, and eliminates the possibility of watching irrelevant ads. From this perspective, ad choice can be regarded as an interactive medium.

The effects of interactivity can generate positive or negative results, depending on situational or personal factors. Interactive features on websites facilitate user learning and satisfaction by allowing users to control website contents (Liu & Shrum, 2002; Liu & Shrum 2009). Liu and Shrum (2002) mentioned that users customize the content and motivate themselves to engage in processing information. Ariely (2000) supported their ideas and stated that being able to control the flow of information maximizes the fit between personal needs and the information that is made available. On the other hand, interactive features can have detrimental effects depending on the individual's ability to control the information. When a large amount of cognitive resources is required to process the information, the effect of interactivity backfires on user satisfaction. For instance, if users are unfamiliar with the Internet, or have little experience with interactive websites, they exhibit negative attitudes toward the website. Therefore, the effects of the interactive medium can result in different reactions due to situational or personal factors.

2.3. Involvement

Involvement is generally defined as “a person's perceived personal relevance of the object based on inherent needs, values, and interests” (Zaichkowsky, 1985, p. 342). Kwon and Chung (2010) conceptualized involvement as the personal relevance to the individual consumer

or the importance of the product category to the individual consumer. There have been numerous studies of involvement and the role it plays in consumer behavior (Andrew, Durvasula, & Akhter, 1991; Petty, Cacioppo, & Schumann, 1983). Andrew, Durvasula, and Akhter (1991) constructed a theoretical framework of involvement. It shows that high involvement leads to increased search behavior, information processing, and motivation. Also Petty, Cacioppo, and Schumann (1983) accounted for the role of involvement in information processing using the Elaboration Likelihood Model (ELM). They showed that consumers take central or peripheral routes in processing information based on the degree to which they are involved with specific products or situations. For instance, when consumers are deeply involved with a particular product, they are more likely to seek out alternatives, and to focus on product-relevant arguments in advertising (central route). The other alternative is that they are more likely to focus on peripheral cues such as endorsers or background music when they are not particularly involved in the product (peripheral route). Petty, Cacioppo, and Schumann (1983) applied this model in the context of advertising.

However, this model does not reveal the direct effect of involvement on attitudes and purchase intentions. Further studies were conducted to investigate the direct effect of involvement on ad effectiveness in different media settings. Recent studies have shown that personal relevancy improves ad effectiveness (Campbell & Wright, 2008; Edward, Li, & Lee, 2002; Hussain & Lasage, 2014; Pashkevich, et al., 2012; Sableman, Shoenberger, & Thorson, 2013). Campbell and Wright (2008) conducted empirical studies regarding how interactivity and personal relevance influence attitudes toward the ad. The level of personal relevance was found to positively affect attitudes regarding the ad. The effects of relevance on ad resistance were also mentioned in previous studies (Clee & Wicklund, 1980; Edward, Li, & Lee, 2002). When a

consumer perceives ads to be irrelevant messages, they would rather feel psychological force to watch those ads than consider them to be useful information. Hussain and Lasage (2014) explored antecedents that affect OVA avoidance. They found that one antecedent that reduces OVA avoidance involves increasing the level of personal relevance of ad contents. Given this result, they suggested that advertisers to target the right customers with right messages.

Pashkevich, et al. (2012) tested the effectiveness of YouTube's new ad format, TrueView. This ad format allows users to skip ads they do not want to watch. They revealed that TrueView enhances user satisfaction while also increasing ad impression and user engagement. The results indicate that high level of relevance improves ad effectiveness in OVA. Moreover, the effect of relevant ads on attitudes toward the ad was investigated in order to explore how consumers perceive online behavioral advertising (Sableman, Shoenberger, & Thorson, 2013). Online behavioral advertising (OBA) is an advertising technique that exposes tailored ads to web users on the basis of their online activities. The results of the study showed that participants preferred relevant ad messages to irrelevant ad messages. In other words, the level of personal relevance is positively associated with attitude toward the ad.

Previous studies above demonstrated the positive effects of ad choice and involvement on ad effectiveness. Ad choice and involvement are expected to induce online web users to positively respond to OVA. However, it is also important to consider how web users experience reactance against the ad when forced to watch ads on online video websites. Psychological Reactance Theory (PRT) explains why viewers perceive ad intrusiveness and develop negative attitudes regarding ads and advertised brands. We have covered literature reviews about reactance theory and predicted whether ad choice and involvement have positive impacts on reactance, attitudes and intentions.

2.4. Psychological Reactance Theory (PRT)

Psychological reactance refers to a motivational state that seeks to re-establish the equilibrium state of one's threatened freedom (Brehm, 1966). When people respond aversively to external factors which are believed to limit their freedom, or when they overvalue their freedom, their behavior is regarded as reactance arousal (Baumeister, Catanese, & Wallace, 2002; Brehm, 1966). Clee and Wicklund (1980) applied this theory to the marketing context. They described how manipulative marketing tactics are perceived as constituting freedom-threatening events. Fitzsimons and Lehmann (2004) examined how unwanted and unexpected recommendations affect reactance arousal in marketing. Participants unfavorably responded to experts' recommendations that did not mesh with their predominant opinions. Unmatched recommendations, even though made by experts, were regarded as threats to freedom by consumers when they made their final decisions.

PRT has been also applied in the context of online advertising (Edward, Li, & Lee, 2002). The contemporary Internet allows consumers to search for content and entertainment on websites. In comparison with traditional non-interactive media such as television and newspapers, web users are more likely to become involved in online activities. This characteristic makes web users more sensitive to interruptions on websites they use (Kelly, Kerr, & Drennan, 2010). Thus, reactance may occur more frequently in the online advertising context than in traditional advertising (Edward, Li, & Lee, 2002). Their study showed that reactance results in intrusiveness, irritation, and ad avoidance. Eunice, et al. (2011) revealed that OVA is perceived as a barrier that limits one's freedom to watch videos without ad breaks. Their study sheds light on how advertising triggers reactance against the ad in the context of OVA.

There have been numerous studies about reactance arousal in the advertising context, but few empirical studies have concentrated on factors that reduce reactance other than the study by Gardner and Leshner (2011). These authors showed that narrative techniques and references can persuade consumers to reduce their anger and negative responses toward ads. Except for this study, most studies have explained a factor or situation that evokes reactance (Dillard & Shen, 2005; Fitzsimons & Lehmann, 2004; Jung, Shim, & Mantaro, 2010; Quick & Stephenson, 2007; Quick & Stephenson, 2008). Previous studies have found that unsolicited recommendations (Fitzsimons & Lehmann, 2004), and language features (Dillard & Shen, 2005; Jung, Shim, & Mantaro, 2010; Quick & Stephenson, 2007; Quick & Stephenson, 2008) facilitate reactance arousal. It is worthwhile to study factors that have the potential to mitigate the level of reactance against advertising. Such findings can help advertisers develop better OVA formats and increase ad effectiveness. Given the limited amount of empirical research about reactance reduction, the present study will examine whether or not ad choice and involvement help diminish reactance against the ad.

CHAPTER 3. HYPOTHESES

3.1. Psychological Reactance

3.1.1. The Effects of Ad Choice

The present study defines consumer freedom as the freedom to choose media content and enjoy such content without interruption. In the context of OVA, a consumer perceives a threat to freedom to exist when forced to watch online video ads which interrupt online video content they are watching. This is how reactance occurs in OVA. One factor in reactance arousal is the lack of user control (Brehm & Brehm, 1981). This occurs, for instance, when consumers are forced to behave in a certain way. If the consumers cannot control their behavior, they would become annoyed and even frustrated. A lack of control over the freedom to enjoy one's preferred content (i.e., preferred videos or commercials) without interruption would magnify the perceived threat against freedom. When viewers are able to control the flow of advertising, they would exhibit less reactance against the ads they watch. In addition to Brehm and Brehm's (1981) argument, McCoy, et al. (2008) empirically showed that user control reduces ad intrusiveness on Internet websites. Their study found that respondents who were given user control of websites exhibited less perceived intrusiveness, compared with respondents who were not given any control. In similar context, ad choice, which is one of the formats of user control, is also expected to reduce consumers' psychological force against OVA (Katz, 2010; Lee, et al., 2013; Sicilia, Ruiz, & Munuera, 2005).

Another factor that affects the level of reactance arousal is expectation of having freedom (Clee & Wicklund, 1980; Zemack-Rugar, Fitzsimons & Lehmann, 2007). Consumers would react more negatively to a particular force that they believe inhibits their freedom when they have high expectations of enjoying such freedom (Clee and Wicklund, 1980). Pointing out this

rationale, Zemack-Rugar, Fitzsimons and Lehmann (2007) examined the effect of providing freedom of choice on the level of reactance. Their study confirmed that enjoying a great degree of freedom generates a higher level of reactance against the recommended option. On the other hand, when the perceived freedom of choice was low, reactance was significantly reduced.

Contemporary consumers who have high expectation of enjoying freedom of content choice would exhibit a high level of reactance against online advertising. The contemporary Internet allows consumers to enjoy numerous choices regarding their choice of media content. For example, they routinely select news content that matches their preferences (Prior, 2005). Online web users do not read entire online newspapers, and instead customize news article selections by selecting preferred content. In other words, consumers have increased their expectations of enjoying diverse content choices. Given this point of view, we assume that consumers, particularly those who are members of the Internet generation, would perceive a greater threat of freedom to exist when they are exposed to compulsory ads. Prior research leads to expectation that consumers who lack ad choice, which provides the freedom to choose ads, would exhibit more reactance against the OVA context. On the contrary, consumers who enjoy ad choice would exhibit less reactance against the ad.

3.1.2. The Effects of Involvement

Previous studies have shown the direct effects of personal relevance on ad effectiveness (Campbell & Wright, 2008; Edward, Li, & Lee, 2002; Hussain & Lasage, 2014; Pashkevich, et al., 2012; Sableman, Shoenberger, & Thorson, 2013). The presence of a high degree of relevancy or involvement is positively correlated with attitudes and engagement. In the present study, however, we determine to define the concept involvement more specifically. Bloch and Richins (1983) categorized involvement in terms of nature and time span as enduring involvement and

situational involvement. Enduring involvement consists of the cross-situational interests of individual consumers based on their needs and values over the long term. For example, if an individual desires to purchase a car, that individual would be likely to exhibit an interest in cars in general, and to frequently search for car information on Internet websites. That consumer would collect information about cars which have good fuel efficiency, reasonable price, etc. The consumer's involvement with purchase activity could be regarded as an enduring involvement. On the other hand, situational involvement is temporarily activated interests in specific contexts or situations. For instance, consider a middle-aged woman who wants to buy a laptop for her daughter as a birthday gift. She is not technologically savvy and does not have any information about laptops. She searches information and compares various alternative laptops. In this case, her type of involvement is considered to be a form of situational involvement. In the advertising context, consumers sometimes watch ads for products that they need in specific situations. A consumer might decide to purchase an umbrella when it rains. Or they might encounter product ads which are related to the website they visit. If a consumer visits a website that shows the latest fashion handbags, that consumer is more likely to show greater involvement with handbag advertisements on a website than for other types of product ads.

It is important to consider situational involvement in advertising, but few empirical works have found an association between situational involvement and reactance. Most researchers have focused on the effects of personal involvement on reactance arousal in the advertising context (Clee & Wicklund, 1980; Edward, Li, & Lee, 2002). Advertising has been shown to bring about both positive influence and psychological force (Clee & Wicklund, 1980; Edward, Li & Lee, 2002). Positive effects occur when consumers perceive persuasive communication to be informative and useful. Given on this rationale, Edward, Li, and Lee (2002) suggested that

personal relevance is an important part of persuasion tactics in online advertising. For instance, if a consumer watched a laptop ad while searching information about new laptops on Internet websites, that consumer would experience less reactance than would be the case when watching a shoe ad. We predicted that consumers would exhibit less reactance when they are provided relevant information in specific contexts or purchase-situations, which is in line with the arguments in previous studies. To summarize our hypotheses,

H1: The effects of ad choice and involvement on reactance would be significant in the context of OVA.

– **H1a: Viewers with ad choice will exhibit less reactance against the ad than do viewers without any choice in the context of OVA.**

– **H1b: Higher involvement will be more effective than lower involvement in reducing the level of reactance against the ad in the OVA context.**

3.2. Attitudes and Purchase Intentions

3.2.1. The Effects of Ad Choice

Previous researchers have analyzed the effect of providing choices on ad effectiveness (Brehm, 1956; Freeman & Steinbruner, 1964; Schlosser & Shavitt, 2009). A sense of choice stimulates consumers to more favorably evaluate the brand and increase purchase intention when they are provided with choices. Given this finding, we presumed that ad choice would also improve consumer attitudes toward the brand and purchase intention in the context of OVA.

We also anticipate the positive effect of ad choice on attitudes and intentions when ad choice is used as an interactive medium. Ad choice is a type of user control that works in an interactive medium (Katz, 2010; Lee, et al., 2013; Sicilia, Ruiz, & Munuera, 2005). The effect of this interactive feature differs depending on situational or personal factors (Li & Shrum, 2002; Liu & Shrum, 2009). Liu and Shrum (2009) stated that counter-effect of interactivity would occur when a high degree of cognitive demand is required to process the information on websites. However, the ad selector is a simple innovation that requires little cognitive load

(Learmonth, 2010). The ad selector is a form of pre-roll that allows viewers to choose their preferred commercials among two or three options (Ward, 2010). In other words, the ad selector is perceived by consumers as being an easy and simple ad format for viewers to process cognitively. For this reason, positive effects of ad choice on brand attitudes and intentions are expected to occur in the context of OVA.

Moreover, attitude toward the ad would be improved as viewers have ad choices. It has been shown that attitude toward the ad and the brand are positively correlated (MacKenzie & Lutz, 1989). MacKenzie and Lutz (1989) developed a conceptual framework of antecedents and consequences that affect attitude toward the ad. Their study showed that a close relationship existed between attitude toward the ad and the brand. Thus, when ad choice improves brand attitudes, it is possible to forecast an improved attitude toward the ad when consumers enjoy ad choice in the OVA context.

3.2.2. The Effects of Involvement

As noted above, several studies have shown that personal involvement positively impacts on ad effectiveness. However, few studies have been conducted on the direct effect of situational involvement. Exceptions include the work of Jeong and King (2010) and Laverie and Arnett (2000). Jeong and King (2010) conducted an empirical study to test how contextual relevance impacts brand attitudes and purchase intentions. They conceptualized ‘context’ as constituting “any number of form or content qualities associated with specific advertising mediums that are of interest to researchers” (Jeong & King, 2010, p. 249). They examined the impact of website context relevance on brand attitudes and purchase intentions in banner advertising. Their hypotheses were based on the storage bin model (Wyer & Srull, 1981). This model indicates that the recent information is stored at the top of the memory storage bin and is more likely to be

retrieved and utilized first when a certain stimulus is provided. In the banner ad context, the information on the websites was more likely to be stored and retrieved when consumers watched website-relevant banner ads. In this case, this context was perceived as the most useful cue for evaluating website-relevant banner ads. They expected respondents to hold more favorable attitudes toward contextually relevant banner ads and to develop increased purchase intention. As they hypothesized, contextually relevant banner ads elicited more favorable attitudes and greater purchase intentions rather than did irrelevant banner ads.

There was also an empirical study that examined the role of situational involvement in consumer satisfaction and behavioral intention in the context of the leisure industry (Laverie & Arnett, 2000). Laverie and Arnett (2000) tested whether situational involvement increases consumer satisfaction, and how this influences them to attend sports games. Situational involvement would be high among fans who watch sports game or when “their” teams win the games. High levels of situational involvement resulted in increasing consumer satisfaction, and this was positively associated with fan-identity salience. Satisfied fans subsequently increased game attendance frequency. These findings lead us to expect that situational involvement would impact attitudes and intentions in different media settings such as the OVA context. Moreover, previous studies have shown that high level of personal relevance reduces the level of reactance and improves attitude toward the ad (Clee & Wicklund, 1980; Edward, Li, & Lee, 2002; Sableman, Shoenberger, and Thorson, 2013). Therefore, we also propose that high levels of situational involvement would also induce consumers to favorably evaluate the ad in the context of OVA. Thus, we propose the following hypotheses,

H2: The effects of ad choice and involvement on attitude toward the ad would be significant in the context of OVA.

– H2a: Viewers who are offered ad choice will exhibit more positive attitudes toward the ad than viewers who are not offered choice in the context of OVA.

– **H2b: Viewers in the high-involvement situation will exhibit more positive attitudes toward the ad than will viewers in the low-involvement situation in response to the OVA context.**

H3: The effects of ad choice and involvement on brand attitudes would be significant in the context of OVA.

– **H3a: Viewers in the high-involvement situation will exhibit more positive brand attitudes than will viewers in the low-involvement situation in response to the OVA context.**

– **H1b: Viewers who are offered ad choice will exhibit more positive brand attitudes than viewers who are not offered choice in the context of OVA.**

H4: The effects of ad choice and involvement on purchase intentions would be significant in the context of OVA.

– **H4a: Viewers in the high-involvement situation will be more likely to purchase the brand in the ad than will viewers in the low-involvement situation in response to the OVA context.**

– **H4b: Viewers who are offered ad choice will be more likely to purchase the advertised brand than viewers who are not offered choice in the context of OVA.**

3.3. Interaction Between Ad Choice and Involvement

The Elaboration Likelihood Model (ELM) describes the extent to which consumers elaborate upon persuasive message claims in an ad by taking either the central or the peripheral route (Petty, Cacioppo, & Schumann, 1983). When the level of involvement is high, a consumer is more likely to extensively process the message claims via the central route. The consumer would expend a great deal of effort and time when processing the message in the ad. Then, consumers with higher involvement would focus more on relevant ad messages, or issues presented in the ad, than would consumers who exhibit lower involvement. In this case, consumers would perceive the usefulness of relevant information in the ad. One consequence would be that, the positive effect of advertising would exceed psychological force (Clee & Wicklund, 1980; Edward, Li, & Lee, 2002). Consumers are more interested in interpreting relevant information than irrelevant information, so a particular ad structure is not expected to produce attitude change. Rather, high level of relevancy would greatly reduce the level of reactance against the ad. On the other hand, when involvement is low, a consumer would be

affected by peripheral cues such as endorser attractiveness than ad message claims (Petty, Cacioppo, & Schumann, 1983). In other words, a consumer with low involvement would perceive the ad claim as consisting of information that is irrelevant to them. If a consumer is forced to watch an irrelevant ad, psychological force would eclipse the benefits of advertising (Clee & Wicklund, 1980; Edward, Li, & Lee, 2002). In this case, exposure to the interactive feature (i.e. ad choice) may stimulate consumers to pay attention to ads on online video websites since ad selector format would empower them with choices. Therefore, following hypotheses were proposed.

H5a: Interaction between ad choice and involvement reactance will be significant. There will be no difference in reactance between the ad-choice condition and the no-choice condition when involvement is high. On the contrary, the ad-choice condition will exhibit significantly less reactance than will the no-choice condition when involvement is low.

In addition, we expected to observe interaction between ad choice and involvement upon attitudes and intentions (Liu & Shrum, 2009; Petty, Cacioppo, & Schumann, 1983). As noted above, when consumers are highly involved in a certain product, they are more likely to assess the ad based on argument quality or relevant information (Petty, Cacioppo, & Schumann, 1983). A particular ad format would not influence attitude change when they look at product information. However, when involvement is low, consumers are more likely to avoid or ignore the ad. Since the ad is not relevant to them, they do not pay attention to what the ad says about but do pay attention to other cues such as ad endorsers or background music (Petty, Cacioppo, & Schumann, 1983). Therefore, a particular ad structure (i.e. ad selector) may motivate them to focus on the ad since ad selector format empowers consumers with user control. They are more likely to exhibit favorable attitudes and increase their behavioral intent to purchase. There is an empirical study that demonstrated interactivity effects across the level of involvement (Liu & Shrum, 2009). Liu and Shrum (2009) found no significant effect of interactivity in high-

involvement situations. However, interactivity did not exert a significant effect on attitudes and intentions in low-involvement situation. Given that the ad selector can be regarded as a form of user control that functions as an interactive feature, Liu and Shrum's (2009) study results can be applied in the present study. The studies above show that specific ad format (i.e. ad selector) may have a significant effect on ad effectiveness (i.e. attitudes and intention) when involvement is low, but may have no effect when involvement is high.

H5b: Interaction between ad choice and involvement on attitude toward the ad will be significant. There will be no difference in attitude toward the ad between the ad-choice condition and the no-choice condition when involvement is high. On the contrary, the ad-choice condition will produce more favorable attitude toward the ad than will the no-choice condition when involvement is low.

H5c: Interaction between ad choice and involvement on attitude toward the brand will be significant. There will be no difference in attitude toward the brand between the ad-choice condition and the no-choice condition when involvement is high. On the contrary, the ad-choice condition will produce more favorable attitude toward the brand than will the no-choice condition when involvement is low.

H5d: Interaction between ad choice and involvement on purchase intention will be significant. There will be no difference in purchase intention between the ad-choice condition and the no-choice condition when involvement is high. On the contrary, the ad-choice condition will make purchase of the advertised brand more likely than will the no-choice condition when involvement is low.

3.4. Reactance as a Mediator

The present study examines the role of reactance as a mediator of the relationship between ad choice and attitudes (as well as involvement and attitudes). Reactance has been used to explain the psychological mechanism behind negative responses against attempts perceived to threaten one's freedom (Baumeister, Catanese, & Wallace, 2002; Brehm, 1966; Clee & Wicklund, 1980; Fitzsimons & Lehmann, 2004; Edward, Li, & Lee, 2002; Gardner & Leshner, 2011). However, researchers have studied the role of reactance as a mediator (Dillard & Shen, 2005; Jung, Shim, & Mantaro, 2010; Rains & Turner, 2007; Quick, Scott, & Ledbetter, 2011).

Dillard and Shen (2005) stated that reactance mediates the relationship between attitudes and the threat of freedom, including argument intensity and trait reactance. They also showed that reactance is best understood as an intertwined process model of reactance. This model indicates that reactance should be considered to be a combination of anger and negative cognition. Rains and Turner (2007) replicated Dillard and Shen's (2005) study in order to generalize the intertwined process model of reactance. They also obtained the same results as Dillard and Shen (2005).

Following Dillard and Shen's (2005) research, other studies also demonstrated the role of reactance as a mediator in health communication (Jung, Shim, & Mantaro, 2010; Quick, Scott, & Ledbetter, 2011). Jung, Shim, and Mantaro (2010) observed how binge drinking college students reacted against an anti-drinking campaign. They tested how different levels of trait reactance and social norms affect reactance against anti-drinking campaigns, and how this led to advocacy in favor of the campaign message. Higher levels of trait reactance triggered greater amounts of reactance. The presence of social norms led binge drinkers to exhibit reactance against the campaign. The result was that, the campaign motivated their desire to maintain their drinking behavior. Finally, they found that reactance mediates attitudes toward the campaign message and antecedents of reactance including social norms. Reactance studies were also conducted on organ donation campaigns (Quick, Scott, & Ledbetter, 2011) They measured how campaign messages impact reactance arousal including the effects of threatening language, trait reactance, and issue involvement. Reactance was negatively associated with attitude toward the organ donation campaign and donor intent regarding their organs.

When ad choice and involvement turn out to be antecedents of reactance reduction, reactance can be expected to play a role as a mediator between attitudes and these antecedents.

Therefore, we assumed that reactance would mediate the relationship between ad choice and attitudes toward the ad (including attitude toward the brand). Reactance acts as a mediator of the relationship between involvement and attitude toward the ad (and attitude toward the brand).

H6a: Reactance will mediate the impact of ad choice on attitude toward the ad.

H6b: Reactance will mediate the impact of ad choice on attitude toward the brand.

H6c: Reactance will mediate the impact of involvement on attitude toward the ad.

H6d: Reactance will mediate the impact of involvement on attitude toward the brand.

CHAPTER 4. METHOD

4.1 Overview

The purpose of this study was to examine interaction and the independent effects of ad choice and involvement on the effectiveness of OVA. The study also sought to determine whether or not reactance would work as a mediator in the relation between ad choice and attitudes (as well as involvement and attitudes). The study employed a 2 (presence of ad choice: yes vs. no) x 2 (level of involvement: high vs. low) between-subject design. Table 4.1. presents the design of the study. The dependent variables were reactance, attitude toward the ad, brand attitudes, and purchase intention. Participants were randomly assigned to one of the four-between-subject conditions in the main experiment. Prior to the main experiment, two pretests were executed in order to confirm whether or not the manipulation had been successfully established. The study was executed under Institutional Review Board (IRB) approval of the university (IRB approval number: 14020).

4.2. Participants

A total of 147 participants were recruited from the Advertising Department's research pool. The research pool consists of undergraduate students drawn from various majors at a large Midwestern University. Students were invited to participate in the experiment in exchange for course extra credit. Undergraduate students were selected as subjects of the study because most online video viewers in US are ages 18 to 24 (Briel, 2014; Piech, 2013). U.S. broadband households with younger consumers are more likely to pay for online video services than are older consumers (Briel, 2014). People who are ages 18-24 consume online videos more often (91%) than other age groups during the course of a month (Piech, 2013). Prior to the analysis, the data concerning the 27 participants who chose the paper towels ad was removed. The study

analyzed data regarding participants who watched the soap ad. Thus, observations of the total 120 participants who chose the soap ad were analyzed in the main experiment. Table 4.2. shows demographic information about the participants in the main experiment. Prior to the main experiment, a total 41 subjects and 30 subjects participated in the first and second pretests, respectively. The participant groups for the two pretests and the main study did not overlap.

4.3. Stimuli Development and Manipulation

4.3.1. Ad choice

We created two online video ads using fictitious brand names (Molli [soap] vs. Freshi [paper towels]). The two products had similar levels of product involvement which were selected as advertised product categories: soap and paper towels (Rahtz & Moore, 1989). Fictitious product ads were designed in two different ways. Participants who were offered choices were given two product ad options and were asked to click on one of the ads in order to watch it. They then watched the ad they chose to watch. The group that was not provided with a choice was forced to watch the soap ad. An ad break interrupted the participants while they were watching the video for 1 minute. Appendix A shows the fictitious brand of soap and paper towels. Appendix B shows two ad options for viewers in the ad-choice condition.

4.3.2. Involvement

In order to manipulate the level of involvement, we created two different priming scenarios. One scenario was given to participants depending on their experimental condition. The participants were asked to read a prepared scenario and to write down whatever they thought was related to the scenario such as product names. Priming scenarios were created based on storage bin model (Wyer & Srull, 1981). This model posits that an individual stores recent information at the top of their memory storage bin, retrieves it, utilizes it and goes on to process the next piece

of relevant information. Yi (1990) used this model to give specific themes of articles to test subjects in order to lead them into thinking about certain attributes of products. He varied the themes of articles in order to activate thoughts about different attributes of products. Okazaki, Navarro-Bailon, and Molina-Castillo (2012) created four scenarios in order to manipulate levels of social anxiety and situational involvement. The scenarios included signing up for a bank's loyalty program by scanning QR codes. Depending on the level of involvement, signing up the program allowed participants to either receive immediate cash back (high-involvement), or to receive a certain number of bonus points (low-involvement).

In this study, two scenarios were created to allow participants to access two products: soap and laptop. The soap ad emphasizes a pure lemon extract ingredient that supposedly helps clean out 99% of the oil, dirt, and hidden impurities and also protects one's skin from various types of germs. The ad for paper towels promoted the towels' trap and lock technology, which indicates absorbability and durability. Except these product features, the two ads included the same logo, background music, and announcer's voice, etc. The scenario involving soap purchasing was to set up a high-involvement situation. The scenario involving a laptop was created in order to set up in a low-involvement situation. According to the storage bin model, participants who read the soap-priming scenario were more likely to think about soap instead of paper towels. Thus, participants who were offered the soap-priming scenario are in the high-involvement condition. However, participants who read the laptop-priming scenario would be less likely to exhibit an interest in soap or paper towels. Since they are more involved in laptop products, they would show little interest in soap or paper towels information. This explains that participants who were offered the laptop-priming scenario are in the low-involvement condition. Appendix C displays priming scenarios for soap and laptop.

4.3.3. Video Content

We selected a 5-minute-viral video from the top viral videos of 2008 through 2013. The first three viral videos were randomly chosen from the 2008-2013 top viral videos. The first video was “6-Year-Old-Aaralyn Screams Her Original Song, Zombie Skin”. The video shows a 6-year-old girl who looked like a princess while singing a heavy metal song with her brother (Paul, 2013). The second video was “Space Oddity”, a music video of David Bowie’s “Space Oddity”. This video displays an astronaut singing a song in zero-gravity on the international space station (Klotz, 2013). The final video was “Where the Hell is Matt (2008)”. In this video, Matt Harding dances in different places around the world in 2008 (Soper, 2013). We assumed that the more interesting the video that participants watch, the more reactance they would exhibit while watching the video. Therefore, the video that received the highest scores in attitude and involvement was selected for the main experiment.

4.4. Pretest 1.

The aims of the first pretest were to measure and test: 1) the priming effects of the two scenarios related to soap and laptop, 2) the difference in product involvement between soap and paper towels, and 3) attitude and involvement toward the three viral videos. A total of 41 participants were recruited for the first pretest. First, they were randomly assigned to one of the two scenarios. They were then asked to write down anything they were able to associate with the scenario for a 5 minute-period. After checking word by word, it was determined that every participant had been involved in soap and laptop purchasing situations. Second, participants assessed the level of product involvement regarding soap and paper towels based on 10 items from Zaichkowsky’s (1994) inventory using 7-point differential semantic scale: unimportant/important, boring/interesting, irrelevant/relevant, unexciting/exciting, means

nothing/means a lot to me, not appealing/appealing, mundane/fascinating, worthless/valuable, not involving/involving, and not needed/needed. There was no significant differences in product involvement when comparing soap ($M = 3.67$, $SD = .88$) and paper towels ($M = 3.70$, $SD = .98$) with $t = -.086$, $p = .932$. Third, three selected viral videos were assessed in terms of attitude and involvement. As regards measuring involvement, 10 items developed by Zaichkowsky (1994) were used on 7-point differential semantic scale. As regards attitude measurement, participants were asked to rate the following 7 items on a 7-point differential semantic scale (Dillard & Shen, 2005): bad/good, foolish/wise, unfavorable/favorable, negative/positive, undesirable/desirable, unnecessary/necessary, and detrimental/beneficial ($\alpha = .923$). The result was that, the third video, “Where the Hell is Matt (2008)” received the highest scores on attitude ($M = 6.06$, $SD = .94$) and involvement ($M = 5.86$, $SD = .95$) using ANOVA in comparison with the other two videos. Therefore, we decided to use the third video in the main experiment. Questionnaires for the first pretest are attached in Appendix D.

4.5. Pretest 2.

The second pretest sought to confirm the degree to which scenarios can induce participants to get involved in soap or paper towels. A total of 30 participants were recruited and were randomly assigned to one of the 2 (presence of ad choice: yes vs. no) x 2 (the level of involvement: high vs. low) condition groups. First, they were provided with either soap or the laptop scenario. They were then instructed to write down anything they could think of concerning the product or a given situation in the scenario for 5 minutes. After they finished the task, they were told to watch ads and evaluate the advertised brands in terms of involvement. The group which was offered choices was provided with two options for ads (i.e. soap and paper towels) and watched the ad which they had selected. The group with no choices was asked to

watch the soap ad. Their involvement toward the advertised brand was measured using Zaichkowsky's (1994) 10 items on a 7-point differential semantic scale. As regards the analysis, involvement scores regarding the soap brand were analyzed for the second pretest. ANOVA results showed that participants who read the soap-scenario were more involved in the brand ($M = 3.83$, $SD = .59$) than were participants who read the laptop-scenario ($M = 3.17$, $SD = .85$) with $F(1, 28) = 5.87$, $p < .05$. Questionnaires for the second pretest are attached in Appendix E.

4.6. Main Experiment

Subjects who signed up for the study were invited to the lab and were seated in front of a computer. They were assigned to one of the four conditions of 2 x 2 between-subject designed experiments. The subjects initially filled out a consent form which was required in order to participate in the media study. After signing the form, they were provided with one of the priming scenarios for either soap or a laptop. They were instructed to write down any thoughts they were able to think of concerning the situation presented in the scenario for 5 minutes. After completing the first task, they were told to watch a video. The video consisted of "Where the Hell is Matt (2008)" with a 1-minute break. The ad conditions differed among the participants. Some participants were allowed to select a particular ad among several ad choices, while the others were not allowed to do so. The participants then were asked to answer questions regarding reactance, attitudes, and purchase intentions. They were debriefed about the study and exited the lab after providing demographic information such as gender, age, ethnicity, etc. The main experiment took no longer than 40 minutes. Questionnaires for the main experiment are attached in Appendix F.

4.7. Measurement

4.7.1. Reactance

The concept of 'reactance' has been operationalized as a combination of anger and negative cognitive responses (Brehm, 1966; Dillard & Shen, 2005; Quick, 2012). Reactance was originally used as a theory which could account for the psychological mechanism of negative reactions against a certain object or, organization, or an ad message perceived to limit one's freedom. Emotion scholars understood psychological reactance as consisting of negative feelings or aggressive reactions during the 1960s and 1970s (Brehm, 1966; Dillard & Meijnders, 2002; Wicklund, 1974). However, in the late 1990s, unfavorable thoughts were found to be a component of reactance (Kelly & Nauta, 1997). Therefore, Dillard and Shen (2005) developed a scale for reactance measurement based on these theories. They conducted an empirical study to examine the role of anger and negative cognition played in reactance. They found that anger is intertwined with unfavorable cognition, and these two components must be combined when measuring reactance. Rains and Turner (2007) generalized Dillard and Shen's (2005) intertwined process model of reactance. Quick (2012) discovered that Dillard and Shen's (2005) method is a reliable scale for reactance measurement. After Dillard and Shen's (2005) study, other studies assessed anger and negative cognition to measure reactance in health communication (Jung, Shim, & Mantaro, 2010; Quick, Scott, & Ledbetter, 2011; Quick & Stephenson, 2007; Quick & Stephenson, 2008).

Items involving anger were measured using a 7-point semantic differential scale. Respondents assessed 4 items ($\alpha = .93$) in measuring anger arousal: irritation, anger, annoyingness, and aggravation ($M = 4.03$, $SD = 1.36$). They were also instructed to write down whatever thoughts entered their mind while they were watching the ad for 3 minutes. Two graduate students were trained and instructed in how to code respondents' answers. First, they were provided with a list of emotion words compiled by Shaver, et al. (1987). The list presents

emotional features of fear, sadness, anger, joy and love. Two trained coders extracted emotion-related words from participants' responses based on the list of emotion words. For instance, if participants were annoyed with unexpected ads during the video, coders were guided to eliminate this answer from the data. Coders were then asked to categorize the participants' cognitive responses into the categories of positive, neutral, and negative cognition. The two coders agreed with each other about 80% of the time regarding cognition concerning the ad ($k = .80$). In order to reduce the gap between coders, three additional graduate students were trained and instructed to code the data as had the previous coders. The result was that, intercoder reliability reached to 97% ($k = .97$). The mean scores of positive ($M = .81$, $SD = 1.15$), neutral ($M = 2.08$, $SD = 1.65$), and negative ($M = 1.24$, $SD = 1.31$) cognition were reported. Negative cognition was used for reactance measure. Two standardized scores of anger and negative cognition were computed and averaged in order to calculate a single variable for reactance.

4.7.2. Attitudes

The participants were asked to assess separately their attitudes toward the ad ($\alpha = .89$) and the brand ($\alpha = .92$) using 7 semantic differential questions on a 7-point scale (Dillard & Shen, 2005). The same scale used in the pretest was used a second time without changes: bad/good, foolish/wise, unfavorable/favorable, negative/positive, undesirable/desirable, unnecessary/necessary, and detrimental/beneficial. The mean score of the attitudes towards the ad was $M = 3.84$ ($SD = 1.07$) and mean score of the attitudes towards the brand was $M = 3.67$ ($SD = .94$).

4.7.3. Purchase intention

Participants were given 5 items and were asked to rate their purchase intentions using a 7-point semantic differential scale ($\alpha = .92$) (Spears & Singh, 2004). The five items included:

never/definitely, definitely do not intend to buy/definitely intend to buy, very low purchase interest/very high purchase interest, definitely not buy it/definitely not buy it, and probably not buy it/probably buy it ($M = 3.21$, $SD = .98$).

4.7.4. Mediation Analysis

A mediation model posits that variable X affects variable Y in a certain way through one or more mediators. Figure 4.1B shows a single mediation model which postulates that variable X exerts an effect on variable Y through variable M. In Figure 4.1A, the total effect of variable X on variable Y is represented as c . In Figure 4.1B, a direct effect of variable X on the outcome of variable Y is denoted as c' . a is a coefficient which predicts an effect of variable X on variable M, and b is a coefficient which predicts Y from variable M.

Although the intervening variable model or mediation model has been estimated by many previous researchers, Baron and Kenny's (1986) Causal Steps Approach is the classic method in mediation analysis. Their approach is easy to follow step-by-step, and has long been used in mediation analysis. This model has recently been criticized by several researchers (Preacher & Hayes, 2008; Hayes, 2009). One criticism is that it does not basing the quantification of indirect effect. This approach is based on the outcome of hypotheses, and test whether or not the total, direct, and indirect effect is statistically significant (Hayes, 2009). More particularly, it does not allow for observing the mediation effect when the total effect is not statistically significant. Moreover, the Causal Steps Approach has been shown to produce the lowest power among the method of mediation analysis (Hayes, 2009).

In order to supplement the limitations of the Casual Effect Approach, several modernized inferential methods have been developed to test the mediation variable effect. One method is Sobel's test (Sobel, 1982, 1986). This test estimates the ratio of indirect effect (the product of a

and b; see Figure 4.1B), to its standard error. This statistic is used to test the existence of an intervening variable effect. However, it has also been shown to have several flaws. Sobel's test has been demonstrated to be valid only in cases that involve large samples in which the distribution is normal (Preacher & Hayes, 2008; Hayes, 2009). In addition, it only allows for the estimation of the indirect effect of independent variable on the dependent variable through a single mediator (Preacher & Hayes, 2008). Preacher and Hayes (2008) noted this limitation of Sobel's test and recommended the use of bootstrapping, a resampling method. One simple bootstrapping method involves resampling with replacement by using the original n sample, and repeating this procedure 1,000 times or more. It has been found to produce higher power than other methods. Another beauty of bootstrapping is that the test also used the estimate of indirect effect basing on no assumption related to sampling distribution (Hayes, 2009). The bootstrapping method was used to detect the role of reactance as a mediator in our study. The INDIRECT custom dialog developed by Preacher and Hayes (2008) was employed to estimate the value of the indirect effect of reactance. We applied 5,000 instances of repeated resampling, and obtained 5,000 bootstrap-resamples for use in mediation analysis. Bootstrapped 95 % confidence intervals were also computed from the output. We observed whether zero occurs between lower limit and upper limit of the confidence intervals.

CHAPTER 5. RESULTS

5.1. Manipulation Check

5.1.1. Ad choice

A manipulation check for ad choice demonstrated a significant mean difference in the perceived freedom of choice between the ad-choice condition and the no-choice condition. Participants answered questions regarding the degree to which they agreed with the following statements: 1) I had an option to choose the ad that I wanted to watch, 2) I had the freedom to choose the ad that I wanted to watch, and 3) I was given choices about choosing the ad. 3 items were assessed using a 7-point semantic differential scale. ANOVA results indicated that perceived freedom of choice was believed by participants to be significantly greater in the group with choices ($M = 5.89$, $SD = .98$) in comparison with the group with no choice ($M = 1.70$, $SD = 1.25$), $F(1, 118) = 418.84$, $R^2 = .78$, $p < .001$. That is, ad choice manipulation was successfully supported.

5.1.2. Involvement

We found a significant mean difference in the level of involvement between high- and low-involvement conditions. Participants were provided 10 items suggested by Zaichkowsky (1994) and were asked to answer the questions using a 7-point semantic differential scale. Among many different scales, Zaichkowsky's 20 items were used to measure the degree of situational involvement (Laverie & Arnett, 2000; Zaichkowsky, 1985). However, the initial 20 items were reduced to the final 10 items in order to demonstrate the suitability of the scale for use in the advertising context (Zaichkowsky, 1994). For this reason, 10 modified items were used to measure involvement: unimportant/important, boring/interesting, irrelevant, relevant, unexciting/exciting, means nothing/means a lot to me, not appealing/appealing,

mundane/fascinating, worthless/valuable, not involving/involving, and not needed/needed.

ANOVA results confirmed that there was a significant difference in the degree of involvement toward the soap brand between the high-involvement and the low-involvement conditions. More specifically, participants who were assigned to the soap scenario exhibited higher levels of involvement regarding the soap brand ($M = 3.58$, $SD = .78$) than the participants who were assigned to the laptop scenario ($M = 3.09$, $SD = 1.19$), $F(1, 118) = 6.80$, $R^2 = .05$, $p = .01$. Thus, we concluded to have successful manipulation check for involvement.

5.2. Testing Hypotheses

5.2.1. Reactance

As proposed in hypothesis H1, we assumed that the effect of ad choice and involvement on reactance is statistically significant. In order to test hypotheses H1a and H1b, we calculated 2 x 2 ANOVA with ad choice and involvement as independent variables and reactance as a dependent variable. We predicted in hypothesis H1a that respondents who are offered ad choice would experience less reactance rather than would be the case for respondents not offered any choice. As expected, a main effect of ad choice on the level of reactance was found, $F(1, 116) = 12.62$, $p < .01$. Participants with ad choice exhibited less reactance ($M = -.23$, $SD = .63$) than participants with no choice ($M = .23$, $SD = .79$). Hypothesis H1b posits that the respondents in higher-involvement condition would show less reactance than respondents in lower-involvement condition. In line with our expectations, there was a significant main effect of involvement on reactance, $F(1, 116) = 5.40$, $p < .05$. The group in the high involvement situation exhibited less degree of reactance ($M = -.15$, $SD = .66$) in comparison with the group in the low involvement situation ($M = .15$, $SD = .81$). As postulated in hypothesis H5a, we also assumed that there is a significant interaction of ad choice and involvement on reactance. Our assumption was incorrect,

and, the interaction effect was not statistically significant, $F(1, 116) = .29, p > .05$. Levene's test confirmed the homogeneity of the variances with $F(3, 116) = 1.47, p > .05$. In summary, our data lends some support for hypothesis H1a and H2a, but not for H5a. Table 5.1. presents the means and standard deviations of reactance as a function of both ad choice and involvement. Figure 5.1. displays non-significant interaction between ad choice and involvement on reactance.

5.2.2. Attitude toward the Ad

Hypothesis H2 reflects our prediction that significant effects of ad choice and involvement on attitude toward the ad would be found. We employed 2 x 2 ANOVA with ad choice and involvement as independent variables, and attitude toward the ad as a dependent variable. Hypothesis H2a indicates our assumption that ad choice would positively affect the attitude toward the ad. The results indicate that, the main effect of ad choice on attitude toward the ad was found, $F(1, 116) = 6.58$, and was statistically significant $p < .05$. In other words, respondents who had choice held more positive attitudes ($M = 4.07, SD = .85$) rather than did respondents who had no choice ($M = 3.60, SD = 1.22$). Another issue that was in line with our expectations in hypothesis H2b was that, there was a clear mean difference between the high-involvement ($M = 4.04, SD = .95$) and the low-involvement ($M = 3.63, SD = 1.15$) conditions in respondents' attitude toward the ad. Thus, there was a statistically significant main effect of involvement on attitude with $F(1, 116) = 5.10, p < .05$. Along with expectations regarding main effect of ad choice and involvement on attitude toward the ad, we also predicted an interaction effect, as posited in hypothesis H5b. We assumed that the two different ad choice conditions would positively affect attitude toward the ad in the low-involvement condition, but not in the high-involvement condition. The issue of greatest interest was that, the two-way interaction of ad choice x involvement was found to be significant, $F(1, 116) = 4.99, p < .05$. Table 5.2. shows

the means and standard deviations of attitude toward the ad as a function of both ad choice and involvement.

In order to investigate which difference primarily affected the significant difference on attitude toward the ad, the simple main effects of ad choice and involvement were computed using ANOVA. Figure 5.2. shows that there was a significant interaction effect on attitude toward the ad. In the high-involvement situation, the results provided no evidence of any difference in attitude toward the ad between the two different ad choice conditions, with $F(1, 58) = .06, p > .05$. However, in the low-involvement condition, ad choice conditions had a significant influence on attitude toward the ad, $F(1, 58) = 10.37, p < .01$. Respondents in the ad-choice condition held more favorable attitude ($M = 3.18, SD = 1.16$) than did respondents in the no-choice condition ($M = 4.07, SD = .97$). Thus, our data provided support for hypothesis H2a, H2b and H5b.

Although it was not hypothesized, the effect of involvement on attitude was also calculated across two different ad conditions. 2 x 2 ANOVA showed that, there was no significant effect of involvement on attitude toward the ad when the respondents were offered ad choice, $F(1, 58) < .001, p > .05$. In contrast, the test demonstrated that a main effect of involvement on attitude toward ad was found to be significant in the no-choice condition, $F(1, 58) = 7.79, p < .01$. That is, the level of involvement impacts attitude regarding the ad when respondents are not provided with any ad options from which they can choose.

5.2.3. Attitude toward the Brand

Hypothesis H3 assumed that the effect of ad choice and involvement on brand attitudes is significant. Table 5.3. presents the means and standard deviations of brand attitudes as a function of both ad choice and involvement. In order to demonstrate this effect, 2 x 2 ANOVA was

employed with ad choice and involvement as independent variables, and attitude toward the brand as a dependent variable. Our expectations predicted in H3a were not met. The main effect of ad choice on brand attitudes was found to not be significant with $F(1, 116) = 3.80, p > .05$. However, the mean scores for brand attitudes showed the expected trend, such that respondents in the ad-choice condition exhibited more favorable brand attitudes ($M = 3.83, SD = .75$) than did the respondents in the no-choice condition ($M = 3.52, SD = 1.07$). ANOVA results revealed a significant main effect of involvement on brand attitudes as expected in hypothesis H3b, $F(1, 116) = 4.70, p < .05$. Compared with the mean scores of respondents' brand attitudes in the low-involvement situation ($M = 3.50, SD = .95$), the mean scores for brand attitudes were significantly greater in the high-involvement situation ($M = 3.85, SD = .90$). In addition to the main effect of ad choice and involvement on brand attitudes, the interaction effect was also analyzed to test the hypothesis H5c. The results indicate that, the main effects of ad choice and involvement were qualified by interaction of ad choice x involvement, $F(1, 116) = 6.70, p < .05$. Figure 5.3. shows the significant interaction effect on attitude toward the brand.

The simple main effects of ad choice and involvement were calculated to confirm which difference mainly resulted in significant interaction. First, we computed the effect of ad choice on brand attitudes under two different involvement conditions. The results confirmed that there was a significant effect of ad choice on brand attitudes in the low-involvement condition, $F(1, 58) = 10.61, p < .01$, but not in the high-involvement condition, $F(1, 58) = .20, p > .05$. The respondents' mean scores for brand attitudes were not clearly different between the two different ad conditions in the high-involvement situations. However, respondents evaluated the brand more favorably when they were offered ad choice ($M = 3.87, SD = .80$) compared with

respondents forced to watch a specific ad ($M = 3.13$, $SD = .95$) in the low-involvement condition. To summarize the results, hypotheses H3a, H3b, and H5c were all supported.

Although it was not postulated in hypotheses, we tested whether or not the main effect of involvement on brand attitudes across two different ad conditions is significant. 2 x 2 ANOVA results showed that there was a statistically significant effect of involvement on brand attitudes in the no-choice condition, but not in the ad-choice condition. That is, respondents in the high-involvement condition held more positive attitudes ($M = 3.90$, $SD = 1.06$) rather than did the respondents in the low-involvement condition ($M = 3.13$, $SD = .95$) when they were not offered any choice from which they could select $F(1, 58) = 8.86$, $p < .01$. On the contrary, there was no mean difference in brand attitudes between the two different levels of involvement when respondents were provided with ad choice, $F(1, 58) = .12$, $p > .05$.

5.2.4. Purchase Intentions

Hypothesis 4 led us to examine the effect of ad choice and involvement on purchase intentions. We applied 2 x 2 ANOVA with ad choice and involvement as independent variables and purchase intentions as a dependent variable. Table 5.4. shows the means and standard deviations of intentions as a function of both ad choice and involvement. Hypothesis H4a posits a significant effect of ad choice on intentions. A main effect of ad choice on purchase intentions was found to be significant, $F(1, 116) = 4.05$, $p < .05$. This result indicates that respondents who had ad choice were more likely to purchase the brand ($M = 3.38$, $SD = .97$) in comparison with the respondents who had no choice ($M = 3.03$, $SD = .97$). In line with our expectations, a significant main effect of involvement on intentions was also found as we had predicted in hypothesis H4b, $F(1, 116) = 5.37$, $p < .05$. That is, the group in the high-involvement situation tended to purchase the brand more ($M = 3.41$, $SD = .90$) than did the group in the low-

involvement situation ($M = 3.01$, $SD = 1.03$). In contrast, the main effect of ad choice and involvement was not found to be qualified by an interaction of ad choice x involvement as postulated in hypothesis H5d, $F(1, 116) = 1.28$, $p > .05$. This shows that the effect of ad choice and involvement on purchase intentions did not influence to each other. Figure 5.4. confirms that there is a non-significant interaction effect on purchase intentions. Thus, we concluded that our data provided support for hypotheses H4a and H4b, but did not support H5d. Table 5.5. presents the ANOVA results of the main experiments. Table 5.6. shows the correlations among dependent variables.

5.2.5. Mediation Analyses

We also predicted that the influence of ad choice and involvement on attitudes would be mediated via reactance. In order to address the hypotheses, we applied the mediation test suggested by Preacher and Hayes (2008).

First, two assumptions related to effects of ad choice on attitudes were tested as proposed in hypotheses H6a and H6b. Thus, ad choice served as an independent variable and attitude toward the ad and the brand were classified as dependent variables. Reactance was predicted to be a mediator in the analyses. Hypothesis H6a assumed that reactance works as a mediator of the relation between ad choice and attitude toward the ad. Table 5.7. shows that the results reveal a significant mediation effect from ad choice to attitude toward the ad via reactance (lower BC = .018, upper BC = .370, $p < .01$). Ad choice was found to be negatively associated with reactance ($-.456$; $p < .01$), and reactance negatively affects attitude toward the ad ($-.325$; $p < .05$). Total effects from ad choice to attitude toward the ad were significant ($.476$; $p < .05$), whereas direct effects were found to not be significant ($.329$; $p > .05$). Hypothesis H6b assumed that there would be significant mediation effects from ad choice to brand attitudes. Despite our

expectations, the role of reactance as a mediator on the relation between ad choice and brand attitudes was found to not be significant (lower BC = $-.086$, upper BC = $.184$, $p > .05$) as shown in Table 5.8. To summarize, our study supported hypothesis H6a, but rejected H6b.

Second, two predictions related to effects of involvement on attitudes were made in hypotheses H6c and H6d. As regards the analyses, involvement worked as an independent variable, and attitude toward the ad and the brand were dependent variables. For mediation tests, reactance was assigned to be a mediator. We assumed that mediation effect of involvement on attitude toward the ad via reactance is significant, as indicated in hypothesis H6c. Table 5.9 shows that reactance mediates the relationship between involvement and attitude toward the ad (lower BC = $.009$, upper BC = $.289$, $p < .01$). It was demonstrated that involvement is negatively correlated with reactance ($-.298$, $p < .05$), and reactance is also negatively associated with attitude toward the ad ($-.350$, $p < .01$). Total effects of involvement on attitude toward the ad were found to be significant ($.419$, $p < .05$), while direct effect was found to not be statistically significant ($.315$, $p > .05$). Hypothesis H6d predicted that there would be a significant effect of involvement on brand attitudes, and it was expected to be mediated by reactance. Table 5.10 presents the results to the effect that the mediation effect from involvement on brand attitudes via reactance turned out to not be significant (lower BC = $-.053$, upper BC = $.143$). Thus, our data supports hypothesis H6c, and rejects H6d.

CHAPTER 6. DISCUSSION

To date, few studies have examined factors that reduce the level of reactance in online advertising, particularly in the context of OVA. Most empirical works on reactance theory have focused on the effect of language features, social norms, or sensation-seeking on reactance in the context of health communication (Dillard & Shen, 2005; Jung, Shim, & Mantaro, 2010; Quick, Scott, & Ledbetter, 2011; Quick & Stephenson, 2007; Quick & Stephenson, 2008; Rains & Turner, 2007). Moreover, previous researchers used typical print ads in their experiments, or simply tested the effect of ad messages (Dillard & Shen, 2005; Jung, Shim, & Mantaro, 2010; Rains & Turner, 2007; Quick, Scott, & Ledbetter, 2011). Edward, Li, and Lee (2002) created online websites to deliver information to participants. Very few empirical studies have developed video ads as part of their experiments. We thus chose to launch this study to reduce these existing research gaps. Our study aimed to understand how the presence of ad choice and involvement influence ad effectiveness in the context of OVA. The study employed 2 x 2 between-subject design in which ad choice and involvement were independent variables, while reactance, attitude toward the ad, brand attitudes, and purchase intention were dependent variables.

The results of the present study produced five major findings. First, ad choice and involvement were found to be factors of reactance reduction. As regards these two factors, we assumed that user control (i.e. ad choice) might increase viewer interactivity and empowerment, and might contribute to reducing viewers' ad resistance. We also assumed that relevant information might stimulate their motivation to become involved in the ad. Increased situational relevancy turned out to decrease reactance against persuasive communications. Although the

study failed to explain interaction of ad choice and involvement on reactance, the significant main effects of ad choice and involvement provide some insights for academics and practitioners.

Second, the results suggest that the way in which online viewers encounter OVA influences their evaluations of the ad. Our study demonstrated that the provision of ad choice for online viewers enhances attitudes concerning the ad. The results are supported by the idea that a sense of choice impacts attitudes because it empowers viewers with the right to choose among options (Brehm, 1956; Freedman & Steinbruner, 1964; Schlosser & Shavitt, 2009). We also found that the level of situational involvement regarding the product or the brand induces viewers assess the ad in a favorable manner. The findings are consistent with previous studies, which demonstrated a significant effect of relevance on attitude toward the ad (Clee & Wicklund, 1980; Edward, Li, & Lee, 2002; Sableman, Shoenberger, and Thorson, 2013).

Third, the main effects of ad choice and involvement on attitudes were qualified by the interaction of ad choice x involvement. More specifically, the effect of ad choice on attitudes was statistically significant in the low-involvement situation, but not in the high-involvement situation which we predicted. This result may support the idea behind Liu and Shrum's (2009) study, which showed that there was a significant two-way interaction between interactivity and involvement regarding brand attitudes and purchase intentions. We also found that respondents in the high-involvement situation held more favorable attitudes than respondents in the low-involvement situation when they were offered no choice. This result might imply that exposing customized ads that include relevant information about each consumer is an ad strategy that contemporary advertisers should note, particularly when they use general pre-roll.

Forth, in the context of OVA, this research study noted the possibility that the impact of ad choice and involvement would motivate online viewers to purchase advertised brands. Our

data supported the significant main effects of ad choice and involvement regarding behavioral intentions (hypothesis H1d and H2d). More specifically, we demonstrated that respondents with choices are more likely to purchase advertised brands than respondents with no choices. The results agree with previous studies to the effect that having a sense of choice can influence purchase intentions (Katz, 2010; Schlosser & Shavitt, 2009). Participants in the high-involvement condition exhibited greater intent of purchasing the brand compared with participants in the low-involvement condition. These findings suggest that advertisers should consider investigating individual consumers' online activities and offer tailored ads. Although the interaction effect turned out to not be significant, the results of this study may induce advertisers to look for ways to persuade consumers to buy the advertised brand, particularly in the context of OVA.

Last, the current study supported previous empirical research that explained the role of reactance as a mediator (Dillard & Shen, 2005; Jung, Shim, & Mantaro, 2010; Quick, Scott, & Ledbetter, 2011; Rains & Turner, 2007). Previous researchers found that reactance mediates the relationship between antecedents (i.e. argument quality, etc.) and outcomes (i.e. attitudes, etc.) in the context of health communication. In line with prior research, our data found significant mediation effects from ad choice to attitude toward the ad through reactance (and mediation effects from involvement to attitude toward the ad). We thus concluded that the role of reactance as a mediator could be applied to the context of OVA.

6.1. Theoretical Implications

The current study has four main theoretical implications for the realm of advertising. The first implication is an illustration of the effect of ad choice and involvement on reactance. Reactance theory has been used to describe the psychological mechanism of negative consumer

reactions against law, policy, and persuasive tactics (Brehm, 1966; Clee & Wicklund, 1980; Dillard & Shen, 2005; Edward, Li, & Lee, 2002; Fitzsimons & Lehmann, 2004). Reactance has been assessed to test the effectiveness of health campaigns such as wearing sunscreen, regular exercise, organ donations, anti-smoking and anti-drinking campaigns (Jung, Shim & Mantaro, 2010; Quick, Scott, & Ledbetter, 2011; Quick & Stephenson, 2007; Quick & Stephenson, 2008; Rains & Turner, 2007). Few empirical works have investigated how to reduce the level of reactance. We shed lights on the effects of possible antecedents that contribute to reducing reactance arousal in the online video setting (i.e. ad choice and involvement). This result may motivate other researchers to discover other possible factors that reduce consumer resistance against advertising.

Second, our study examined the effect of situational involvement on attitudes. As noted above, previous researchers have found the effects of personal relevance on attitudes in different media contexts (Campbell & Wright, 2008; Edward, Li, & Lee, 2002; Hussain & Lasage, 2014; Pashkevich, et al., 2012; Sableman, Shoenberger, & Thorson, 2013). However, few works have studied the effect of situational relevance on attitudes toward the ad and the brand, particularly in the context of OVA. Given this research gap, our study found that situational relevancy favorably affects both attitudes toward the ad and the brand.

Third, we discovered a significant interaction effect of ad choice and involvement on attitudes in the context of OVA. Our prediction was based on Liu and Shrum's (2009) dual-process model of interactivity effects. Their data found that there was a two-way interaction between interactivity and involvement on attitudes in the context of online websites. Their study observed a significant main effect of ad choice on attitudes in low-involvement situation, while

no mean difference in attitudes was found in the high-involvement situation. In other words, we applied their model in terms of OVA.

Finally, we found that reactance plays a role as a mediator in the relation between attitude toward the ad and possible factors that can reduce reactance arousal (i.e. ad choice and involvement) in online video settings. Previous empirical studies demonstrated the mediation effects from antecedents of ad resistance to attitudes via reactance (Dillard & Shen, 2005; Jung, Shim & Mantaro, 2010; Quick, Scott, & Ledbetter, 2011). As regards the antecedents of reactance, they investigated the effects of trait reactance, language features, social norms, sensation-seeking, etc. We discovered few studies that attempted to determine the role of reactance as a mediator in the relationship between attitudes and factors that influence reactance reduction. Thus, we sought out ways to persuade online viewers to exhibit less reactance against ads (i.e. ad choice and involvement), particularly in the context of OVA. We confirmed that it is possible to observe the mediation effects of ad choice on attitudes (attitude toward the ad) via reactance. We also discovered the mediation effects from involvement to attitudes via reactance.

6.2. Practical Implications

From a managerial point of view, the current study had two implications. First, the results of the study emphasize the importance of empowering online viewers with user control. Contemporary online advertising tends to be perceived as being more intrusive in comparison with traditional television or radio commercials (Kelly, Kerr, & Drennan, 2010). The intrusiveness of online ads results in irritation or ad avoidance (Edward, Li & Lee, 2002). Previous studies recommend inducing viewers to engage with advertising in order to reduce their reactance arousal. Our study found that providing ad choices to online viewers can be a strategy for advertisers and marketers. When launching advertisements via online video, advertisers

empower viewers with user control, which is helpful for reducing negative reactions against the ad. Consumers would then go on to hold more favorable attitudes toward the ad, and the brand.

In addition to usefulness of providing ad choices, our research also offers insights that advertisers should stimulate online video viewers' interests. Our empirical study identified that high levels of situational involvement contribute to improving attitudes and purchase intentions. In other words, consumers positively react to personally relevant information, and to information that is helpful in specific situations. For instance, a consumer might not be interested in rock concerts. However, when the ad delivers vivid scenes and inspiring rock concert performance, that may motivate the consumer to attend a concert. A consumer might favorably assess the singers who performed in the concert. Thus, advertisers and marketers must develop events or deliver interesting information to increase situational involvement toward the brands. Obtaining good ideas can be facilitated by tracking online web users' activities via online behavioral advertising (OBA). OBA refers to an advertising technique that targets audiences by tracking the online activities of viewers and then delivering relevant ads to them based on what is known about them (Sableman, Shoenberger, & Thorson, 2013). Marketers and advertisers have used OBA due to its effectiveness. Advertisers are likely to pay three times more per impression for verifiable user-related ads than other types of ads (Bachman, 2014). Twitter also launched tailored audience programming to deliver customized and relevant ad information to individual users (Sloane, 2014). Thus, this technique would be advantageous for determining consumers' personal interests, and for obtaining useful ideas for increasing the situational relevance of brands.

6.3. Limitations and Future Studies

The present study has several limitations, and recommendations for future studies that must be taken into account. First, the study might have generated a demand effect when situational involvement was manipulated with priming scenarios. Participants were assigned to either soap- or laptop-priming scenario depending on their conditions. For example, when respondents who were asked to read the soap-scenario were exposed to the soap brand, they might have recognized the purpose of the current study. If so, they might have answered the questions in a particular way in order to meet our expectations. Thus, future research may need to seek out better methods of manipulating involvement in order to prevent the demand effect.

Second, eliminating emotion-related words from participants' answers might result in underestimation of negative cognition. We applied Dillard and Shen's (2005) scale in order to quantify the level of reactance. We separately asked each participant to write down any thoughts they had about the ad in order to measure negative cognition. We eliminated emotion-related words or thoughts from respondents' answers in order to avoid overestimating the affective aspects of reactance. Contrary to our expectations, however, this procedure might have instead encouraged us to underestimate the negative emotions toward the ad. Their answers led us to find numerous negative emotion-related words related to the ad. Several negative emotional words might better reflect the affective aspects of reactance than 4-anger-items assessed using a 7-point scale. Therefore, we recommend adopting better scales or methods in order to more accurately reflect the affective and cognitive components of reactance in the future.

Third, in order to simplify the design of our study, we removed the responses of participants who chose paper towels, who accounted 20% of our data. Focusing on the soap brand might generate only a limited number of insights about the effect of ad choice and involvement on ad effectiveness. We suggest that future researchers to investigate more than 2

product ads in the context of OVA. Future researchers may uncover different results than was the case in the present study.

Fourth, we did not include other moderators that would influence the level of reactance level in the study. We suggest that future studies include trait reactance and participants' online video experiences. Trait reactance is the general propensity of individuals to react to the threat of freedom. A consumer who exhibits higher levels of trait reactance tends to exhibit higher levels of state reactance that evoked in specific situations. Online video experience is an also important factor that impacts the level of reactance. Online viewers who frequently watch videos might be familiar with forced ads. It may be possible that viewers with little experience with online videos may respond more favorably to user control (i.e., ad choice) rather than consumers who watch videos on a regular basis.

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TABLES AND FIGURES

Chapter 4 Tables and Figures

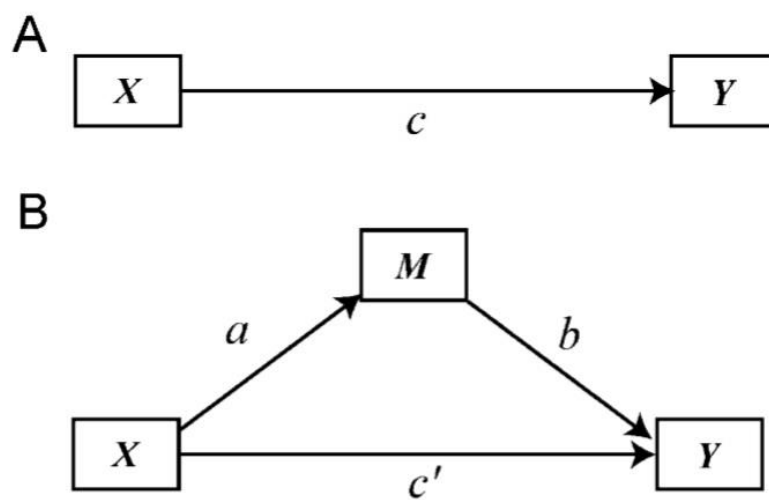
Table 4.1. 2x2 Between Subject Design of the Study

	Ad Choice O	Ad Choice X
High Involvement (Soap-priming scenario)	Choose soap ad vs. paper towels ad	Soap ad
Low Involvement (Laptop-priming scenario)	Choose soap ad vs. paper towels ad	Soap ad

Table 4.2. Demographic Information of Participants in the Main Experiment

		N	Percent (%)
Gender	Male	42	35.0
	Female	78	65.0
	Total	120	100
Age	18	22	18.3
	19	30	25.0
	20	28	23.3
	21	21	17.5
	22	10	8.3
	23	7	5.8
	24	2	1.7
	Total	120	100
Racial Group	African-American or Black	5	4.2
	White	70	58.3
	Hispanic or Latino	4	3.3
	Asian or Asian American	39	32.5
	Multiracial	2	1.7
	Total	120	100
Major	Advertising	32	26.7
	Non-Advertising	88	73.3
	Total	120	100
Grade	Freshman	42	35.0
	Sophomore	30	25.0
	Junior	28	23.3
	Senior	20	16.7
	Total	120	100

Figure 4.1. The Total Effect of X on Y (A), A Simple Mediation Model (B)



Chapter 5 Tables and Figures

Table 5.1. Means and Standard Deviations of Reactance as a Function of Both Ad Choice and Involvement

	High Involvement	Low Involvement	Total
Ad Choice	-.34 (.59)	-.11 (.66)	-.23 (.63)
No Choice	.04 (.67)	.41 (.87)	.23 (.79)
Total	-.15 (.66)	.15 (.81)	.00 (.75)

Notes. n = 120. Standard deviations appear in parentheses below means.

Table 5.2. Means and Standard Deviations of Attitude toward the Ad as a Function of Both Ad Choice and Involvement

	High Involvement	Low Involvement	Total
Ad Choice	4.08 (.71)	4.07 (.97)	4.07 (.85)
No Choice	4.01 (1.15)	3.18 (1.16)	3.60 (1.22)
Total	4.05 (.95)	3.63 (1.15)	3.84 (1.07)

Notes. n = 120. Standard deviations appear in parentheses below means.

Table 5.3. Means and Standard Deviations of Attitude toward the Brand as a Function of Both Ad Choice and Involvement

	High Involvement	Low Involvement	Total
Ad Choice	3.80 (.72)	3.86 (.80)	3.83 (.75)
No Choice	3.90 (1.06)	3.13 (.95)	3.52 (1.07)
Total	3.85 (.90)	3.50 (.95)	3.67 (.94)

Notes. n = 120. Standard deviations appear in parentheses below means.

Table 5.4. Means and Standard Deviations of Purchase Intention as a Function of Both Ad Choice and Involvement

	High Involvement	Low Involvement	Total
Ad Choice	3.49 (.76)	3.28 (1.16)	3.38 (.97)
No Choice	3.33 (1.02)	2.73 (.82)	3.03 (.97)
Total	3.41 (.90)	3.01 (1.03)	3.21 (.98)

Notes. n = 120. Standard deviations appear in parentheses below means.

Table 5.5. The Results of Analyses of Variance

	Reactance	Attitude toward the Ad	Attitude toward the Brand	Purchase Intention
Ad Choice	12.23***	6.16*	3.52	3.89*
Involvement	4.94*	4.72*	4.39*	5.23*
Ad Choice x Involvement	.29	4.99*	6.70**	1.28

Notes. *F*-value is reported for each dependent variable. * = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$.

Table 5.6. Correlation among Dependent Variables

	Reactance	Attitude toward the Ad	Attitude toward the Brand	Purchase Intention
Reactance	1	-.273**	-.097	-.217*
Attitude toward the Ad	-.273**	1	.676**	.478**
Attitude toward the Brand	-.097	.676**	1	.342**
Purchase Intention	-.217*	.478**	.342**	1

Notes. Correlation Coefficient r is reported. * = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$.

Table 5.7. Results of the Mediation Analyses:
Mediation Effects from Ad Choice to Attitude toward the Ad via Reactance

Attitude toward the Ad				
	Coeff.	Se	T	p
Ad choice to reactance (a path)	-.4558	.1303	-3.4975	.0007
Direct effect of reactance on attitude toward the ad (b path)	-.3251	.1327	-2.4499	.0158
Total effect of ad choice on attitude toward the ad (c path)	.4759	.1917	2.4820	.0145
Direct effect of ad choice on attitude toward the ad (c' path)	.3278	.1973	1.6613	.0993
Bias-corrected confidence (BC)	Lower	Upper		
Mediation via reactance	.0135	.3842		
Summary:	$R^2 = .0960$, $F(2, 117) = 6.2119$, $p = .0027$			

Table 5.8. Results of the Mediation Analyses:
Mediation Effects from Ad Choice to Attitude toward the Brand via Reactance

Attitude toward the Brand				
	Coeff.	Se	T	p
Ad choice to reactance (a path)	-.4558	.1303	-3.4975	.0007
Direct effect of reactance on attitude toward the brand (b path)	-.0624	.1200	-.5196	.6043
Total effect of ad choice on attitude toward the brand (c path)	.3178	.1693	1.8766	.0630
Direct effect of ad choice on attitude toward the brand (c' path)	.2894	.1785	1.6215	.1076
Bias-corrected confidence (BC)	Lower	Upper		
Mediation via reactance	-.0905	.1880		
Summary:	$R^2 = .0312$, $F(2, 117) = 1.8850$, $p = .1564$			

Table 5.9. Results of the Mediation Analyses:
Mediation Effects from Involvement to Attitude toward the Ad via Reactance

Attitude toward the Ad				
	Coeff.	Se	T	p
Involvement to reactance (a path)	-.2983	.1341	-2.2236	.0281
Direct effect of reactance on attitude toward the ad (b path)	-.3502	.1290	-2.7157	.0076
Total effect of involvement on attitude toward the ad (c path)	.4190	.1929	2.1726	.0318
Direct effect of involvement on attitude toward the ad (c' path)	.3146	.1918	1.6406	.1036
Bias-corrected confidence (BC)	Lower	Upper		
Mediation via reactance	.0100	.2751		
Summary:	$R^2 = .0955$, $F(2, 117) = 6.1749$, $p = .0028$			

Table 5.10. Results of the Mediation Analyses:
Mediation Effects from Involvement to Attitude toward the Ad via Reactance

Attitude toward the Brand				
	Coeff.	Se	T	p
Involvement to reactance (a path)	-.2982	.1341	-2.2236	.0281
Direct effect of reactance on attitude toward the brand (b path)	-.0775	.1161	-.6672	.5060
Total effect of involvement on attitude toward the brand (c path)	.3534	.1687	2.0941	.0384
Direct effect of involvement on attitude toward the brand (c' path)	.3303	.1726	1.9129	.0582
Bias-corrected confidence (BC)	Lower	Upper		
Mediation via reactance	-.0587	.1454		
Summary:	$R^2 = .0395$, $F(2, 117) = 2.4049$, $p = .0947$			

Figure 5.1. Interaction between Ad Choice and Involvement on Reactance

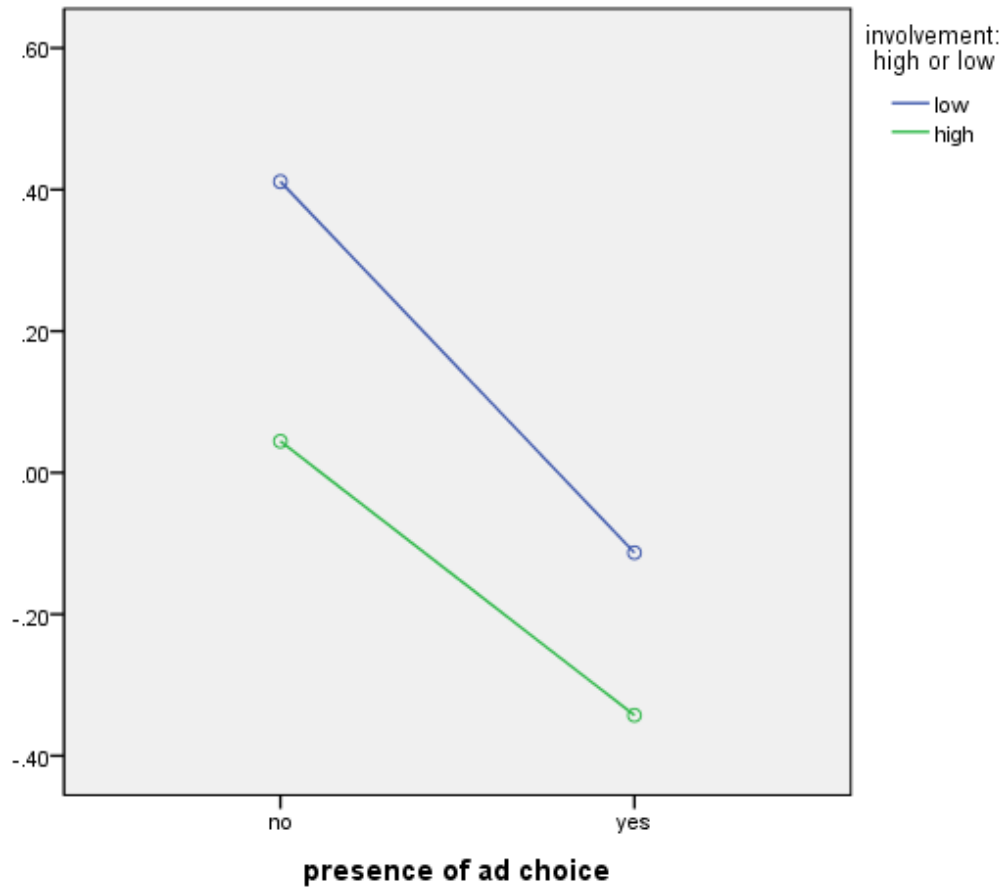


Figure 5.2. Interaction between Ad Choice and Involvement on Attitude toward the Ad

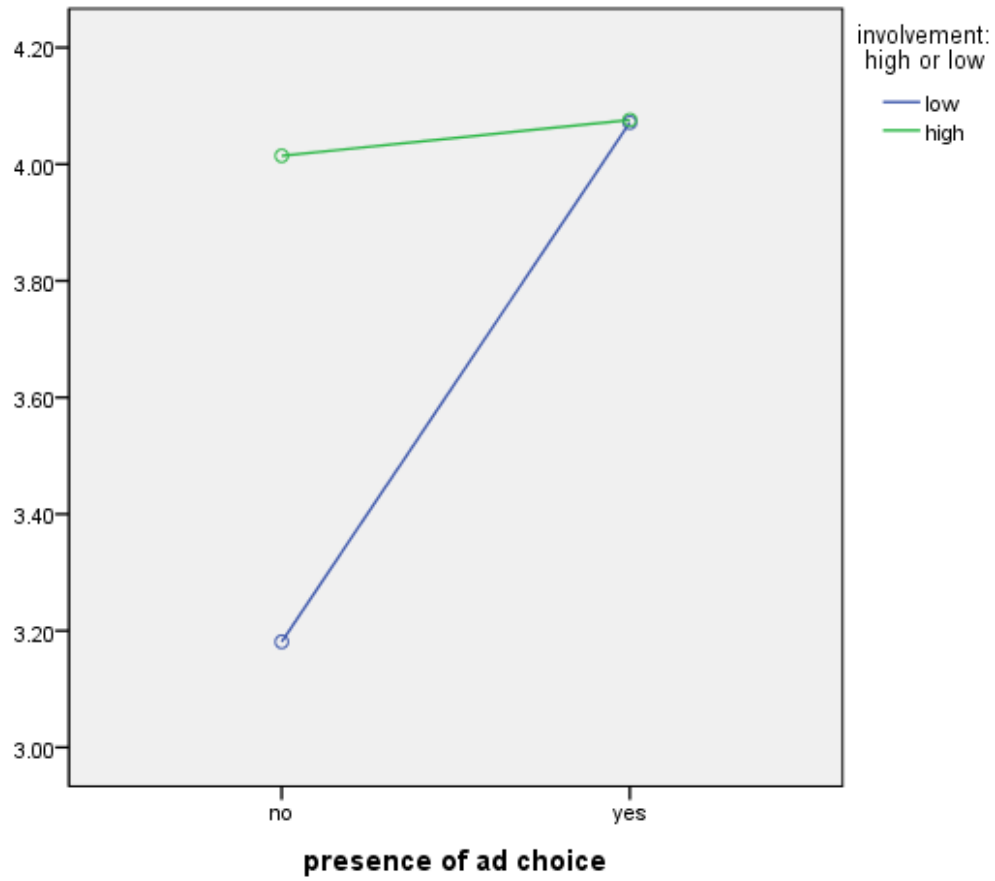


Figure 5.3. Interaction between Ad Choice and Involvement on Attitude toward the Brand

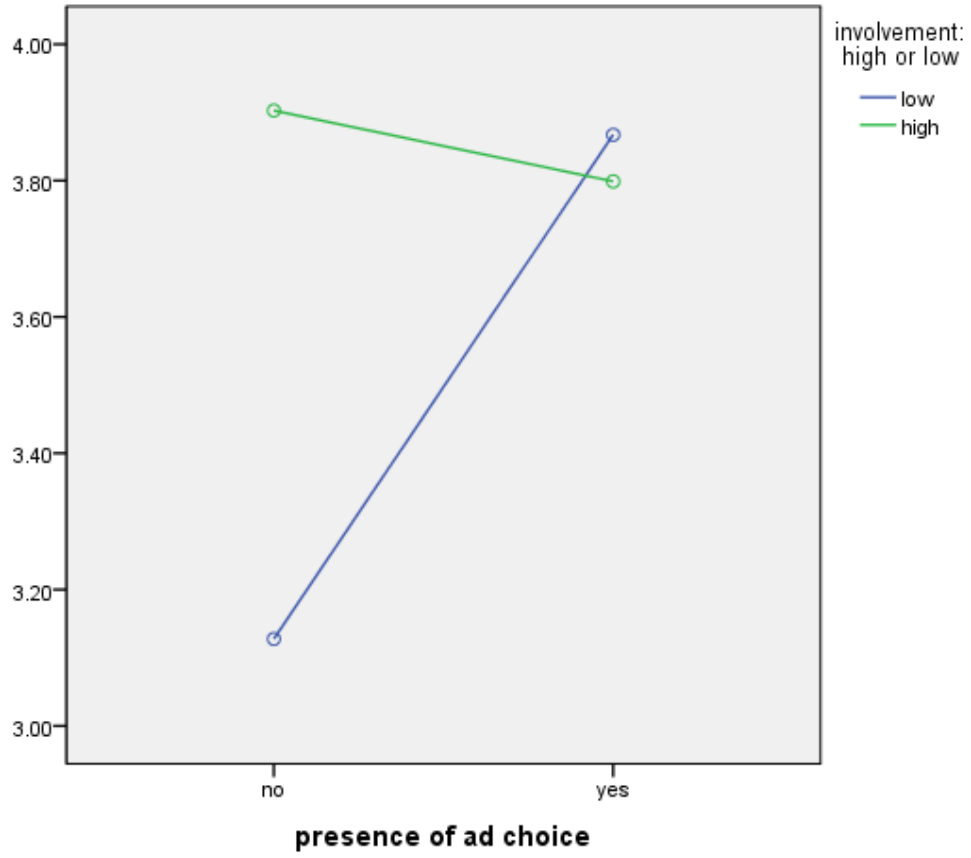
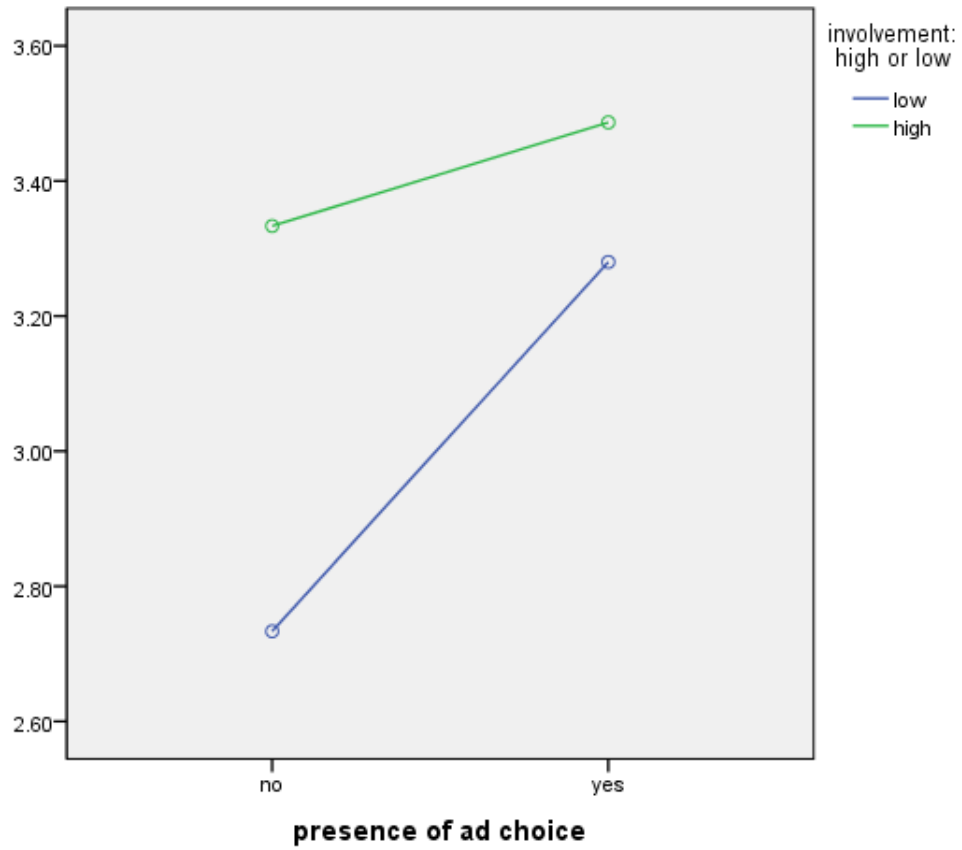


Figure 5.4. Interaction between Ad Choice and Involvement on Purchase Intention



APPENDIX A: ADVERTISING STIMULI (1): SOAP AND PAPER TOWELS



Soap (Molli)



Paper Towels (Freshi)

APPENDIX B: ADVERTISING STIMULI (2): A PAGE OF AD CHOICE

Please choose one of following commercials you want to watch.



Soap: Molli



Paper Towels: Freshi

APPENDIX C: PRIMING SCENARIOS FOR SOAP AND LAPTOP

Please take a moment to imagine having just moved to a new country. Being a new resident, there were various things that you need to take care of (e.g., setting up internet, cable, opening a new bank account, various changes of address forms to fill out). Moreover, you needed to purchase daily necessities at the marketplace and bought several things that you need. You were choosing a soap at the soap aisle. You could not see any familiar brands you have known in your country. You were not sure which soap you should choose. Please describe in as much detail as possible what criteria you will use to choose soap. You can tell your previous experiences or any suggestions about the soap. You will be able to see next button below after 5 minutes and continue the study.

Soap-priming scenario

Please take a moment to imagine purchasing a new laptop. You wanted to purchase a new trendy laptop and searched several laptops that you could buy. While you were searching laptops, you found the one featured all-day battery life that was one of your wishes in the past. Most of laptop's battery has lasted less than 5 hours on a charge. Therefore, you were very excited to find a laptop that has a wonderful feature. Please describe in as much detail as possible how you think about the laptop above. Also please describe about laptop you know. You will be able to see next button below after 5 minutes and continue the study.

Laptop-priming scenario

APPENDIX D: PRETEST 1 QUESTIONNAIRE

The italicized words are only used for experimenters to recognize the questions and blocks.

Welcome! Thank you very much for participating in this study!

- Please WAIT for the signal to start the experiment. Do not start on your own.
- If you have a cell phone, any mobile communication devices, please turn them off now.
- If you came with your friends, please avoid chatting with them.
- When you are done with the entire study, please remain seated until the experimenter lets you leave.
- If you have any questions during the experiment, please raise your hand.

Consent Form

Please read this consent document carefully before you decide to participate in this study.

Title of Study: The Interplay of Ad Choice and Involvement on Psychological Reactance, Attitudes, and Intentions in the Context of Online Video Advertising

Purpose of the research study: In this study, we expect to understand how consumers respond to online video ad, and contribute to advertising industry and academics to develop ad format that enhances consumers' online video watching. By conducting experiments, we will analyze the how college students aged 18 to 24 evaluate the online video ad that interrupts during the video.

What you will do in the study: In this experiment, you will sign the consent form to participate in the media study. First, you will read a statement and write down anything about it for 5 minutes. Secondly, you will watch three videos chosen from best viral videos of 2008-2013. After you watch three videos, you will answer the questions about those videos. At last, you will be guided to answer a few questions about specific product category. When you are done with the study, you will be debriefed about our study and leave the lab.

Time required: The experiment will take no more than 40 minutes.

Risks and Benefits: There are no anticipated risks beyond those risks that exist in daily life. The outcomes of the study will be helpful to understand consumers' reactions and perceptions of online video formats; provide a basis for future outside funding in this area.

Compensation: You will receive extra 1 credit for participation.

Confidentiality: There will be no audiotaping, recording, or any photography for data collection. The data will be only collected by online survey during the experiment. The answers provided by participants will be automatically analyzed by the website Qualtrics and also the other research team members will analyze the data by using statistical program. Your personal identity will be kept confidential (e.g. name, address, phone number) to the extent provided by law. Any documents or files that contain subjects' names or other confidential information will be just used to confirm their status to give extra credits. Except using it as extra credits, personal information will not be used but stored in a locked file cabinet or password-protected folder. Only the researcher and other research team members will have access to the notes and other records. Your name will not be used in any report or paper and your comments will be reported alongside others.

Voluntary participation: Your participation in this study is completely voluntary. There would be no penalties to withdrawing beyond loss of the extra credit. However, when you participate in our study, you should do every task that the study requires.

Right to withdraw from the study: You have the right to withdraw from the study at anytime without consequence beyond loss of the extra credit.

Whom to contact if you have questions about the study: Dr. Chang Dae Ham, Assistant Professor, Department of Advertising, 330 Gregory Hall, (217) 333-1602, Email: cdham317@illinois.edu; Regina Ahn, Master student, Department of Advertising, 222B Armory Hall, (217) 974-5411, Email: rahn5@illinois.edu

Whom to contact about your rights as a research participant in the study: If you have any questions about your rights as a participant in this study or any concerns or complaints, please contact the University of Illinois Institutional Review Board at 217-333-2670 (collect calls will be accepted if you identify yourself as a research participant) or via email at irb@illinois.edu

Agreement: I understand the procedure described. I voluntarily agree to participate in the procedure and I have received a copy of this informed consent. Please indicate your decision to participate by signing this consent form.

Priming scenarios: soap and laptop

Q1. Please follow the instruction below. After finishing the work below, click continue button. (Randomly assigned to one of two scenarios) Please take the 5 minutes to put yourself in the following situation and write down any words or thoughts as many as possible about a person described in the statement. (product, adjective, object, or brand name, etc.).

Soap-priming scenario:

Please take a moment to imagine having just moved to a new country. Being a new resident, there were various things that you need to take care of (e.g., setting up internet, cable, opening a new bank account, various changes of address forms to fill out). Moreover, you needed to purchase daily necessities at the marketplace and bought several things that you need. You were choosing soap at the soap aisle. You could not see any familiar brands you have known in your country. You were not sure which soap you should choose. Please describe in as much detail as possible what criteria you will use to choose soap. You can tell your previous experiences or any suggestions about the soap. You will be able to see next button below after 5 minutes and continue the study.

Laptop-priming scenario:

Please take a moment to imagine purchasing a new laptop. You wanted to purchase a new trendy laptop and searched several laptops that you could buy. While you were searching laptops, you found the one featured all-day battery life that was one of your wishes in the past. Most of laptop's battery has lasted less than 5 hours on a charge. Therefore, you were very excited to find

a laptop that has a wonderful feature. Please describe in as much detail as possible how you think about the laptop above. Also please describe about laptop you know. You will be able to see next button below after 5 minutes and continue the study.

Evaluation of three viral video chosen from 2008-2013

Q2. Following videos are chosen from the best viral videos of 2008-2013. Please watch three videos and answer the questions.

(a) First video:



Please rate how much you liked the video you watched.

Bad	- - - - - - -	Good
Foolish	- - - - - - -	Wise
Unfavorable	- - - - - - -	Favorable
Negative	- - - - - - -	Positive
Undesirable	- - - - - - -	Desirable
Unnecessary	- - - - - - -	Necessary
Detrimental	- - - - - - -	Beneficial

Please rate how much you were involved in the video you watched.

Unimportant	- - - - - - -	Important
Boring	- - - - - - -	Interesting
Irrelevant	- - - - - - -	Relevant
Unexciting	- - - - - - -	Exciting
Means nothing	- - - - - - -	Means a lot to me
Unappealing	- - - - - - -	Appealing
Mundane	- - - - - - -	Fascinating
Worthless	- - - - - - -	Valuable
Not involving	- - - - - - -	Involving
Not needed	- - - - - - -	Needed

(b) Second video:



Please rate how much you liked the video you watched.

Bad	- - - - - - -	Good
Foolish	- - - - - - -	Wise
Unfavorable	- - - - - - -	Favorable
Negative	- - - - - - -	Positive
Undesirable	- - - - - - -	Desirable
Unnecessary	- - - - - - -	Necessary
Detrimental	- - - - - - -	Beneficial

Please rate how much you were involved in the video you watched.

Unimportant	- - - - - - -	Important
Boring	- - - - - - -	Interesting
Irrelevant	- - - - - - -	Relevant
Unexciting	- - - - - - -	Exciting
Means nothing	- - - - - - -	Means a lot to me
Unappealing	- - - - - - -	Appealing
Mundane	- - - - - - -	Fascinating
Worthless	- - - - - - -	Valuable
Not involving	- - - - - - -	Involving
Not needed	- - - - - - -	Needed

(c) Third video:



Please rate how much you liked the video you watched.

Bad	- - - - - - -	Good
Foolish	- - - - - - -	Wise
Unfavorable	- - - - - - -	Favorable
Negative	- - - - - - -	Positive
Undesirable	- - - - - - -	Desirable
Unnecessary	- - - - - - -	Necessary
Detrimental	- - - - - - -	Beneficial

Please rate how much you were involved in the video you watched.

Unimportant	- - - - - - -	Important
Boring	- - - - - - -	Interesting
Irrelevant	- - - - - - -	Relevant
Unexciting	- - - - - - -	Exciting
Means nothing	- - - - - - -	Means a lot to me
Unappealing	- - - - - - -	Appealing
Mundane	- - - - - - -	Fascinating
Worthless	- - - - - - -	Valuable
Not involving	- - - - - - -	Involving
Not needed	- - - - - - -	Needed

Comparison of product involvement between soap and paper towels

Q3. Please rate how much you consider soap in your daily life on the following items.

Unimportant	- - - - - - -	Important
Boring	- - - - - - -	Interesting
Irrelevant	- - - - - - -	Relevant
Unexciting	- - - - - - -	Exciting
Means nothing	- - - - - - -	Means a lot to me
Unappealing	- - - - - - -	Appealing
Mundane	- - - - - - -	Fascinating
Worthless	- - - - - - -	Valuable
Not involving	- - - - - - -	Involving
Not needed	- - - - - - -	Needed

Please rate how much you consider paper towels in your daily life on the following items.

Unimportant	- - - - - -	Important
Boring	- - - - - -	Interesting
Irrelevant	- - - - - -	Relevant
Unexciting	- - - - - -	Exciting
Means nothing	- - - - - -	Means a lot to me
Unappealing	- - - - - -	Appealing
Mundane	- - - - - -	Fascinating
Worthless	- - - - - -	Valuable
Not involving	- - - - - -	Involving
Not needed	- - - - - -	Needed

Demographic Information

What is your gender?

Male Female

What is your age?

With what racial group do you identify yourself?

- African-American or Black, but not of Hispanic origin
- White, but not of Hispanic origin
- Hispanic or Latino
- Asian or Asian American
- Native American or Aleut
- Multiracial
- Some other group, please indicate in the line below.

What is your major?

What is your grade?

APPENDIX E: PRETEST 2 QUESTIONNAIRES

The italicized words are only used for experimenters to recognize the questions and blocks.

Welcome! Thank you very much for participating in this study!

- Please WAIT for the signal to start the experiment. Do not start on your own.
- If you have a cell phone, any mobile communication devices, please turn them off now.
- If you came with your friends, please avoid chatting with them.
- When you are done with the entire study, please remain seated until the experimenter lets you leave.
- If you have any questions during the experiment, please raise your hand.

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What you will do in the study: In this experiment, you will sign the consent form to participate in the media study. First, you will read a statement and write down anything about it for 5 minutes. Secondly, you will watch one advertisement. Please answer the questions about the ad after you complete watching it. When you are done with the study, you will be debriefed about our study and leave the lab.

Time required: The experiment will take no more than 20 minutes.

Risks and Benefits: There are no anticipated risks beyond those risks that exist in daily life. The outcomes of the study will be helpful to understand consumers' reactions and perceptions of online video formats; provide a basis for future outside funding in this area.

Compensation: You will receive extra 1 credit for participation.

Confidentiality: There will be no audiotaping, recording, or any photography for data collection. The data will be only collected by online survey during the experiment. The answers provided by participants will be automatically analyzed by the website Qualtrics and also the other research team members will analyze the data by using statistical program. Your personal identity will be kept confidential (e.g. name, address, phone number) to the extent provided by law. Any documents or files that contain subjects' names or other confidential information will be just used to confirm their status to give extra credits. Except using it as extra credits, personal information will not be used but stored in a locked file cabinet or password-protected folder. Only the researcher and other research team members will have access to the notes and other records. Your name will not be used in any report or paper and your comments will be reported alongside others.

Voluntary participation: Your participation in this study is completely voluntary. There would be no penalties to withdrawing beyond loss of the extra credit. However, when you participate in our study, you should do every task that the study requires.

Right to withdraw from the study: You have the right to withdraw from the study at anytime without consequence beyond loss of the extra credit.

Whom to contact if you have questions about the study: Dr. Chang Dae Ham, Assistant Professor, Department of Advertising, 330 Gregory Hall, (217) 333-1602, Email: cdham317@illinois.edu; Regina Ahn, Master student, Department of Advertising, 222B Armory Hall, (217) 974-5411, Email: rahn5@illinois.edu

Whom to contact about your rights as a research participant in the study: If you have any questions about your rights as a participant in this study or any concerns or complaints, please contact the University of Illinois Institutional Review Board at 217-333-2670 (collect calls will be accepted if you identify yourself as a research participant) or via email at irb@illinois.edu

Agreement: I understand the procedure described. I voluntarily agree to participate in the procedure and I have received a copy of this informed consent. Please indicate your decision to participate by signing this consent form.

Priming scenarios: soap and laptop

Q1. Please follow the instruction below. After finishing the work below, click continue button. (Randomly assigned to one of two scenarios) Please take the 5 minutes to put yourself in the following situation and write down any words or thoughts as many as possible about a person described in the statement. (product, adjective, object, or brand name, etc.).

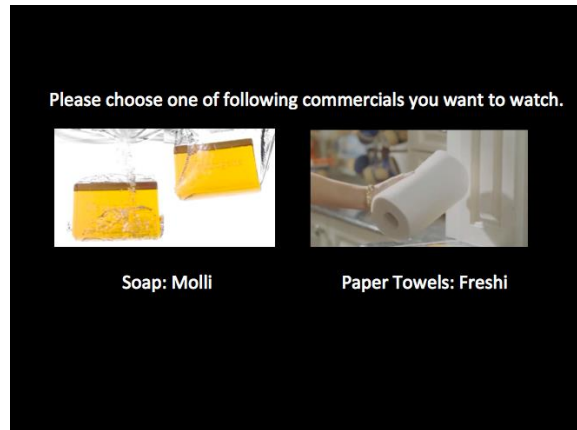
Soap-priming scenario:

Please take a moment to imagine having just moved to a new country. Being a new resident, there were various things that you need to take care of (e.g., setting up internet, cable, opening a new bank account, various changes of address forms to fill out). Moreover, you needed to purchase daily necessities at the marketplace and bought several things that you need. You were choosing soap at the soap aisle. You could not see any familiar brands you have known in your country. You were not sure which soap you should choose. Please describe in as much detail as possible what criteria you will use to choose soap. You can tell your previous experiences or any suggestions about the soap. You will be able to see next button below after 5 minutes and continue the study.

Laptop-priming scenario:

Please take a moment to imagine purchasing a new laptop. You wanted to purchase a new trendy laptop and searched several laptops that you could buy. While you were searching laptops, you found the one featured all-day battery life that was one of your wishes in the past. Most of laptop's battery has lasted less than 5 hours on a charge. Therefore, you were very excited to find a laptop that has a wonderful feature. Please describe in as much detail as possible how you think about the laptop above. Also please describe about laptop you know. You will be able to see next button below after 5 minutes and continue the study.

Advertising (Choice or No-choice)



Involvement toward the soap brand (Molli) and paper towels brand (Freshi)

Q3-a. Please rate how much you were involved in soap (Molli) in the ad

Unimportant	- - - - - - -	Important
Boring	- - - - - - -	Interesting
Irrelevant	- - - - - - -	Relevant
Unexciting	- - - - - - -	Exciting
Means nothing	- - - - - - -	Means a lot to me
Unappealing	- - - - - - -	Appealing
Mundane	- - - - - - -	Fascinating
Worthless	- - - - - - -	Valuable
Not involving	- - - - - - -	Involving
Not needed	- - - - - - -	Needed

Q3-b. Please rate how much you were involved in paper towels (Freshi) in the ad

Unimportant	- - - - - - -	Important
Boring	- - - - - - -	Interesting
Irrelevant	- - - - - - -	Relevant
Unexciting	- - - - - - -	Exciting
Means nothing	- - - - - - -	Means a lot to me
Unappealing	- - - - - - -	Appealing
Mundane	- - - - - - -	Fascinating
Worthless	- - - - - - -	Valuable
Not involving	- - - - - - -	Involving
Not needed	- - - - - - -	Needed

Demographic Information

What is your gender?

Male Female

What is your age?

With what racial group do you identify yourself?

- African-American or Black, but not of Hispanic origin
- White, but not of Hispanic origin
- Hispanic or Latino
- Asian or Asian American
- Native American or Aleut
- Multiracial
- Some other group, please indicate in the line below.

What is your major?

What is your grade?

APPENDIX F: MAIN EXPERIMENT QUESTIONNAIRES

The italicized words are only used for experimenters to recognize the questions and blocks.

Welcome! Thank you very much for participating in this study!

- Please WAIT for the signal to start the experiment. Do not start on your own.
- If you have a cell phone, any mobile communication devices, please turn them off now.
- If you came with your friends, please avoid chatting with them.
- When you are done with the entire study, please remain seated until the experimenter lets you leave.
- If you have any questions during the experiment, please raise your hand.

Consent Form

Please read this consent document carefully before you decide to participate in this study.

Title of Study: The Interplay of Ad Choice and Involvement on Psychological Reactance, Attitudes, and Intentions in the Context of Online Video Advertising

Purpose of the research study: In this study, we expect to understand how consumers respond to online video ad, and contribute to advertising industry and academics to develop ad format that enhances consumers' online video watching. By conducting experiments, we will analyze the how college students aged 18 to 24 evaluate the online video ad that interrupts during the video.

What you will do in the study: In this experiment, you will sign the consent form to participate in the media study. First, you will read a statement and write down anything about it for 5 minutes. Secondly, you will watch a viral video chosen from best viral videos of 2008-2013 with 1-minute break. If there are instructions during the video, please follow them. After you watch the video and the ad, you will answer the questions about what you have watched. When you are done with the study, you will be debriefed about our study and leave the lab.

Time required: The experiment will take no more than 40 minutes.

Risks and Benefits: There are no anticipated risks beyond those risks that exist in daily life. The outcomes of the study will be helpful to understand consumers' reactions and perceptions of online video formats; provide a basis for future outside funding in this area.

Compensation: You will receive extra 1 credit for participation.

Confidentiality: There will be no audiotaping, recording, or any photography for data collection. The data will be only collected by online survey during the experiment. The answers provided by participants will be automatically analyzed by the website Qualtrics and also the other research team members will analyze the data by using statistical program. Your personal identity will be kept confidential (e.g. name, address, phone number) to the extent provided by law. Any documents or files that contain subjects' names or other confidential information will be just used to confirm their status to give extra credits. Except using it as extra credits, personal information will not be used but stored in a locked file cabinet or password-protected folder. Only the researcher and other research team members will have access to the notes and other records. Your name will not be used in any report or paper and your comments will be reported alongside others.

Voluntary participation: Your participation in this study is completely voluntary. There would be no penalties to withdrawing beyond loss of the extra credit. However, when you participate in our study, you should do every task that the study requires.

Right to withdraw from the study: You have the right to withdraw from the study at anytime without consequence beyond loss of the extra credit.

Whom to contact if you have questions about the study: Dr. Chang Dae Ham, Assistant Professor, Department of Advertising, 330 Gregory Hall, (217) 333-1602, Email: cdham317@illinois.edu; Regina Ahn, Master student, Department of Advertising, 222B Armory Hall, (217) 974-5411, Email: rahn5@illinois.edu

Whom to contact about your rights as a research participant in the study: If you have any questions about your rights as a participant in this study or any concerns or complaints, please contact the University of Illinois Institutional Review Board at 217-333-2670 (collect calls will be accepted if you identify yourself as a research participant) or via email at irb@illinois.edu

Agreement: I understand the procedure described. I voluntarily agree to participate in the procedure and I have received a copy of this informed consent. Please indicate your decision to participate by signing this consent form.

Priming scenarios: soap and laptop

Q1. Please follow the instruction below. After finishing the work below, click continue button. (Randomly assigned to one of two scenarios) Please take the 5 minutes to put yourself in the following situation and write down any words or thoughts as many as possible about a person described in the statement. (product, adjective, object, or brand name, etc.).

Soap-priming scenario:

Please take a moment to imagine having just moved to a new country. Being a new resident, there were various things that you need to take care of (e.g., setting up internet, cable, opening a new bank account, various changes of address forms to fill out). Moreover, you needed to purchase daily necessities at the marketplace and bought several things that you need. You were choosing soap at the soap aisle. You could not see any familiar brands you have known in your country. You were not sure which soap you should choose. Please describe in as much detail as possible what criteria you will use to choose soap. You can tell your previous experiences or any suggestions about the soap. You will be able to see next button below after 5 minutes and continue the study.

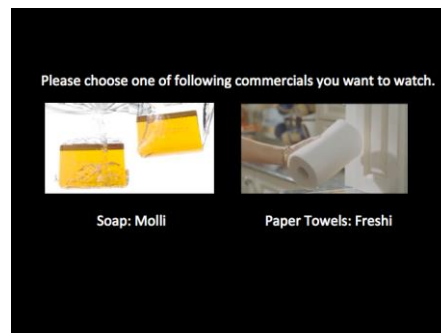
Laptop-priming scenario:

Please take a moment to imagine purchasing a new laptop. You wanted to purchase a new trendy laptop and searched several laptops that you could buy. While you were searching laptops, you found the one featured all-day battery life that was one of your wishes in the past. Most of laptop's battery has lasted less than 5 hours on a charge. Therefore, you were very excited to find

a laptop that has a wonderful feature. Please describe in as much detail as possible how you think about the laptop above. Also please describe about laptop you know. You will be able to see next button below after 5 minutes and continue the study.

Evaluation of three viral video chosen from 2008-2013

Q2. Following videos are chosen from the best viral videos of 2008-2013. Please watch the video and answer the questions.



Anger

Please rate how much you agree with the following statements.

I felt angry while viewing the ad.		
Not at all	- - - - - -	Very much
Did you feel annoyed while viewing this message?		
Not at all	- - - - - -	Very much
Did you feel irritated while viewing this message?		
Not at all	- - - - - -	Very much
Did you feel aggravated while viewing this message?		
Not at all	- - - - - -	Very much

Negative Cognition

Please write down your thoughts about ad you saw during the ad break for 3 minutes.

Attitude

Please rate how much you liked the video you watched.

Bad	- - - - - - -	Good
Foolish	- - - - - - -	Wise
Unfavorable	- - - - - - -	Favorable
Negative	- - - - - - -	Positive
Undesirable	- - - - - - -	Desirable
Unnecessary	- - - - - - -	Necessary
Detrimental	- - - - - - -	Beneficial

Please rate how much you liked the brand (*Molli / Freshi*) in the ad.

Bad	- - - - - - -	Good
Foolish	- - - - - - -	Wise
Unfavorable	- - - - - - -	Favorable
Negative	- - - - - - -	Positive
Undesirable	- - - - - - -	Desirable
Unnecessary	- - - - - - -	Necessary
Detrimental	- - - - - - -	Beneficial

Purchase Intention

Please rate how much you like to purchase the brand (*Molli / Freshi*) in the ad.

Never	- - - - - - -	Definitely
Definitely do not intend to buy	- - - - - - -	Definitely intend to buy
Very low purchase interest	- - - - - - -	Very high purchase interest
Definitely not buy it	- - - - - - -	Definitely buy it
Probably not buy it	- - - - - - -	Probably buy it

Perceived Freedom of Choice

Please rate how much you agree with the following statements.

I had an option to choose the ad that I want to watch.		
Not at all	- - - - - - -	Very much
I had freedom to choose the ad that I want to watch.		
Not at all	- - - - - - -	Very much

I was given choices to choose the ad.

Not at all | - | - | - | - | - | - | Very much

Involvement

Please rate how much you were involved in the brand (*Molli / Freshi*) from the ad you watched.

Unimportant	- - - - - -	Important
Boring	- - - - - -	Interesting
Irrelevant	- - - - - -	Relevant
Unexciting	- - - - - -	Exciting
Means nothing	- - - - - -	Means a lot to me
Unappealing	- - - - - -	Appealing
Mundane	- - - - - -	Fascinating
Worthless	- - - - - -	Valuable
Not involving	- - - - - -	Involving
Not needed	- - - - - -	Needed

Demographic Information

What is your gender? Male Female

What is your age? _____

With what racial group do you identify yourself?

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- Native American or Aleut
- Multiracial
- Some other group, please indicate in the line. _____

What is your major? _____

What is your grade? _____