AN ELABORATION LIKELIHOOD MODEL OF FACEBOOK ADVERTISING EFFECTIVENESS: SELF-MONITORING AS A MODERATOR

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ABSTRACT

Based on the elaboration likelihood model, the current study aims to examine whether self-monitoring influence the persuasiveness of Facebook advertising. This study conducted two experimental studies, and used two different claims of advertising stimuli in an experimental setting to explore the relationship between users and advertising. The results of this study provided evidence that high (low) self-monitors become more likely to engage in peripheral (central) route processes, and then displayed more positive advertising attitude and purchase intention with image-oriented (product-oriented) Facebook advertising. This paper provides a review of the major perspectives in the concept of ELM, and self-monitoring plays a role as a moderator in Facebook advertising. Theoretical and managerial implications were discussed regarding the strategic contextual and persuasion of Facebook advertising. The findings can also provide insights that could improve advertisers' plan to perform social media marketing.

Keywords: Elaboration likelihood model; Self-monitoring; Facebook; Advertising attitude; Purchase intention

1. Introduction

Social media (such as Facebook, Pinterest, Twitter) has rapidly changed the contemporary marketing approach (Luarn et al., 2016; Wirtz et al., 2017; Yoon, 2012). It has built the relationship between consumers and marketers, and created new opportunities to increase consumers' brand awareness (Hansen et al., 2014; Luarn et al., 2015). In fact, with over 2.7 billion monthly active users of 2020, Facebook is the biggest social network worldwide (statista, 2021). Numerous researchers have known Facebook potential for discussing communication behaviors and have investigated the relationship between social media and impression formation (Liu et al., 2018; Luarn et al., 2014). Unlike traditional anonymous sites, Facebook offers their users publicity, visibility, and accessibility to others, and has partially replaced actual social connections. Interactions are published on users' News Feed on Facebook (via their EdgeRank algorithm), such as liking, commenting, and sharing, which enables them to directly or indirectly influence other users in their networks (Chiu, 2021; Kapitan & Silvera, 2016; Luarn & Chiu, 2016). The News Feed contains varied information ranging from friends' stories to commercial messages, and it represents the breadth of user's social relationships (Luarn et al., 2018).

About half of all digital display ad revenue goes to Facebook, Google (PRC, 2020). According to Rizavi et al. (2011) and Liu & Lopez (2016), social media acts as a practical platform for advertising that attracts millions of users from different countries, speaking multiple languages, and belonging to different demographics (Leong et al., 2018). In the third quarter of 2020, Facebook's total advertising revenue amounted to 21.22 billion U.S. dollars (statista, 2021a). Facebook advertising also offers users the opportunity to interact actively with the adverts on their page allowing them to "like" and "share" and also view who else or which friends liked or shared the same adverts (Dehghani & Tumer, 2015; Martínez-Navarro & Bigné, 2017), which is known as "friendvertising". Accordingly, new opportunities arise to build unique brand awareness and viral advertising platforms (Voorveld et al., 2018). However, the mechanism also makes that only a small percentage of average fans demonstrate any engagement with their advertising by liking, sharing, or commenting on such contents (Lee et al., 2018). Advertisers would like to see how that exposure may lead to impression changes and behavioral responses. It might be worth noting that the reason for increasing the effectiveness of Facebook advertising, and this is also the main motivation of this study.

This study draws upon the elaboration likelihood model (ELM) (Petty & Cacioppo, 1984) of persuasion to examine the effectiveness of Facebook advertising through the use of information-relevant cues and peripheral cues. ELM is a suitable basis for modeling the factors that affect users' elaborations of persuasive items on general attitude (Hansen et al., 2014; Wan & Ren, 2017). Following ELM, individuals who obtain the information have different capabilities and motivations to elaborate the argument that will later determine how a given influence process will

form their attitude (Chang et al., 2020; Crano & Prislin, 2006). For example, when users are able and motivated to evaluate the ads, they are more likely to be high on the elaboration continuum. Message recipients who take the central routes will critically process the information, so function-oriented advertising which focus on the intrinsic merits (e.g., quality) and functional value of the product will tend to change users' attitude. According to previous studies, function-oriented advertising often provides information on the tangible (i.e., size, weight, material composition, and price) and intangible product-related attributes (i.e., quality and reliability) (Berens et al., 2005).

On the other hand, those with poorer elaboration likelihood tend to assess the modification in attitude on peripheral cues including source credibility (Wang et al., 2015; Zhu et al., 2014). Individuals who take the peripheral routes to persuasion will require less cognitive efforts in attitude formation (Petty et al., 2015; Yoon, 2012). Altered user attitude is speculated based on extrinsic product cues. When they are image-oriented, emphasizing the image of the product and its use, the ads concern a beer's exotic origins or the lifestyle of the type of person who consumes it (Peracchio & Meyers-Levy, 1994). It is in the way that elaboration represents the differentiation factor between the central and peripheral routes.

According to previous studies, Chen et al. (2015) indicated that both central and peripheral route factors significantly impact users' like and share intention. However, many users concerned with what content and advertising they can post and comment on to maintain their self-images and visible social approval (Shen et al., 2016; Wang et al., 2016). One of the most investigated personal traits related to self-images is self-monitoring (Kim et al., 2017). For instance, individuals with high self-monitoring are characterized as users who behave strategically to acquire desired results by adjusting their public presentations. By comparison, low self-monitors express themselves with authentic attitudes, values, and beliefs. Being particularly concerned with the social and situational rightness of their action, high self-monitors are more likely to engage in social comparison, especially in social media (Hall & Pennington, 2013; Liu et al., 2017).

In fact, like in all social contexts, self-construction is particularly strategic and deliberate on Facebook because such contextual differences influence users' views and acceptance of Facebook advertising, which is more different than traditional advertising (Kim et al., 2017; Voorveld et al., 2018). This study attempts to identify the level of self-monitoring that influences advertising attitude and purchase intention with Facebook advertising. Specifically, we investigate how self-monitoring moderates the interaction effect between the elaboration abilities and routes on ad processing. That is, when self-monitoring is high, they are more involved in social cues from other users, so they process the Facebook advertising through peripheral routes and focus on image-oriented advertising. When self-monitoring is low, they process the Facebook advertising through central routes and focus on function-oriented perspective.

In sum, relatively little has been explored systematically about the empirical consequences of Facebook advertising in real-world. Based on the ELM and self-monitoring framework, this study employed two experiments to collect data and adopted the regression models to test the hypotheses, and then provide a fully satisfactory explanation. Consistent with ELM, the process route is expected to be contingent upon their self-monitoring on the elaboration likelihood continuum. The finding showed that even though technologies continuously change and alter the ways in which individuals communicate, traditional theoretical approaches can still aid in the exploration of new communication contexts. This study contributed to the ways in which self-monitoring influences how individuals process persuasive messages displayed on Facebook advertising. That is, advertisers must match the self-monitoring level of users with the appropriate advertising claims to attract more clicks and improve the persuasive effectiveness. The remainder presents the theoretical background, the research method, the results, and the discussion.

2. Theoretical Background and Conceptualization

2.1. Facebook Advertising and Advertising Claims

Facebook has influenced the way users socialize and disseminate information, and has transformed interactions between consumers and companies (Swani & Milne, 2017). In addition to attracting user's attention and meeting their needs, advertisers begin to investigate the usage and efficiency of social media to improve their marketing strategies (Aghakhani et al., 2018). According to previous studies, Facebook provides a wide platform for viral online recommendations (Hajli et al., 2017). The mechanism encourages advertisers spending a reasonable budget on analyzing procedures to identify potential customers and target them with advertising (Dehghani & Tumer, 2015; Luarn et al., 2015). Unlike other forms of online advertising, Facebook advertising looks similar to regular posts, with the exception that they include the label "Sponsored" (Kruikemeier et al., 2016). Facebook advertising includes sponsored posts (boosting posts and promoting pages), pay-per-click ads, click-to-site ads, carousel ads, social plugins or applications, and sponsored stories. Advertisers can set the advertising's appearance based on sex, age, keyword, relationship status, job title, workplace, or college, and then makes Facebook advertising more prevalent, easily noticed, and highly tailored to the target audience (Wiese et al., 2020).

According to previous study, Lee et al. (2018) suggested that firms aggressively acquired followers on Facebook by investing in paid ads that increased the reach of their messages on the platform. When user interacts with the advertising content (no matter clicks like button or posts comment), the Facebook EdgeRank algorithm will repost this specific advertising content to their friends' News Feed (Wiese et al., 2020). User's responses are likely to help disseminating the advertising message, because of the mechanism that not only "exposed fans" but also "friends of fans" will see the advertising, contributing to the increased brand awareness on Facebook (Han et al., 2015). Specifically, successful Facebook advertising is adopted by users. Effective advertising that stimulates user created word-of-mouth effect and results in greater sales in social media advertising campaigns (Voorveld et al., 2018). They increase value by sharing it and producing original or derivative content that distributes through peer-to-peer interaction (Zhang & Peng, 2015).

In fact, to attract Facebook users' attention and solve the various needs, advertisers must investigate the use and efficiency of advertising to improve their marketing strategies (Duffett, 2015b). Although advertising strategies vary widely, one of the basic ways is to highlight the particular elements of the product being advertised. That is, advertising content and claims are also relatively underemphasized in economic theory. For example, function-oriented advertising, which underlines the utilitarian value and attempts to persuade us that it performs the way a product of its type should (DeBono, 2006), primarily showcasing the product itself. Such advertising often provides information on the tangible (i.e., size, weight, material composition, and price) and intangible product-related attributes (i.e., quality and reliability) (Berens et al., 2005). Function-oriented ads are less likely to rely on feeling-oriented and emotional messages, but more concerned with an accurate reflection of their values tend to favor search attributes, brand, price, and product availability information appeals (Septianto & Pratiwi, 2016). If the advertising includes more relevant, comprehensive, and detailed information about the specific condition of the product, users will be more confident about the quality of the content and will tend to change their attitude toward the ads.

Alternatively, some advertising symbolic products where benefits are sought in the extrinsic and imagery nature, so-called image-oriented advertising focus on the image related to use or possess the product (DeBono, 2006; Tsao, 2014). Image-oriented appeal incorporates images that allow individuals to perceive that a given product has the potential to be used to enhance their image in society. As image-oriented ads normally convey emotional messages, these advertising portray the kind of person we could be if we owned that particular product, or the kind of reaction we could elicit from others if they know we possessed the product (Septianto & Pratiwi, 2016). In this paper, we explore the role of advertising claims in driving user attitude and behavior on Facebook advertising.

2.2. Elaboration Likelihood Model

The elaboration likelihood model (ELM) provides a theoretical model for understanding the process that drives attitude change, or the extent to which one's evaluation of a given target is modified from one value to another (Cacioppo & Petty, 1984; Petty & Cacioppo, 1984). In fact, ELM posits that one's overall evaluation of a given target may be influenced by central and peripheral routes (Petty et al., 2015). Determination of which one to choose when processing information is based on user's elaboration pathway (Crano & Prislin, 2006; Wan & Ren, 2017). For example, through the central route, individuals form evaluations by engaging in a critical thought process regarding issue-relevant information, which refers to all credible, key evidence directly relating to the merit of the focal topic being communicated (Petty et al., 1997; Yoon, 2012). Via the peripheral route, individuals engage in a less effortful evaluation of the communicated message and tent to form evaluations by relying on peripheral cues (Petty & Cacioppo, 1984; Zhu et al., 2014).

According to previous studies, individuals with high abilities and motivations will have higher tendencies to engage in cautious scrutinizing of the related information and tend to be persuaded by argument quality. That is, recipients of higher elaboration likelihood tend to participate in thoughtful information processing, and subsequently their thoughts will be greatly influenced by the quality of the argument. They decide whether to accept the message after rationally thinking through the message that is trying to persuade them (Hansen et al., 2014). For example, the issue-relevant information include evidence regarding the specific benefits and costs of the product, or evidence regarding the product's quality (Chang et al., 2020; Darley & Smith, 1993). Therefore, individuals are more likely to apply central route information processing and are more willing to elaborate on ads content carefully to obtain additional product information (Wang et al., 2015). At this time, when they see the function-oriented advertising, they will be applying the central route to process and elaborate advertising content, and further their ads attitude will be higher.

Conversely, individuals with less capabilities and motivations will have fewer tendencies to be driven by peripheral cues. According to ELM, peripheral cues are the remaining elements of the message, which often serve to create the message setting (Petty et al., 1997). They would not elaborate on the functional attribute of the product and evaluate credibility of the source (Hansen et al., 2014). For example, when they see the advertising, they may process cues such as the tone or language used, the background music, or simply the count of arguments being made in support

the product being pitched (Crano & Prislin, 2006; Wang et al., 2015). Therefore, image-oriented advertising may significantly impact users' like and share intention. If advertisers can provide image-oriented content to users, their willingness to accept the advertising will be enhanced.

However, many users are concerned with what content and advertising they can post and comment on Facebook to maintain their self-images and visible social approval (Shen et al., 2016; Wang et al., 2016). According to previous studies, these advertising claims are effective because they appeal in different ways to individuals with a range of self-monitoring propensities (DeBono, 2006; Liu et al., 2017). Based on this perspective, self-monitoring is proposed as moderator to test the strength of its influence on advertising attitudes and purchase intention.

2.3. Self-Monitoring

According to previous studies, the compose of self-monitoring is critical for understanding how individuals handle and assess marketing communications such as advertising. Self-monitoring refers to a capability of individuals to adjust the presentation of their identity to others (Abell & Brewer, 2014). Individuals high in self-monitoring are astute at scanning their environments and are more likely to be worried about social adaptability to meet specific interpersonal relationships (Hall & Pennington, 2013). They are considerate to what others do and talk, and are proficient at controlling images of themselves, which makes them more adapting to the social situations (Abell & Brewer, 2014). Therefore, high self-monitors are more influenced by social norms, so they are especially aroused to present themselves that foster status and demonstrate social traits to win approval from others (Rosenberg & Egbert, 2011). As Turnley & Bolino (2001) mentioned, the feature of high self-monitors is avoiding face-threats to the party involving a greater repertoire of social roles and scripts.

In fact, when users reply to or click the like button toward Facebook advertising, Facebook's algorithm will repost this result to their friends' News Feed (Kim et al., 2016; Wang et al., 2016). This mechanism encourages high self-monitors to spend more time processing the information to appear more popular and socially attractive on Facebook (Liu et al., 2017). Under ELM, motivation is typically operationalized as the extent to which an individual perceives the message's focal topic as personally relevant or important. However, the extent to which one views the topic is highly individualistic and context (Petty et al., 1997). That is, this study suggests that although individuals high in self-monitoring may be more willing to elaborate on ads, they are more likely to engage in peripheral route processes. Specifically, this paper suggests that when high self-monitors are exposed to Facebook ads, they are likely to treat the advertising focuses on the potential images associated with the brand, and then exhibit more favorable advertising attitude and purchase intention toward image-oriented advertising. Accordingly, the following hypotheses are advanced:

H1a: *Individual with high self-monitoring displays a more positive attitude toward Facebook advertising that are image-oriented rather than function-oriented.*

H1b: *Individual with high self-monitoring displays a more purchase* intention *toward Facebook advertising that are image-oriented rather than function-oriented.*

On the other hand, individuals in low self-monitoring are less sensitive to the social environment cues, and are therefore less talented at assessing suitable behaviors and self-presentation in various circumstances (Hall & Pennington, 2013). Low self-monitors intend to have a limited repertoire of self-regulatory ability and choose actions and words in the light of their intentions (DeBono, 2006; Leary & Kowalski, 1990). Moreover, consistency is crucial to the self-presentation of low self-monitors with truthful feelings, attitudes, and values (Hall & Pennington, 2012).

Alternatively, low self-monitors are driven by internal cues (such as dispositions); therefore, they are more likely to be persuaded using advertising that attests to a product's performance (Kim et al., 2017). Although Facebook's mechanism reposts the user's favorite posts or advertising to their friends' pages, low self-monitors do not like to spend their time filtering their engagement with Facebook (Hall & Pennington, 2013; Kim et al., 2017). That is, when users exhibit low self-monitoring behavior on Facebook, the likelihood of cognitive decision based on central route processes. This suggests that low self-monitors demonstrate more positive attitude toward brand and associated advertising when the brand is advertised from a function-oriented perspective rather than an image-oriented perspective. Thus, the following hypotheses are proposed:

H2a: *Individual with low self-monitoring displays a more* positive *attitude toward Facebook advertising that are function-oriented rather than image-oriented.*

H2b: *Individual with low self-monitoring displays a more* purchase *intention toward Facebook advertising that are function-oriented rather than image-oriented.*

3. Study 1

This research was composed of two studies. First study examined individuals' self-monitoring levels (high vs. low self-monitoring) under laboratory experiment conditions, and then randomly assigned them to one of two advertising conditions (function-oriented vs. image-oriented advertising) to investigate how their personal traits

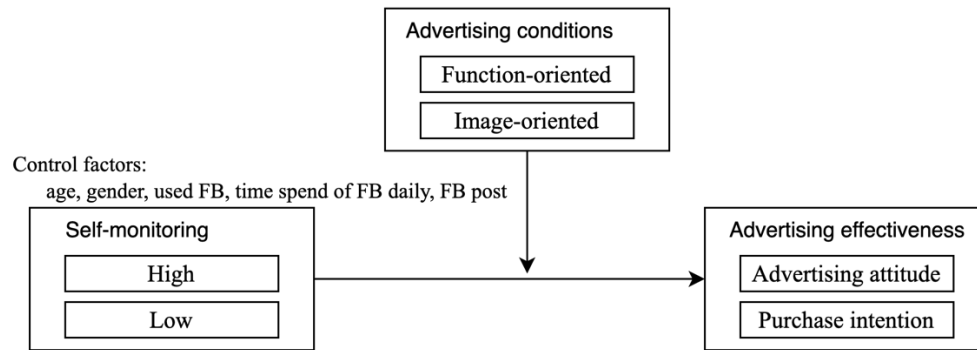affected the persuasiveness of Facebook advertising. (see Figure 1)

Figure 1: Research Model

3.1. Participants

Study 1 recruited 287 participants (43.2% male, 56.8% female) to join the experiment and excluded 9 invalid samples. The mean age was 23.84 years (SD=4.80). These participants had used Facebook for a long time (M=6.68 years, SD=3.38), time spent of Facebook more than one hour a day (M=2.17 hours, SD=1.27), and more than one post a day (M=3.28 posts, SD=1.80).

3.2. Procedure

Because we need participants to use their own Facebook accounts as they normally would, by posting text updates and photos or browsing through and liking the videos of friends, after they entered the laboratory, they were asked to log into their Facebook accounts and spend 10 minutes using it. After these participants completed the self-monitoring scale survey, they were randomly presented with one of two Facebook advertising situations (either function-oriented or image-oriented advertising) manipulated by this study, followed by a series of questions about their advertising attitudes and purchase intention. The procedure was completed in approximately 30 minutes.

3.3. Materials and Pilot Test

Advertising product. According to statista (2020), the most effective advertising format on Facebook is single image ad (24% share of respondents), so this study also used this advertising type as the experiment material. The product must reflect either image-enhancing or function-oriented (Abell & Brewer, 2014); therefore, this study selected the multiple-function product jeans (as the same experimental product as Peracchio & Meyers-Levy (1994) study) for Facebook advertising. For each product, the pictorial content of the advertising was the same one, and the layout depicted clothing appropriate for both men and women. The difference was the single verbal claim associated with the image.

Manipulating the advertising claims. Because the image claims underlined expressiveness and social approval, viewers might perceive if they use the product that could help improve their status. The image-oriented advertising alluded to an image that could be gained or achieved through use of the product (DeBono, 2006). For example, "G-ZTAR (jeans): it's reminiscent of a seductive journey to a land with strong beams of sunshine.", as the same ad claims from Peracchio & Meyers-Levy (1994). On the other hand, the product claims focused on intrinsic product attributes, such as comfort and durability, and underlined information more directly about the product itself (Bearden et al., 1989). Therefore, the advertising focused more on the product itself and gave the audience some information about the product's content and quality. For example, for the function-oriented version, the following statement was used: "G-ZTAR (jeans): a comfortable fitting, five-pocket pair of jeans with extra stitching for durability."

Three advertising sets (a total of six advertising with image or quality statements) were created. One set was selected based on the results of the pilot test. A total of 60 subjects were asked the extent to which the advertising was related to the product itself or to the brand image. A semantic differential scale with 7-point was used (product features/general brand image, product quality/product image, focusing on the quality of the image of the brand/focusing on the image of the brand) (α=0.78).

3.4. Measures

The survey consisted of three measures: self-monitoring, advertising attitude, purchase intention. In addition to these measures, participants were also asked to provide basic demographic information along with information related to the Facebook use.

Self-monitoring. The scale was mainly adapted from Snyder & Gangestad (1986) (e.g., "I guess I put on a show

to impress or entertain people.", "I am not particular good at making other people like me."…), and was employed to measure this construct using fourteen 7-point Likert scale that ranged from strongly disagree to strongly agree (α=0.81).

Attitude toward the advertising. Advertising attitude was measured using the scale developed by Taylor et al. (2011) and Lee & Aaker (2004). The participants responded to the statement "I feel (this ad) is…" by using seven 7-point semantic differential items (anchored by good/bad, positive/negative, favorable/unfavorable, helpful/not helpful, persuasive/not persuasive, believable/unbelievable and credible/not credible) (α=0.84).

Purchase intention. The nine-item scale (not very likely/very likely, very improbable/very probable, very impossible/very possible, very nonexistent/very existent,…) was mainly adapted from Duffett (2015a), and was employed to measure this construct using a 7-point Likert scale that ranged from strongly disagree to strongly agree (α=0.86).

3.5. Results

The current research predicted the moderating role of self-monitoring that individuals with high (low) self-monitoring displays a more positive attitude toward Facebook image-oriented (function-oriented) advertising. The data used for this study was gathered based on the self-reported perceptions of the respondents. Regression models were constructed to predict whether control variables (age, gender, how long to use Facebook, time spent on FB daily per day, FB post per day) and certain variables were significant in affecting the Facebook advertising. As seen in Table 1, the results yielded adjusted R^2 value of 0.49. For this regression model 1, factors considered to be significant predictors in advertising attitude were Facebook post per day (t = *3.32, p <. 01*), product claims (t = *-2.39, p < .01*) and social monitoring (t = *16.16, p < .01*). That is, participants with high (low) self-monitoring displayed a more positive attitude toward the image-oriented (function-oriented) advertising than toward the function-oriented (image-oriented) advertising (*F = 39.70, p <. 001*). The results thus supported H1a and H2a. (see Table 1)

H1b (H2b) predicted that high (low) self-monitors would display a more purchase intention toward an image-oriented (function-oriented) rather than function-oriented (image-oriented) advertising. The results yielded adjusted R^2 value of 0.44. For this regression model 2, factors considered to be significant predictors in purchase intention were product claims (t = *-2.58, p < .01*) and social monitoring (t = *14.74, p < .01*). That is, participants with high (low) self-monitoring displayed a more purchase intention toward the image-oriented (function-oriented) advertising than toward the function-oriented (image-oriented) advertising (*F = 31.83, p < .001*). The results thus supported H1b and H2b. (see Table 2)

Table 1: Regression Predicting the Advertising Attitude from Control Factors, Product Claims and Social Monitoring

Independent variables	Coefficients stand.			Linearity statistics					
	β	t	p	Tolerance	VIF	R	R^2	$\triangle R^2$	Durbin-Watson
Constant		5.43	.01*			.71	.51	.49	.46
age	-.05	1.33	.18	.95	1.04				
gender	.01	.11	.91	.95	1.04				
used FB	.00	.00	.99	.98	1.02				
Time spent of FB daily	-.00	-.06	.94	.98	1.01				
FB post	.14	3.32	.01*	.95	1.04				
Product claims	-.10	-2.39	.01*	.92	1.08				
Social monitoring	.71	16.16	.01*	.95	1.04				

Note: F=39.70, p<.001; *p < .01

Table 2: Regression Predicting the Purchase Intention from Control Factors, Product Claims and Social Monitoring

Independent variables	Coefficients stand.			Linearity statistics					
	β	t	p	Tolerance	VIF	R	R^2	$\triangle R^2$	Durbin-Watson
Constant		4.93	.01*			.67	.45	.44	1.13
age	-.06	-1.33	.18	.95	1.04				
gender	.04	.93	.35	.95	1.04				
used FB	-.03	-.69	.48	.98	1.02				
Time spent of FB daily	.01	.02	.98	.98	1.01				
FB post	.07	1.64	.10	.95	1.04				

Product claims	-.12	-2.58	.01*	.92	1.08
Social monitoring	.67	14.74	.01*	.95	1.04

Note: F=31.83, p<.001; *p < .01

4. Study 2

Study 2 posted the two types of advertising on the real platform (Facebook); whenever an individual clicked the like button on advertising, we invited them to participate in this study. If they are willing to join the study, they will send an online questionnaire to examine their self-monitoring levels, advertising attitudes, and purchase intention. That is, we do not recognize their level of self-monitoring before they finish the questionnaire.

4.1. Participants

A total of 5,317 users clicked the "like" button on two real Facebook advertising ($n_{image-oriented}$ = 2438, 45.9%; $n_{function-oriented}$ = 2879, 54.1%), this study asked them to complete the research questionnaire by Facebook message. A total of 214 users (37.2% male, 62.8% female; $n_{image-oriented}$ = 88; $n_{function-oriented}$ = 116) responded to the request, and completed the questionnaire. Participants' mean age were 23.96 years (SD = 4.72), they had used Facebook for a long time (M = 6.91 years, SD = 3.08), time spent of Facebook more than one hour a day (M = 2.26 hours, SD = 1.36), and more than one post a day (M = 2.89 posts, SD = 1.37). Based on their demographic and behavioral data, this study confirmed that respondents did not demonstrate significant differences on their social media behavior.

4.2. Procedure

To obtain a more representative sample, this study employed a social network approach by posting two types of advertising (the same material as in Study 1) on Facebook for one week. After Facebook users clicked the like button on these advertising, they were provided further given instructions and invited to participate in this study. Those who accepted the invitation were asked to complete an online questionnaire to determine their self-monitoring levels, advertising attitudes and purchase intention.

4.3. Materials

This study selected the multiple-function product jeans for advertising as the same in Study 1. For each product, the pictorial content of the advertising was the same, and the layout depicted clothing appropriate for both men and women. The difference was the single verbal claim associated with the image. For example, for the function-oriented version, the following statement was used: "G-ZTAR (jeans): a comfortable fitting, five-pocket pair of jeans with extra stitching for durability." For the image-oriented version, the following statement was used: "G-ZTAR (jeans): it's reminiscent of a seductive journey to a land with strong beams of sunshine." Three advertising sets (a total of six advertising with image or quality statements) were created.

4.4. Results

Study 2 also predicted the moderating role of self-monitoring, and examined H1 and H2 by posting realistic advertising (image-oriented vs. function-oriented) on Facebook. As expected, the results yielded adjusted R^2 value of 0.54. The results of the regression model revealed that factors considered to be significant predictors of advertising attitude included: product claims (t = -8.16, p < .001) and social monitoring (t = 13.30, p < .001). That is, with image-oriented (function-oriented) advertising, high (low) self-monitors exhibited a more positive advertising attitude than low (high) self-monitors (F = 34.72, p < .001). This effect was consistent with our expectation, which also supported H1a and H2a. (see Table 3)

Table 3: Regression Predicting the Advertising Attitude from Control Factors, Product Claims and Social Monitoring

Independent variables	Coefficients stand.			Linearity statistics					
	β	t	p	Tolerance	VIF	R	R^2	$\triangle R^2$	Durbin-Watson
Constant		9.99	.01*			.74	.55	.54	.88
age	-.05	-1.08	.27	.92	1.08				
gender	.05	1.14	.25	.95	1.04				
used FB	.01	.19	.84	.93	1.06				
Time spent of FB daily	-.01	-.28	.77	.95	1.05				
FB post	-.01	-.24	.80	.97	1.03				
Product claims	-.40	-8.16	.001**	.93	1.06				
Social monitoring	.63	13.30	.001**	.99	1.01				

Note: F=34.72, p<.001; *p < .01

Moreover, the results also yielded an adjusted R^2 value of 0.49. As seen in Table 4, the results of the regression model revealed that factors considered to be significant predictors of purchase intention included: product claims (t = *-4.65, p < .001*) and social monitoring (t = *13.54, p < .001*). That is, with image-oriented (function-oriented) advertising, high (low) self-monitors exhibited a more positive purchase intention than low (high) self-monitors (*F = 29.50, p < .001*). The results also supported H1b and H2b. In sum, advertising claims provide users with association they can easily use for the purchase decisions on Facebook. Claims may differ in the degree to which they are associated with certain goals to implement these purposes. (see Table 4)

Table 4: Regression Predicting the Purchase Intention from Control Factors, Product Claims and Social Monitoring

Independent variables	Coefficients stand.			Linearity statistics					
	β	t	p	Tolerance	VIF	R	R^2	$\triangle R^2$	Durbin-Watson
Constant		7.55	.00*			.71	.51	.49	.97
age	-.04	-.86	.38	.92	1.08				
gender	-.02	-.56	.57	.95	1.04				
used FB	-.01	-.19	.84	.93	1.06				
Time spent of FB daily	.07	1.37	.17	.95	1.05				
FB post	.07	1.45	.14	.97	1.03				
Product claims	-.32	-4.65	.001**	.93	1.06				
Social monitoring	.50	13.54	.001**	.99	1.01				

Note: F=29.50, p<.001; *p < .01, **p < .001

5. Conclusion

5.1. Discussion

Although the concept of advertising value and the factors affecting it have been widely tested for various types of advertising in several studies (Chiu et al., 2017; Hsieh et al., 2020), research on social media advertising platforms is lacking. Facebook advertising is a stimulus designed to encourage users to engage with a brand or product (Voorveld et al., 2018; Wiese et al., 2020). Especially it differs from traditional online ads because Facebook ads are designed to resemble a typical post, making it difficult for users to distinguish between ads and user-generated content (Lee et al., 2018; Sanne & Wiese, 2018; Wirtz et al., 2017). At this time, self-construction is particularly strategic and deliberate on Facebook because such contextual differences influence users' views and acceptance of advertising. The main objective of this study was to fill this research gap by using self-monitoring to investigate how Facebook users are concerned with what content and advertising they can post and comment on to maintain their self-images and visible social approval on social media.

Following ELM, individuals who obtain the information have different capabilities and motivations to elaborate the argument that will later determine how a given influence process will form their attitude (Chang et al., 2020; Crano & Prislin, 2006). This study employed two experiments to collect data and adopted the regression models to test the hypotheses. Synthesizing what we observed across both studies, the experimental results are summarized as follows. First, as we know, Facebook users can meet their personal and social needs through the platform (Chiu, 2021; Swani & Milne, 2017), and their EdgeRank algorithm makes users view who else or which friends liked or shared the same ads (Dehghani & Tumer, 2015; Martínez-Navarro & Bigné, 2017). This study released two types of advertising on Facebook, and the same results were recorded. As expected, the moderator of self-monitoring seemed to have significant effect on the persuasive process of Facebook advertising.

Second, the results highlight some of the complexities associated with more detailed models of ELM. In our experimental results, we found that when high self-monitors are exposed to Facebook ads, the effect of the peripheral route is strengthened. They are likely to exhibit a more favorable advertising attitude and purchase intention toward image-oriented advertising. It suggests that high self-monitors need to meet their social-adjustive goals, thereby interacting with image-oriented advertising that is socially appropriate (Harnish & Bridges, 2006). The results also showed that low self-monitors are likely to engage with function-oriented advertising, toward which they have a more positive advertising attitude and have a higher purchase intention.

Overall, the lack of empirical evidence based on behavioral data makes this study valuable for a wide academic (and industry) readership. This study demonstrated the importance of self-monitoring that served as moderator affecting the advertising attitudes and purchase intention of Facebook advertising. It is imperative for advertisers and brand companies to gain a more comprehensive understanding of users' psychological traits in designing advertising

campaigns.

5.2. Theoretical Implications

This study yielded several new insights for theoretical implications. First, many previous studies have used the ELM as a research framework to investigate consumer intention or changes in behavior toward online advertising and review (Hansen et al., 2014; Kim et al., 2010; Tsao, 2014). This study extended the concept of ELM, and found that the role of social media is not limited by the tool for individuals' self-presentation, but it further influenced their information processing and advertising attitude. The present study classified the persuasion of Facebook advertising as through either the central route or peripheral route and discussed which route influences users more under different conditions. The finding suggested that the moderation effect of self-monitoring was examined and proved in this study.

Second, for multiple-function products, high self-monitors were attracted to more image-oriented/ social-identity copy and less function-oriented/quality-based copy than low self-monitors, which is also consistent with previous studies (Ferguson et al., 2016; H. Y. Kim et al., 2016). The reverse was true for low self-monitors. That is because high monitors always care about self-image in others' eyes and will be more sensitive to their behaviors on social media than the low monitors. The finding of this study suggested the generalization of current knowledge on traditional advertising to social media advertising and user behavior.

Third, investigations in previous studies were conducted by asking participants to choose their favorite advertising from among various types of advertising (Chiu et al., 2017; Duffett, 2015b; Ferguson et al., 2016). This study asked participants to use their Facebook accounts for 10 mins, to create a realistic status message as they usually would. They were then asked their attitude toward specific advertising. This method can effectively reduce the chance of participants comparing these advertising directly and make the situation more realistic. Moreover, in contrast with previous research (Hall & Pennington, 2013; Yoon, 2012), study 2 posted the Facebook advertising in a realistic context and attracted the users who clicked on them. The method used in this study allowed us to obtain objective and realistic data to understand the effectiveness of Facebook advertising. In conclusion, the findings in this study may contribute to applications in future studies or to extended investigation about the persuasion of FB advertising within the ELM framework.

5.3. Practical Implications

As each social media platform offers users a unique experience, this experience carries over to the advertising placed on that platform. This study has several practical implications as well. First, as we know that using Facebook advertising as part of overall advertising strategy, to optimize Facebook advertising, they must match the self-monitoring level of users with the appropriate advertising claims to attract more clicks and improve the persuasive effectiveness. Particularly, Facebook platform can use content analysis to measure their users' self-monitoring by examining their actual pages and content over a period. This fit effect between Facebook users and persuasive content can be a guideline for social advertising planning.

Second, according to the results of the data analysis, the findings provide a guide for advertisers and marketers to design customized messages for their users and encourage them to engage with advertising. Most notably, advertisers can select more effective advertising claims based on the features of the product. For example, social products can be advertised more effectively through image-oriented advertising because they are more appealing to high self-monitors. This will help catch user's attention and lead to clicks on advertising, and further lead to the intention to purchase and spread word-of-mouth. It is hoped that the results will provide unique guidance implications to marketers on whether they might be of benefit and enhance to their own brands.

Third, advertising on Facebook needs to give users useful and specific information that they expect to find there. Advertisers using Facebook advertising to disseminate messages should perform continuous monitoring of user's responses to determine the features of their advertising. Our findings motivate advertisers to develop advertising strategies that increase users' activity and promote sustainable brand loyalty. Overall, the relationships between self-monitoring and ad claims can open the door for strategic message design, not only for guiding more persuasive advertising types, but perhaps also for suggesting more effective media plans.

5.4. Limitation and Future Research

Despite the study's findings and implications, there were some limitations to consider when interpreting these conclusions. First, different brands and products might elicit different user motivations for participation and result in distinct behavior towards the advertising. The relationship between advertising claims and self-monitoring might be constrained by the product nature on Facebook that is not investigated in this study. Understanding the motivations related with brands is crucial and requires further investigation. In addition, this study only used the most effective Facebook advertising formats (single image ads) as the experiment material. By examining with more diverse advertising types in the future, the findings can be replicated to enhance its robustness.

Second, we are aware that the number of sample sizes could not completely apply to the whole population of Facebook users. In addition, rather than asking participants about their self-monitoring level, evaluating Facebook

profiles and their posts would add more explanatory and predictive value to the research contribution. Also, further research is required to examine the entire advisor networks of high and low self-monitors to further understand the effect of social influence on decision making.

Third, this study only discussed the different content that may impact the attitude toward Facebook advertising, which has its own specific algorithm. It would be interesting to examine the advertising attitude in other social media. Future research may be able to use the same framework to see whether there is difference among other social media. Moreover, future research can measure other outcomes that are specific to social media, such as advertising clicks and conversion rates. It would be beneficial to know how advertising clicks affect online sales. These findings can help develop an overall understanding of the persuasion of social media advertising.

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REFERENCES

Abell, L., & Brewer, G. (2014). Machiavellianism, self-monitoring, self-promotion and relational aggression on Facebook. *Computers in Human Behavior*, *36*, 258-262.

Aghakhani, N., Karimi, J., & Salehan, M. (2018). A unified model for the adoption of electronic word of mouth on social network sites: Facebook as the exemplar. *International Journal of Electronic Commerce*, *22*(2), 202-231.

Bearden, W. O., Shuptrine, F. K., & Teel, J. E. (1989). Self-monitoring and reactions to image appeals and claims about product quality. *ACR North American Advances*.

Berens, G., Van Riel, C. B., & Van Bruggen, G. H. (2005). Corporate associations and consumer product responses: The moderating role of corporate brand dominance. *Journal of Marketing*, *69*(3), 35-48.

Cacioppo, J. T., & Petty, R. E. (1984). The elaboration likelihood model of persuasion. *ACR North American Advances*.

Chang, H. H., Lu, Y. Y., & Lin, S. C. (2020). An elaboration likelihood model of consumer respond action to facebook second-hand marketplace: Impulsiveness as a moderator. *Information & Management*, *57*(2), 103171.

Chen, K. J., Kim, J., & Lin, J. S. (2015). The effects of affective and cognitive elaborations from Facebook posts on consumer attitude formation. *Journal of Consumer Behaviour*, *14*(3), 208-218.

Chiu, Y. P. (2021). Social recommendations for Facebook brand pages. *Journal of Theoretical and Applied Electronic Commerce Research*, *16*(1), 71-84.

Chiu, Y. P., Lo, S. K., & Hsieh, A. Y. (2017). How colour similarity can make banner advertising effective: Insights from Gestalt theory. *Behaviour & Information Technology*, *36*(6), 606-619.

Crano, W. D., & Prislin, R. (2006). Attitudes and persuasion. *Annu. Rev. Psychol.*, *57*, 345-374.

Darley, W. K., & Smith, R. E. (1993). Advertising claim objectivity: Antecedents and effects. *Journal of Marketing*, *57*(4), 100-113.

DeBono, K. G. (2006). Self-monitoring and consumer psychology. *Journal of Personality*, *74*(3), 715-738.

Dehghani, M., & Tumer, M. (2015). A research on effectiveness of Facebook advertising on enhancing purchase intention of consumers. *Computers in Human Behavior*, *49*, 597-600.

Duffett, R. G. (2015a). Facebook advertising's influence on intention-to-purchase and purchase amongst Millennials. *Internet Research, 25*(4), 498-526.

Duffett, R. G. (2015b). The influence of Facebook advertising on cognitive attitudes amid Generation Y. *Electronic Commerce Research*, *15*(2), 243-267.

Ferguson, G., Lau, K. C., & Phau, I. (2016). Brand personality as a direct cause of brand extension success: Does self-monitoring matter? *Journal of Consumer Marketing, 33*(5), 343-353.

Hajli, N., Sims, J., Zadeh, A. H., & Richard, M. O. (2017). A social commerce investigation of the role of trust in a social networking site on purchase intentions. *Journal of Business Research*, *71*, 133-141.

Hall, J. A., & Pennington, N. (2012). What you can really know about someone from their Facebook profile. *Social networking and Impression management: Self-presentation in the digital age* (p. 247).

Hall, J. A., & Pennington, N. (2013). Self-monitoring, honesty, and cue use on Facebook: The relationship with user extraversion and conscientiousness. *Computers in Human Behavior*, *29*(4), 1556-1564.

Han, X., Wang, L., Crespi, N., Park, S., & Cuevas, Á. (2015). Alike people, alike interests? Inferring interest similarity in online social networks. *Decision Support Systems*, *69*, 92-106.

Hansen, S. S., Lee, J. K., & Lee, S. Y. (2014). Consumer-generated ads on YouTube: Impacts of source credibility and need for cognition on attitudes, interactive behaviors, and eWOM. *Journal of Electronic Commerce Research*, *15*(3), 254.

Harnish, R. J., & Bridges, K. R. (2006). Social influence: The role of self-monitoring when making social comparisons. *Psychology & Marketing*, *23*(11), 961-973.

Hsieh, A. Y., Lo, S. K., Chiu, Y. P., & Lie, T. (2020). Do not allow pop-up ads to appear too early: Internet users' browsing behaviour to pop-up ads. *Behaviour & Information Technology*, 1-10.

Kapitan, S., & Silvera, D. H. (2016). From digital media influencers to celebrity endorsers: Attributions drive endorser effectiveness. *Marketing Letters*, *27*(3), 553-567.

Kim, D. H., Seely, N. K., & Jung, J. H. (2017). Do you prefer, Pinterest or Instagram? The role of image-sharing SNSs and self-monitoring in enhancing ad effectiveness. *Computers in Human Behavior*, *70*, 535-543.

Kim, D. H., Sung, Y. H., Lee, S. Y., Choi, D., & Sung, Y. (2016). Are you on Timeline or News Feed? The roles of Facebook pages and construal level in increasing ad effectiveness. *Computers in Human Behavior*, *57*, 312-320.

Kim, H. Y., Kim, B., Kim, J., Shin, H., & Kim, J. (2016). Impact of immediacy and self-monitoring on positive emotion and sense of community of user: Focusing on social interactive video platform. *Science of Emotion and Sensibility*, *19*(2), 3-18.

Kim, J. U., Kim, W. J., & Park, S. C. (2010). Consumer perceptions on web advertisements and motivation factors to purchase in the online shopping. *Computers in Human Behavior*, *26*(5), 1208-1222.

Kruikemeier, S., van Noort, G., Vliegenthart, R., & de Vreese, C. H. (2016). The relationship between online campaigning and political involvement. *Online Information Review, 40*(5), 673-694.

Leary, M. R., & Kowalski, R. M. (1990). Impression management: A literature review and two-component model. *Psychological Bulletin*, *107*(1), 34.

Lee, A. Y., & Aaker, J. L. (2004). Bringing the frame into focus: the influence of regulatory fit on processing fluency and persuasion. *Journal of Personality and Social Psychology*, *86*(2), 205.

Lee, D., Hosanagar, K., & Nair, H. S. (2018). Advertising content and consumer engagement on social media: Evidence from Facebook. *Management Science*, *64*(11), 5105-5131.

Leong, L. Y., Jaafar, N. I., & Ainin, S. (2018). Understanding Facebook commerce (f-commerce) actual purchase from an artificial neural network perspective. *Journal of Electronic Commerce Research*, *19*(1), 75-103.

Liu, P., Chan, D., Qiu, L., Tov, W., & Tong, V. J. C. (2018). Effects of cultural tightness–looseness and social network density on expression of positive and negative emotions: A large-scale study of impression management by Facebook users. *Personality and Social Psychology Bulletin*, *44*(11), 1567-1581.

Liu, Y., Huang, Y., & Qin, X. (2017). Measuring self-monitoring using Facebook online data based on Snyder's psychological theories. In *International conference on neural information processing* (pp. 908-918). Springer, Cham.

Liu, Y., & Lopez, R. A. (2016). The impact of social media conversations on consumer brand choices. *Marketing Letters*, *27*(1), 1-13.

Luarn, P., & Chiu, Y. P. (2016). Influence of network density on information diffusion on social network sites: The mediating effects of transmitter activity. *Information Development*, *32*(3), 389-397.

Luarn, P., Huang, P., Chiu, Y. P., & Chen, I. J. (2016). Motivations to engage in word-of-mouth behavior on social network sites. *Information Development*, *32*(4), 1253-1265.

Luarn, P., Kuo, H. C., Lin, H. W., Chiu, Y. P., & Jhan, Y. C. (2018). Analyzing user preferences using Facebook fan pages. *Interfaces*, *48*(2), 166-175.

Luarn, P., Lin, Y. F., & Chiu, Y. P. (2015). Influence of Facebook brand-page posts on online engagement. *Online Information Review, 39*(4), 505-519.

Luarn, P., Yang, J. C., & Chiu, Y. P. (2014). The network effect on information dissemination on social network sites. *Computers in Human Behavior*, *37*, 1-8.

Martínez-Navarro, J., & Bigné, E. (2017). The value of marketer-generated content on social network sites: Media antecedents and behavioral responses. *Journal of Electronic Commerce Research*, *18*(1), 52.

Peracchio, L. A., & Meyers-Levy, J. (1994). How ambiguous cropped objects in ad photos can affect product evaluations. *Journal of Consumer Research*, *21*(1), 190-204.

Petty, R. E., & Cacioppo, J. T. (1984). Source factors and the elaboration likelihood model of persuasion. *ACR North American Advances*.

Petty, R. E., Cacioppo, J. T., & Kasmer, J. A. (2015). The role of affect in the elaboration likelihood model of persuasion. In *Communication, social cognition, and affect (PLE: Emotion)* (pp. 133-162). Psychology Press.

Petty, R. E., Heesacker, M., & Hughes, J. N. (1997). The elaboration likelihood model: Implications for the practice of school psychology. *Journal of School Psychology*, *35*(2), 107-136.

PRC. (2017). *About half of all digital display ad revenue goes to Facebook, Google*. Retrieved from https://www.pewresearch.org/ft_20-07-10_digitalnative_feature_new/

Rizavi, S. S., Ali, L., & Rizavi, S. H. M. (2011). User perceived quality of social networking websites: A study of

Lahore region. *Interdisciplinary Journal of Contemporary Research in Business*, 2(12), 902-913.

Rosenberg, J., & Egbert, N. (2011). Online impression management: Personality traits and concerns for secondary goals as predictors of self-presentation tactics on Facebook. *Journal of Computer-Mediated Communication*, 17(1), 1-18.

Sanne, P. N., & Wiese, M. (2018). The theory of planned behaviour and user engagement applied to Facebook advertising. *South African Journal of Information Management*, 20(1), 1-10.

Septianto, F., & Pratiwi, L. (2016). The moderating role of construal level on the evaluation of emotional appeal vs. cognitive appeal advertisements. *Marketing Letters*, 27(1), 171-181.

Shen, G. C. C., Chiou, J. S., Hsiao, C. H., Wang, C. H., & Li, H. N. (2016). Effective marketing communication via social networking site: The moderating role of the social tie. *Journal of Business Research*, 69(6), 2265-2270.

Snyder, M., & Gangestad, S. (1986). On the nature of self-monitoring: Matters of assessment, matters of validity. *Journal of Personality and Social Psychology*, 51(1), 125.

statista. (2020). *Most effective advertising formats on Facebook according to marketing professionals worldwide as of May 2019*. Retrieved from https://www.statista.com/statistics/1102769/effective-facebook-ad-formats-world/

statista. (2021a). *Facebook's global revenue as of 3rd quarter 2020, by segment*. Retrieved from https://www.statista.com/statistics/277963/facebooks-quarterly-global-revenue-by-segment/

statista. (2021b). *Number of monthly active Facebook users worldwide as of 3rd quarter 2020.* Retrieved from https://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/

Swani, K., & Milne, G. R. (2017). Evaluating Facebook brand content popularity for service versus goods offerings. *Journal of Business Research*, 79, 123-133.

Taylor, D. G., Lewin, J. E., & Strutton, D. (2011). Friends, fans, and followers: Do ads work on social networks?: How gender and age shape receptivity. *Journal of Advertising Research*, 51(1), 258-275.

Tsao, W. C. (2014). Which type of online review is more persuasive? The influence of consumer reviews and critic ratings on moviegoers. *Electronic Commerce Research*, 14(4), 559-583.

Turnley, W. H., & Bolino, M. C. (2001). Achieving desired images while avoiding undesired images: Exploring the role of self-monitoring in impression management. *Journal of Applied Psychology*, 86(2), 351.

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

Wan, F., & Ren, F. (2017). The effect of firm marketing content on product sales: Evidence from a mobile social media platform. *Journal of Electronic Commerce Research*, 18(4), 288-302.

Wang, Q., Meng, L., Liu, M., Wang, Q., & Ma, Q. (2016). How do social-based cues influence consumers' online purchase decisions? An event-related potential study. *Electronic Commerce Research*, 16(1), 1-26.

Wang, X., Teo, H. H., & Wei, K. K. (2015). Effects of communication elements on decision making in eWOM systems. *Journal of Electronic Commerce Research*, 16(3), 153.

Wiese, M., Martínez-Climent, C., & Botella-Carrubi, D. (2020). A framework for Facebook advertising effectiveness: A behavioral perspective. *Journal of Business Research*, 109, 76-87.

Wirtz, B. W., Göttel, V., & Daiser, P. (2017). Social networks: Usage intensity and effects on personalized advertising. *Journal of Electronic Commerce Research*, 18(2), 103-123.

Yoon, S. J. (2012). A social network approach to the influences of shopping experiences on e-wom. *Journal of Electronic Commerce Research*, 13(3), 213.

Zhang, L., & Peng, T. Q. (2015). Breadth, depth, and speed: Diffusion of advertising messages on microblogging sites. *Internet Research, 25*(3), 453-470.

Zhu, L., Yin, G., & He, W. (2014). Is this opinion leader's review useful? Peripheral cues for online review helpfulness. *Journal of Electronic Commerce Research*, 15(4), 267.