**The Contagious Emotions: Positive, Arousing and Empowering Emotions Determine Share and Purchase Intentions in Viral Advertising**

**Abstract**

The current study adopts the theoretical framework of three-factor theory of emotions (i.e., Pleasure-Arousal-Dominance) to empirically test the role of emotions in influencing share and purchase intentions in the context of viral advertising. The results confirmed the positive role of Pleasure, Arousal, and Dominance in spreading the viral video commercials. More importantly, the results demonstrated that Dominance emerged as the strongest predictor among the three dimensions to explain the increased share intention. In addition, the intention to share mediated the effects of three emotional dimensions on purchase intention. Theoretical and practical implications are discussed.

Keywords: Emotions, Viral Advertising, Pleasure, Arousal, Dominance, Purchase Intention, Share Intention

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**INTRODUCTION**

Recently, digital marketing strategy has shifted away from an emphasis on “paid” media, where brands pay to advertise, to “earned” media, where consumers themselves become the channel of delivery (Tucker 2015). The increased popularity of video sharing giant YouTube combined with improved sharing functionality across most social networking sites, has contributed to the pivotal role of viral videos in the marketing mix of many companies (Eckler and Bolls 2011; O’Malley 2011). With effective execution, a viral video campaign has demonstrated to offer marketers benefits, such as expanded campaign research, reduced advertising avoidance, and earned media publicity for the company (Dobele et al. 2007; Eckler and Bolls 2011; Hann et al. 2008; Cho, Huh and Faber 2014).

There is a growing body of literature on viral marketing and advertising. Particularly, previous studies on viral advertising has focused on three major areas: (1) the motives of sharing (Lee, Ham, and Kim 2013; Nikolinakou and King 2018; Phelps et al. 2004; Taylor, Strutton, and Thompson 2012), (2) the characteristics of content to be shared (Berger 2011; Berger and Milkman 2012; Yuki 2015), and (3) the effects of viral advertising on consumer behavior (Cho et al. 2014; De Bruyn and Lilien 2008). Among all the studies with these three key topics, the construct of emotions has consistently been the center of discussion. For example, one of the key triggers for eliciting virality for video ads is to share positive emotions (Nikolinakou and King 2018) and to increase feelings of pleasure and belongingness (Lee, Ham, and Kim 2013). The emotional tone of viral ads is considered as a crucial determinant that influences whether the ads get shared. Berger and Milkman (2012) found that content that evoked high arousal emotions, such as awe, anger, and anxiety, resulted in higher share. Further, the emotional characteristics of advertising contents, such as humor, entertainment, and warmth, not only reduce ad avoidance (Campbell et al. 2017; Goodrich et al. 2015), but also increase sharing intention (Berger 2011; Yuki 2015).

The first authors that suggested the key role of emotions in viral marketing were Dobele et al. (2007), who argued that viral messages need to contain surprise to be effective, but surprise is not enough and must therefore be combined with other emotions. Later on, Berger and Milkman (2012) conducted the first empirical study to examine the role of emotions in the spread of online content and found that virality is mainly driven by physiological arousal. This study had a great impact on subsequent viral advertising research and since then most studies looking at why content spreads online also measured some type of emotion, affect, mood or valence.

Previous research on emotions and viral advertising conceptualized the construct of emotions either from a single dimensional approach (positive, negative, or coactive; Eckler and Bolls 2011) or from a discrete/categorical approach (excitement, anger, anxiety; Berger and Milkman 2012). These two approaches may result in a less comprehensive perspective of emotions because of the limited sets of emotions chosen in one particular study, and therefore restrict findings to identify the significant role of emotions in viral advertising. The present study adopts the three-dimensional theory of emotions to examine the effects of pleasure, arousal, and dominance (PAD) on share and purchase intentions. Such a three-dimensional approach hopes to complement the findings from previous studies by emphasizing the dominance dimension that has been ignored in the current literature and provide a more holistic view to account for the emotional effects in viral advertising. Moreover, most of the previous studies have mainly emphasized how emotions impacted attitudinal responses, such as ad attitude and brand attitude, and share intention, while the current study hopes to tap into the further impacts on purchase intent. In addition, prior research has often selected limited samples of viral video ads to examine the effects of emotions, whereas the current study adopts a bigger sample with brands in multiple industries to increase the generalizability of the potential findings. Overall, the present research intends to fill the gap in current literature by establishing the direct relationship between emotions, share intention and purchase intention in the context of viral advertising.

**LITERATURE REVIEW**

**Viral Advertising**

Viral advertising is a persuasive message developed by an identified sponsor disseminated through unpaid peer-to-peer communication on interactive digital platforms (Porter and Golan 2006; Kirby 2006). Matt Cutler (2009), the vice president of marketing and analytics at Visible Measures, argued that the common benchmark for viral video success is one million views per week as the “magic number” for success. Marketers are increasingly turning to the diffusion of video as a way to gain cut-through and reach in the social media space (comScore 2011; Purcell 2010). A number of firms such as Evian, Dove, Frito-Lay, GoPro, Red Bull, BMW, and Volkswagen, have begun to utilize viral ads because of the many benefits that they may entail. Viral advertising allows consumers to control the process and decide for themselves if an ad is worthy watching/forwarding to others or not. Thus, video ads that go viral improve brands’ or products’ potency (Vollmer and Precourt 2008).

While the potential advantages of viral videos would seem quite appealing to marketers, success can be hit and miss. Some videos are shared for tens of thousands of times in a few short hours, while others fall very short of expectations. Therefore, some recent studies have started to model the determines of whether a video ad campaign successfully goes viral. This is increasingly important given that 85% of the US internet audience watch videos online (WordStream 2019). Porter and Golan (2006) emphasized the importance of outrageous content (specifically sexuality, humor, violence, and nudity) as a determinant of virality. Brown, Bhadury, and Pope (2010) echoed the importance of comedic violence and argued that the outrageous nature of these ads appears to be a key driver. Later on, researchers moved beyond analyzing the specific content of vial advertising to understand the underlying psychological factors that drive content sharing (e.g., Eckler and Bolls 2011; Berger 2011). The results seem to consistently point to the pivotal role of emotions. The following section will review several key studies in viral advertising with a specific emphasis on the effects of emotions.

**The Role of Emotions in Viral Advertising**

Viral success depends on consumers’ active participation in forwarding messages to others, so campaigns are often more about the emotional impact of the message than the product itself (MindComet 2006). Because emotionality of messages is what likely drives consumer participation, viral videos often employ strong emotional appeals. For instance, Phelps and colleagues (2004, p. 345) found that “messages that spark strong emotional feelings-humor, fear, success, or inspiration-are likely to be forwarded” in their study of email marketing. These observations imply that emotionally evocative content may be particularly viral. But which is more likely to be shared−positive or negative content?

Eckler and Bolls (2011) conceptualized human emotions as a fleeting and affective evaluation emerging from the activity of underlying motivational systems that are broadly organized around the dimensions of appetitive and aversive responding (Lang and Bradley 2010). The appetitive motivational system activates in response to pleasant stimuli, whereas the aversive motivational system reacts to unpleasant stimuli (Lang and Bradley 2010). Building on the appetitive/aversive motivational system, Eckler and Bolls (2011) conducted an experiment to examine the emotional tone (positive, negative, and coactive) of viral videos. Their findings showed that ads with positive emotional tone resulted in more favorable attitude toward the ad and the brand, as well as greater intent to forward the viral ads. Responses turned less positive as the emotional tone became more mixed (i.e., coactive) and were least positive for the ads with negative tone (i.e., unpleasant).

While Eckler and Bolls (2011) took the dimensional approach to analyze the effects of emotions, Berger and Milkman (2012) investigated the effects of discrete emotions triggered by viral content (e.g., sadness, awe, and anger) on share intention through a field study and a series of lab experiments. Their results suggested that online content that evoked high-arousal emotions was more viral, regardless of whether those emotions were positive (i.e., awe) or negative (i.e., anger or anxiety). Online content that evoked more of a deactivating emotion (i.e., sadness), however, was actually less likely to be viral.

The above findings on the relationship between emotions and virality may seem contradictory, but it may be inappropriate to compare the results from these two studies as their conceptualizations of emotions were inherently different. To resolve the discrepancies in the current literature and further elucidate the role of emotions in viral advertising, the current study adopts a three-dimensional approach to examine the effects of emotions.

**Three-Factor Theory of Emotions (PAD)**

The Three-Factor Theory of Emotions conceptualizes emotions as a multi-dimensional construct, including Pleasure, Arousal, and Dominance, therefore also known as the PAD model (Russell and Mehrabian 1977). Pleasure is the measure of positive or negative reaction such that it constitutes extreme happiness to extreme unhappiness. For instance, feeling of happiness indicates positive pleasure whereas feeling of sadness indicates negative pleasure. Arousal determines the level of stimulation and involvement, which ranges on a physiological continuum indicating some level of physical activity, mental alertness, or frenzied excitement at the arousal end of the continuum, with inactivity, mental dullness, or sleep at the other end. Dominance is a sense of control after being exposed to a stimulus, and it refers to the feeling of control or being able to influence one experiences versus the feeling of a lack of control or being unable to influence a situation (Mehrabian & de Wetter, 1987; Morris et al., 2002).

Compared to the unidimensional or categorical approach used in previous studies in viral advertising, the Three-Factor Theory of Emotions has some merits. First, multiple factory analyses of data collected using emotion questionnaires indicated the existence of three distinctive dimensions of emotional states (e.g., Mehrabian 1996; Russell and Mehrabian 1977; Shaver, Schwartz, Kirson, and O’Connor 1987). The three-dimensional approach is clearly more informative as a representation of emotion than the unidimensional (positive or negative) or two-dimensional (only focused on pleasure and arousal) approach. Specifically, the third dimension, Dominance, helps differentiate two basic emotions—anger and fear, which would be grouped under the same dimension(s) using the unidimensional or even two-dimensional approach. Second, Havlena and Holbrook (1986) compared categorical models of discrete emotions to dimensional models of emotions and found that the three-dimensional model was more parsimonious, valid and reliable than the categorical models. That is, the three dimensions of Pleasure, Arousal, and Dominance are both necessary and sufficient to describe a large variety of emotional states (Russell and Mehrabian 1977).

The Three-Factor Theory of Emotions, specifically—that is, the PAD measure—has been extensively employed and studied in consumer psychology and advertising research (e.g., Bashir, Wen, Kim, and Morris 2018; Christ 1985; Christ and Biggers 1984; Morris et al. 2002; Morris, Woo, and Cho 2003) as a concrete theoretical framework of emotions that measure advertising effectiveness (Holbrook and Batra 1987). However, such an approach has not yet been employed in the study of the emotional effects of viral advertising. In particular, the role of Dominance remains largely unknown to the current literature. Therefore, the current study adopts such a conceptualization of emotions to explore its influences in viral advertising.

**Effects of PAD on Share and Purchase Intentions**

The Pleasure dimension (also noted as “valence”) indicates the level of happiness and positivity of emotions, with higher score in Pleasure denoting more positive feelings. Previous studies have suggested that more positive content (e.g. humorous content) will be more viral (Tucker 2015; Petrescu, Korgaonkar, and Gironda 2015). Sharing is a social behavior, and thus involve complex considerations (Berger 2014; Huang, Lin and Lin 2009). Consumers often share content for the self-presentation purpose (Wojnicki and Godes 2008) or to communicate self-identity, and consequently, positive content may be shared more because it helps build or maintain the senders’ positive images (Berger 2013, 2014). Most people would prefer to be known as someone who shares upbeat stories or make others laugh and feel good rather than someone who shares things that make others sad or upset. Sharing positive content may also help boost others’ mood or provide information about potential rewards (e.g., this restaurant is worth trying). Therefore, this study predicts that:

**H1: Increased Pleasure will lead to greater share intention of the viral videos.**

Independent of Pleasure, Arousal may shape consumers’ share behaviors. Arousal denotes the strength of emotional involvement and bonding, with the likelihood of subsequently identifying with the brands in the viral advertising (Bashir et al. 2018). Emotionally arousing messages tend to foster selective exposure (Knobloch-Westerwick, 2015), such that people seek out content with emotionally evocative frames (Zillmann et al., 2004). Media messages characterized by high arousal are also more likely to go viral (Berger, 2014). The experience of emotional arousal tends to prompt social sharing of that emotion because emotion sharing has both intrapersonal and interpersonal benefits, such as sense-making of the emotional experience and establishment (or strengthening) of social bonds (Rimé, 2009; Bashir et al. 2018). Berger and Milkman (2012) demonstrated that content that evoked high-arousal emotions tended to be shared more than content that elicited low-arousal emotions. Therefore, this study proposes the following hypothesis:

**H2: Increased Arousal will lead to greater share intention of the viral videos.**

The Dominance dimension refers to a sense of control after being exposed to viral advertising, ranging from the feeling of a lack of control to the feeling of being influential and powerful, or in control (Mehrabian and de Wetter 1987). Dominance can also be considered as the feeling of empowerment (Morris et al. 2002). Even though the effects of Dominance on virality has not yet been examined in prior research, emotional appeals aimed at evoking Dominance appear to be persuasive by highlighting the feelings of mastery and self-fulfillment (Holbrook and O’Shaughnessy 1984). Similarly, Phelps et al. (2004) suggested that emails that entail the themes of success and inspiration had greater pass-along value. These two themes (i.e., success and inspiration) may closely align with Dominance in regard to the intrinsically motivating nature of competence and empowerment. In addition, higher in Dominance seems to elicit greater approach behaviors (Biggers and Rankis 1983). Therefore, in the context of viral advertising, stronger feelings of Dominance may lead to greater intention to share the content. Formally,

**H3: Increased Dominance will lead to greater share intention of the viral videos.**

More importantly, the present research extends the discussion of emotional effects on viral advertising to purchase intention. According to the affect transfer model (MacKenzie, Lutz and Belch 1986), the emotions arising from the viral content are likely to transmit to the brand advertised in the ad, and therefore result in higher likelihood to purchase. Further, emotions have been proven as a key driver for purchase intent. In a robust study of over 23,000 responses to 240 advertising messages, Morris et al. (2002) found that emotions dominated over cognition for predicting conative attitude and action, and accounted for twice the variance toward conative attitude. Thus, this study further proposes the following hypotheses.

**H4: Increased Pleasure will lead to greater intention to purchase the product featured in the viral videos.**

**H5: Increased Arousal will lead to greater intention to purchase the product featured in the viral videos.**

**H6: Increased Dominance will lead to greater intention to purchase the product featured in the viral videos.**

**Virality and Purchase Intentions**

Advertising researchers and professionals have discussed the economic benefits of viral advertising as not only to build widespread brand awareness, but also to help generate consumer interest, product trials, and sales (Kirby and Marsden 2006). Viral advertising is about touching a vital nerve point in consumers in order to exponentially increase the diffusion and impact of the messages (Shukla 2010; Welker 2002). Eventually, the key point is to make consumers associate the contagious good feelings spread through the viral ad with the brand (Porter and Golan 2006).

There are also examples from practice regarding the estimated effect of viral ads on company sales. For instance, the now famous “blend everything” commercial from Blendtec have led to an estimated 800% increase in sales (Truong 2010). Thus, just like positive word-of-mouth, viral advertising attracts consumers’ attention and earns media publicity. The emotional benefits of viral advertising are thought to motivate and lead consumers to product trial and acquisition. Thus, the authors hypothesize:

**H7: Increased intention to share the viral video will lead to greater purchase intention.**

**H8: Intention to share the viral video mediates the influence of (a) Pleasure, (b) Arousal, and (c) Dominance on purchase intention.**

**METHOD**

**Study Design**

To test the proposed hypotheses, an online experiment was conducted using a within-subject design. The experimental stimuli were 27 video advertisements that have gone viral on YouTube. Each participant was randomly assigned to watch three of them.

**Participants**

Two hundred and eight-four participants (*N* = 284) who were U.S. residents were recruited from *Amazon Mechanical Turk (MTurk)*. Each participant received one dollar as compensation. Among them, 63.7% (*Nmale*= 181) were male and 36.3% (*Nfemale*= 103) were female. Their mean age was 35.56 (SD = 9.98). As for race, 72.2% (*NWhite*= 205) were White, 22.2% (*NAfrican American*= 63) were African American, 4.6% (*NAsian*= 13) were Asian, and 1.1% (*Nothers*= 3) were others. As for education, 53.5% (*Ncollege\_graduate*= 152) were college graduate, 23.6% (*Nsome college*= 67) had some college credit, 16.5% (*Ngraduate*= 47) had a graduate level degree, and 6.3% (*Nhigh school*= 18) had a high school diploma.

**Stimulus Materials**

The stimulus materials employed in this study were real *YouTube* video advertisements. An initial list of 70 advertisements was obtained from *YouTube Ads Leaderboard* for the time window of June 2018 to December 2018. As part of *Google*’s marketing research project, *Think with Google*, *YouTube Ads Leaderboard* showcases the top advertisements that people choose to watch each month. Among the 70 advertisements, five was no longer available on *YouTube*. Since each participant would watch multiple videos and answer the same questions for multiple times, in order to make the study manageable, we removed the videos that were longer than one minute. If a brand had multiple videos in the list, we only kept the one with the highest number of views. The final list contained 27 *YouTube* video advertisements. Real video commercials have been utilized by numerous advertising studies and are applauded for their boost for external validity of the studies and representativeness of the finding (e.g., Karson and Korgaonkar 2001; Vargas, Duff and Faber 2017)

**Procedure**

*MTurk* participants were provided with the *Qualtrics* survey link. After consenting to participate in the study, participants were told that the purpose of this study was to evaluate several video commercials. They were asked to check the audio and video capacity of their devices. A nine-second crickets chirping audio was played. If a participant did not correctly identify the sound in a multiple-choice question, the survey would be terminated for that participant. After the check of audio and video capacity, participants were given the instruction of ADSAM (Attitude Self-Assessment Manikin) and completed a practice question. Then participants were randomly assigned to three video blocks. In each video block, participants first reported their product involvement and preexisting attitude toward the brand featured in the video, and then watch the video. After that, participants reported pleasure, arousal, and dominance using ADSAM, and then filled a questionnaire about sharing intention, purchase intention, and prior experience of watching the video. After finishing three blocks, participants provided some demographic information, including age, gender, race, and education.

**Measures**

*ADSAM*. AdSAM® is based on the Self-Assessment Manikin (SAM; Lang, 1980) and was developed to measure emotional response to advertising and marketing communications stimuli. AdSAM® captures the three dimensions of emotional response respectively—pleasure, arousal, and dominance (Jang et al., 2014; Morris, 1995). The major benefit of AdSAM® in this case lies in its ability to avoid engaging participants into cognitively thinking about their feelings and therefore generate more robust and genuine results of emotional response.

*Product involvement*. Three nine-point items were adopted to measure participants’ level of involvement in the product category featured in the stimuli (Zaichkowsky 1994). Items included “unimportant/important,” “irrelevant/relevant,” and “means nothing to me/means a lot to me.”

*Preexisting brand attitude*. A three-item nine-point scale was adopted to measure participants’ preexisting attitude toward the brands featured in the stimuli (Spears and Singh 2004). The items were “bad/good,” “unfavorable/favorable,” and “unlikable/likable.”

*Sharing intention*. Sharing intention was measured using a three-item nine-point scale adopted from Lee, Ham and Kim (2013). The items were “I plan to pass along this online video ad.” “I will make an effort to pass along this online video ad.” and “I intend to pass along this online video ad.”

*Purchase intention*. Purchase intention was measured using two nine-point items adopted from Baker and Churchill (1977). The items were “I am likely to try this product.” and “I am likely to buy this product.”

*Prior experience*. Prior experience was measured using a single item adopted from Stacy, Zogg, Unger, and Dent (2004). The item was “How many times have you seen this advertisement before? (1 = never, 9 = very frequently).”

**RESULTS**

Before testing the hypothesized relationships, analyses assessed if the scales achieved satisfactory levels of reliability and if factor loadings were significantly related to their corresponding constructs. The proposed model was next tested with SPSS Amos, using the two-step model-building approach as specified by Anderson and Gerbing (1988). The measurement model, including the latent constructs and their respective observed variables, was first analyzed, and then the structural model with the hypothesized relationships was tested to explain the data.

## **Measurement Model Evaluation**

The confirmatory factor analysis was conducted to ensure the construct validity of the measures. Because the ad exposure experience and the emotional responses, such as pleasure, arousal, and dominance, were measured with single items, the error variance of each indicator was fixed to a nonzero value (Brown, 2006). Reliability estimates for single items such were the .85 as recommended by Petrescu (2013). Due to the low factor loading value of the reversed item, one product involvement item (“It means nothing to me”) was deleted. The results showed that, except single-item measures, all measurement items were significantly loaded on their corresponding latent constructs and the standardized factor loadings exceeded 0.7 (see Table 1). The goodness-of-fit indices demonstrated that the model fit the data well: *χ2* (53) = 193.93, *p* < .001; RMSEA = .056; CFI = .988; GFI = .969; TLI = .979; SRMR = .012.

[Insert Table 1 about here]

## **Testing Hypotheses**

Structural equation modeling (SEM) was used to test the significant associations among multiple variables according to the eight hypotheses proposed in this study. To control the effects of the prior exposure to the advertisement (Heath, Nairn, & Bottomley, 2009), brand attitude (Chattopadhyay & Basu, 1990), and product involvement (Lutz, McKenzie, & Belch, 1983) on ad sharing intention and purchase intention, these three variables were included as the control variables in this model.

Table 2 presents the results of H1 through H7. H1, H2, and H3 predicted that the emotional responses such as pleasure, arousal, and dominance would have positive impacts on ad sharing intention. As expected, pleasure (*β* = .170, SE = .053, *p* < .001), arousal (*β* = .142, SE = .046, *p* < .001), and dominance (*β* = .189, SE = .049, *p* < .001) were positively related to ad sharing intention. The more consumers felt pleasant, aroused, and dominant emotions about an ad, the more likely they would share it with others. Thus, H1 through H3 were supported. H4 through H6 predicted that the emotional responses to an ad would have positively direct effects on purchase intention. Although the direct effect of pleasure (*β* = .196, SE = .040, *p* < .001) and dominance (*β* = .100, SE = .037, *p* < .001) on purchase intention were significantly positive, the emotion of arousal was not (*β* = -.044, SE = .034, *p* = .121). Thus, H4 and H6 were supported, but H5 was rejected. As predicted in H7, higher consumer levels of ad sharing intention would lead to an increase in purchase intention (*β* =.348, SE = .031, *p* < .001). Thus, H7 was confirmed.

[Insert Figure 1 about here]

[Insert Table 2 about here]

To assess the significance of the indirect effects of emotional responses to an ad on purchase intention through ad sharing intention (H8), the bias-corrected bootstrapping (with 5,000 bootstrap samples and 95% confidence interval) was conducted (Blunch, 2013). Table 3 showed that the indirect effects of pleasure (*β* =.059, Boot SE = .015, 95% CI = [.033, .092]), arousal (*β* =.049, Boot SE = .014, 95% CI = [.025, .079]), and dominance (*β* =.066, Boot SE = .013, 95% CI = [.044, .093]) were all significantly positive. Thus, H8 was supported.

[Insert Table 3 about here]

**DISCUSSION**

The current study empirically tested the role of emotions in influencing share and purchase intentions in the context of viral advertising. The results demonstrated that increased levels of Pleasure, Arousal, and Dominance resulted in greater intention to share the video ads, and such an intention to share eventually triggered greater intention to purchase the products featured in the ads. The following section discusses the theoretical and practical implications of the study results and provides some directions for future research.

**Theoretical Implications**

The findings of the present research contribute to the advertising literature in several ways. First, building upon the emotion contagion literature, our study replicates and confirms the positive effects of Pleasure and Arousal on viral advertising that have been identified in previous research (Eckler and Bolls 2011; Berger and Milkman 2012). In our results, when the video ads generated more positive feelings (i.e., increase of Pleasure), consumers exhibited greater intention to share. Consistent with the notion that people share content to inform or entertain others, or to boost their moods, content with positive valence is more viral. As suggested in prior studies, people may tend to forward positive information online to achieve positive self-presentation and image-building (Berger 2013, 2014). Similarly, a highly arousing video ad also leads to greater share intention, revealing that Arousal, independent of Pleasure, also drives virality. Emotional arousal tends to promote share intention because the sharing behavior itself denotes a sense-making process of the emotional experience and the intensity of such emotional experience facilitates the in-group relationships between the sender and the receiver (Rimé, 2009; Bashir et al. 2018). In addition, Berger and Milkman (2012) have suggested that high-arousal content may be perceived as more valuable to share compared to low-arousal content.

Further, the current research incorporates a third dimension of emotions (i.e., Dominance) to the transmission model of viral advertising, which has not been examined in the existing literature. Over the years, researchers have lost some interest in this particular dimension. The loss of interest stems from two major reasons. First, it attributes to the lesser robustness of Dominance as a dimension of emotion and its high association with Pleasure in some studies of emotional stimuli (Bradley and Lang 1994). Second, some empirical investigations failed to identify the effects of Dominance on behavior (Yani-de-Soriano, Foxall, and Newman 2013). However, the authors believe that the lack of independence from the other two dimensions may have been merely an artifact of limited stimulus sets in many studies. The stimuli used in previous studies didn’t show a large variation in the third dimension, which is considered as more abstract and underlying (Mehrabian 1995). More importantly, Dominance is highly related to the approach tendency and therefore is likely to influence behaviors more directly. Many emotions studies have placed a great emphasis on attitudinal responses rather than actual behaviors, which may limit the impacts of Dominance as well. When it comes to the study of viral advertising, the effects of Dominance emerged as the strongest predictor among the three dimensions to explain the outcomes of share intention. Specifically, when the viral videos elicit the feeling of control and induce the sense of empowerment, such videos are more likely to be shared. There are a lot of real-life examples that could be used to validate such findings, like the Real Beauty campaign by Dove, the Like a Girl campaign by Always, and the recent Dream Crazier campaign by Nike. These viral campaigns emphasize the idea of empowerment and are deemed meaningful to consumers, driving the success and virality of the campaign. By adopting the PAD model to analyze the role of emotions in viral advertising, this study intends to provide a more parsimonious model compared to analyzing the effects of a larger set of discrete emotions, but also a more robust model compared to only focusing on the dimension of valence or arousal.

More importantly, the present study extends the viral advertising literature by including purchase intention as a key outcome variable in the proposed model. In our results, Pleasure and Dominance both exerted a positive direct effect on purchase intention and a positive indirect effect through share intention. For Arousal, only positive indirect effect was significant but not the direct effect. In other words, increased Arousal may not necessarily result in greater purchase intention unless the Arousal was able to trigger intention to share. This is an interesting finding especially when Berger and Milkman (2012) have conducted a series of experiments to confirm the important role of arousal in share intention. By integrating purchase intention as an effectiveness measure of viral advertising, the current study better elucidate the relationship between emotions and share intention and underscore the key mediating role of share intention.

In addition, our results acknowledged that the effectiveness of viral advertising may require a long-term effort in consumer-brand relationship building. Two control variables (i.e., pre-existing brand attitude and prior exposure) exerted significant impacts on both share and purchase intentions. Future research on viral advertising should not ignore the effects of such predispositional and situational factors.

# **Practical Implications**

This research has several important practical implications. First, this study shows that PAD scales can be used for copy testing to select the best ad creative to maximize the number of ad sharing. Although attention, affect, memory, and desirability have been mostly used for copy testing (Venkatraman et al., 2015), the shareability should also be considered as an important criterion for ad selection in the digital age (Yuki, 2015). Especially, ad practitioners could use the PAD’s coefficients for the ad sharing intention in this study as the weights to predict the ad shareability. Second, the current research found that ad sharing intention could increase the possibility of purchase. This mean that increasing the likelihood of ad sharing is not only a way to maximize the advertising exposure effect, it can also be a means of sales increase. Therefore, the number of ad sharing should be considered as one of the critical advertising goals for improving sales. Third, the results of this study also show that the more frequently consumers are exposed to the ad and the more positive the consumers’ attitudes toward the brand are, the more likely the ad will be shared. To increase the possibility of ad sharing, companies should make efforts to increase consumers' exposures to the ad and build brand equity.

# **Limitations and Future Study**

The current study has several limitations. First, this study forced respondents to watch the ad stimuli from beginning to end without skipping. Therefore, the results has less external validity in regard to the real life situations where individuals tend to skip through the ad and the effects of PAD may be lessened. Second, the influence of PAD on ad sharing intention may vary depending on the product category. Because the stimuli in this study were selected from popular video ads on YouTube, we cannot exclude the possibility that those selected stimuli may have been biased to some product categories such as digital devices and contents. In order to generalize the results of this study, it is necessary to conduct repeated studies across various product categories. Third, studies on advertising strategies that make consumers feel dominant are also necessary. Although this study found that Dominance was the most powerful emotion that causes ad sharing intention, it is still unclear what advertising message strategy causes consumers to feel dominant emotions and why. Therefore, such results call for future research to further examine the antecedents and consequences of Dominance.

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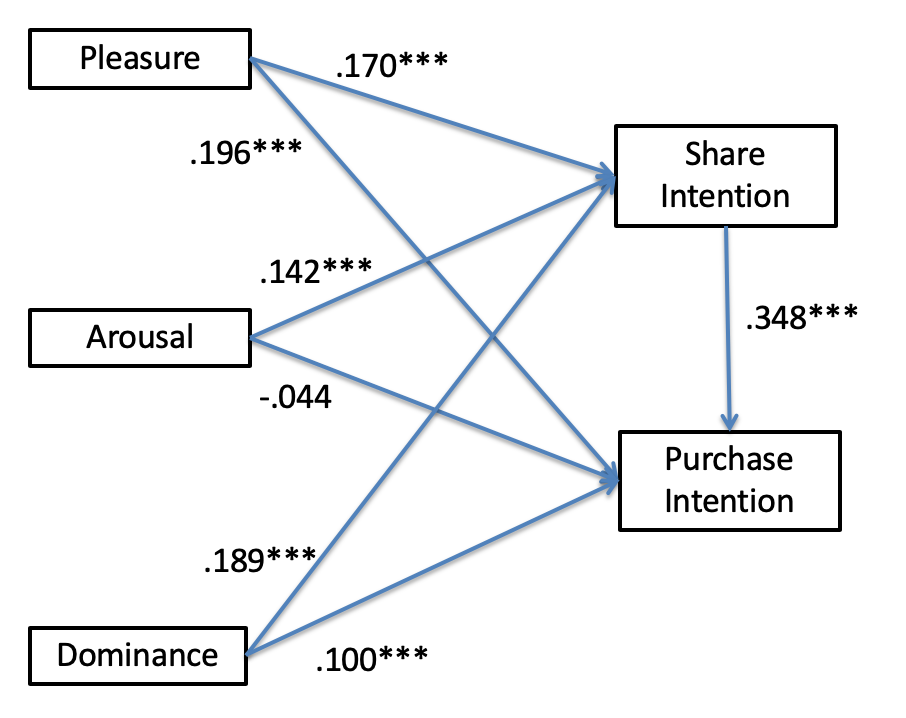
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**Table 1. Measures, Factor Loadings, and Reliabilities.**

|  |  |  |
| --- | --- | --- |
| Factors | Indicators | Standardized Factor Loadings |
| Pleasure  (M = 6.24, SD =2.11) | The AdSAM manikin | - |
| Arousal  (M = 4.55, SD =2.28) | The AdSAM manikin | - |
| Dominance  (M = 5.97, SD =1.87) | The AdSAM manikin | - |
| Product Involvement  (M = 5.77, SD =2.53, r = .816) | Important | .979\*\*\* |
| Relevant | .833\*\*\* |
| Brand Attitude  (M = 6.69, SD =2.04, α = .962) | Favorable | .950\*\*\* |
| Good | .935\*\*\* |
| Likable | .951\*\*\* |
| Ad Exposure Experience  (M = 5.97, SD =1.87) | How many times have you seen this advertisement before? | - |
| Sharing Intention  (M = 4.68, SD =2.92, α = .981) | I plan to pass along this online video ad | .971\*\*\* |
| I will make an effort to pass along this online video ad. | .965\*\*\* |
| I intend to pass along this online video ad. | .981\*\*\* |
| Purchase Intention  (M = 5.68, SD =2.69, r = .911) | I am likely to try this product. | .942\*\*\* |
| I am likely to buy this product. | .967\*\*\* |

**Figure 1. Tested Structural Model.**



Note: \*\*\* indicates p < .001. All coefficients are standardized.

**Table 2. Results of the Structural Equation Model.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Predictors | B | S.E. | *β* |
| Sharing Intention | Pleasure | 0.260 | 0.053 | 0.170\*\*\* |
| Arousal | 0.201 | 0.046 | 0.142\*\*\* |
| Dominance | 0.326 | 0.049 | 0.189\*\*\* |
| Prior Exp | 0.645 | 0.033 | 0.628\*\*\* |
| Brand Attitude | 0.205 | 0.046 | 0.137\*\*\* |
| Product Involve | 0.022 | 0.032 | 0.019 |
| Purchase Intention | Pleasure | 0.255 | 0.040 | 0.196\*\*\* |
| Arousal | -0.053 | 0.034 | -0.044 |
| Dominance | 0.147 | 0.037 | 0.100\*\*\* |
| Sharing Intention | 0.296 | 0.031 | 0.348\*\*\* |
| Prior Exp | 0.144 | 0.033 | 0.164\*\*\* |
| Brand Attitude | 0.482 | 0.034 | 0.379\*\*\* |
| Product Involve | 0.099 | 0.024 | 0.101\*\*\* |

Note: \*p.<.05, \*\*p<.01, \*\*\*p<.001

χ2 (53) = 193.93, p = .311; RMSEA = .056; CFI =.988; GFI =.969; TLI = .979; SRMR = .012

**Table 3. Mediating Effect of Ad Sharing Intention.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Standardized  Indirect Effect Size | Boot SE | 95% CI |
| Pleasure on Purchase Intent | .059 | .015 | [.033, .092] |
| Arousal on Purchase Intent | .049 | .014 | [.025, .079] |
| Dominance on Purchase Intent | .066 | .013 | [.044, .093] |