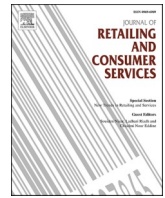


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The effects of ad heuristic and systematic cues on consumer brand awareness and purchase intention: Investigating the bias effect of heuristic information processing

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ABSTRACT

With growing numbers of digital users, social media advertising becomes a vital marketing channel for attracting and sustaining consumers. Drawing on the heuristic-systematic model, this research investigates the effects of advertisement systematic cues including ad informativeness and ad persuasiveness, and ad heuristic cue which is ad poster category on the consumer brand awareness, and the sequential effect on consumer purchase intention. An experimental design featuring two categories of ad poster, namely, firm and influencer, is created for empirical evidence collection. Results show that ad informativeness and ad persuasiveness contribute to greater consumer brand awareness and purchase intention. The poster category can positively bias the influence of ad informativeness, and firm poster outperforms the influencer poster when controlling the advertisement content the same. The findings demonstrate the co-occurrence of heuristic and systematic information processing in the social media advertising context. This research deepens current understanding of social media advertising and provides practical implications for marketers to capitalize on different ad posters according to advertisement informativeness and persuasiveness feature.

1. Introduction

Social media advertising is growing in leaps and bounds as the user number keeps increasing. This brings the benefits of increased brand exposure and website traffic for marketers and business owners (Stelzner, 2020). However, how to engage the audience is still the top question faced by social media marketers. Choosing effective advertising strategies is challenging for marketers due to the complexity of advertisement (ad) influencing mechanism, the budget constraints, and other brand concerns. Despite that factors related to ad effectiveness are diverse, ad content design and ad posting context are two central aspects that marketers need to consider.

Ad content design features, i.e. informativeness, emotion, interactivity, help marketers deliver product information and brand value to consumers, thus enable consumers to make decisions based on their systematic thinking. Informative ad can drive consumers' path to conversion and spread the word of mouth, and emotional ad content tends to stimulate consumers' empathy and enhance their engagement (Lee

et al., 2018). Interactive ad might entertain consumers and increase their purchase intention (Alalwan, 2018). Ad contextual features, i.e. platform types, poster popularity, influence consumer decision making process through the spillover effect (Voorveld et al., 2018; Boerman, 2020; Kim et al., 2019). A social media platform with higher consumer trust may contribute to the trustworthiness of ads posted on the platform (Geng et al., 2021). Influencers with reliable public image may enhance the ad perceived credibility (Xiao et al., 2018).

While previous findings provide valuable insights into the social media advertising, very few studies consider the interactions between ad content feature and ad contextual feature, which is a vital issue for improving ad effectiveness. Thus, this research considers ad informativeness and persuasiveness as ad systematic cue, and ad poster category as heuristic cue, and investigates their interactions in the consumer influencing process by drawing on the heuristic-systematic model.

Heuristic-systematic model explains the process of human information processing (Liberian and Eagly, 1989) and has been applied in multiple research contexts, such as web advertising, influencer

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marketing, and customer online reviews (Xiao et al., 2018; Guo et al., 2020; Yeon et al., 2019). The heuristic-systematic model suggests two modes of information processing: heuristic mode and systematic mode. And these two modes might exist simultaneously (Zhang et al., 2014). Thus, this research distinguishes between ad content feature (informativeness and persuasiveness) and contextual feature (poster category) and argues that consumers may perform different mode when dealing with different ad features. To gain deeper understanding of the ad feature influencing mechanism, this study aims to answer the following research questions:

Q1: Whether ad systematic cues (informativeness and persuasiveness) and heuristic cue (poster category) exert different influence on consumer brand awareness and purchase intention?

Q2: Whether and how ad systematic cues interact with ad heuristic cue in their consumer influencing process?

To examine these questions, we collect empirical evidence through an experimental design featuring two categories of ad poster, namely, firm and influencer. Results are analyzed to examine the mediating and moderating effects of the focal constructs. We expect that findings in this study make several contributions to prior research. First, this study distinguishes between ad systematic cue and ad heuristic cue, and suggests that consumers process them according to the systematic mode and heuristic mode respectively. Second, we empirically investigate the ad cues' direct impacts on consumer brand awareness and indirect impacts on consumer purchase intention. Third, by investigating the interactions between these two types of ad cues, this study complements the research on the bias effect and extends the heuristic-systematic model.

2. Prior work and hypotheses development

2.1. Heuristic-systematic model

Heuristic-systematic model is proposed by Liberman and Eagly (1989) to explain how people process information. According to the heuristic-systematic model, people process information by employing two modes: systematic mode and heuristic model (Todorov et al., 2002; Bahn and Boyd, 2014).

Systematic information processing suggests that people make decisions after considering all the associated information provided and elaborate the information through systematic thinking. In the social media context, consumers need to obtain all the product or service related information, such as price, functionality, raw material, in order to make a judgement on the ad content. This process requires sufficient cognitive thinking efforts for consumers (Chaiken, 1980). People tend to adopt the systematic mode when they are highly motivated, with ability and competency, and rich cognitive resource according to the sufficiency principle (Chen and Chaiken, 1999).

By contrast, heuristic information processing suggests that people may rely on some simple and non-content related information, such as brand type and ranking information, to make decisions (Chu et al., 2020; Zhang et al., 2014). The fact is that people are normally economic men who prefer to spend little cognitive effort when there is no need to spend much (Bohner et al., 1995). The least effort principle also points to heuristic information processing when consumers received product or service promotion (Bohner et al., 1995). For example, when "certain expert" exists and consumers know that expert, the consumers tend to rely on the expert's statement related to the focal product or service (Chen and Chaiken, 1999).

While consumers may have preference between heuristic information processing and systematic information processing, these two modes can occur simultaneously and interact with each other (Zhang et al., 2014). The attenuation effect extends the theoretical framework of heuristic-systematic model by suggesting that the effect of heuristic mode will be weakened by systematic mode when people are motivated to elaborate. Additionally, the heuristic mode might influence people's decision through indirectly biasing systematic processing because

non-content cues might improve the expectations of content (Chaiken and Maheswaran, 1994). For example, people will spend more cognitive effort to process information when the message comes from a famous professor instead of an unidentified student. Thus, in the social media marketing context, examining this bias effect in the ad influencing process may provide important implications for ad designers and posters about how to integrate the systematic and heuristic cues.

2.2. Hypotheses development

Despite the depth of existing work, we identified a few gaps that necessitate our current research. First, although dual-process models are widely used in marketing and information system research (Guo et al., 2020; Xiao et al., 2018; Zhang et al., 2014), the lion's share of work has focused on the ad content features (systematic cues) and ad contextual features (heuristic cues). The complicated interactions between these different types of information cues received little attention. To fill this gap, we explore the moderating effect of ad poster categories (heuristic cue) on the influencing path from ad informativeness and persuasiveness (systematic cues) to consumer brand awareness. Second, most prior studies examine the effectiveness of influencer posted ads with their personal characteristics (Lou and Yuan, 2019 ; De Veirman et al., 2017; Schouten et al., 2020), few studies evaluate the effect of influencer poster v. s. Firm poster on consumer brand awareness when controlling the posted content consistent as firm generated. Finally, we explore whether these information cues contribute to consumer purchase intention through the mediation of brand awareness.

Our overarching conceptual model is illustrated in Fig. 1. We argue that ad informativeness and persuasiveness (systematic cues), and ad poster category (heuristic cue) can contribute to greater consumer awareness of the ad brand. These cues indirectly enhance consumer purchase intention through the mediation of consumer brand awareness. Moreover, the ad poster category moderates on the influencing path from ad informativeness and persuasiveness to consumer brand awareness.

2.2.1. Heuristic factor: poster category

Heuristic factor of social media ad delivers non-content cues about the product or service. These factors of heuristic information can influence consumers' perceptions and attitudes through the spillover effect when consumers possess certain impression about these cues (Chu et al., 2020; Zhang et al., 2014). For example, the ads posted by certain experts tend to be perceived as more reliable than those posted by an ordinary person (Chen and Chaiken, 1999). Thus, influencer posters may differ with firm official account in advertising effectiveness even when they post same content.

Social media influencer poster refers to individual content creators that has expertise in an area, and that has certain amounts of followers on social media. The influencer has potential to influence consumers' attitude towards brand and can create unlimited commercial value (Lou and Yuan, 2019). The characteristics (trustworthy, attractive, and similar) of influencer can increase followers' trust in their branded posts, and promote brand awareness latterly (Lou and Yuan, 2019). Watching influencer's videos can also enhance consumer's awareness and their purchase intent towards luxury brand (Lee and Watkins, 2016).

Firm poster refers to official marketing content creators, who utilizes social media to increase brand exposure, and to build a better

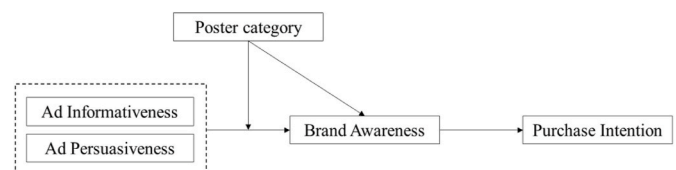


Fig. 1. Conceptual model.

relationship with consumers and sell their products or services (Kumar et al., 2016). Firm poster is the voice of brand and usually contains high-quality message (Dabbous and Barakat, 2020). Positive firm-consumer interactions may improve the hedonic motivation of consumers, thus strengthen consumers' brand awareness and purchase intention. Additionally, firm posters give consumers a chance to better understand the brand, acquire reward and benefit from the brand posts (Barreda et al., 2015).

The influence of heuristic factor is relevant to availability of knowledge or knowledge of consumers. In the social media, people may have different amount of knowledge regarding to the influencer and the firm. When consumers are followers of the influencer, their affection about the influencer may lead them to know more about the influencer's life style and expertise. Through presenting personal experience, influencers can build a para-social interaction relationship with followers (Jin and Ryu, 2020; Weismueller et al., 2020). However, consumers consider firm posters as official channels because they usually leverage social media platforms to announce product information and business decisions (Mangold and Faulds, 2009; Yoon et al., 2018). Therefore, the heuristic cues "influencer poster" and "firm poster" may gain different levels of knowledge availability among consumers, and result in different influence on brand awareness through information processing. Therefore, we put forward the following hypothesis:

H1. Social media ad posted by different ad poster has different influence on consumer brand awareness.

2.2.2. Systematic factors: ad informativeness and ad persuasiveness

Prior studies identified argument quality as a critical systematic factor during people's systematic information processing (Ferran and Watts, 2008). The argument quality denotes the strength or plausibility of persuasive argumentation (Eagly and Chaiken, 1993), and can be decomposed into two dimensions: argument informativeness and argument persuasiveness (Lee et al., 2013; De Vries et al., 2012; Zhang et al., 2014). The definition of informativeness and persuasiveness can be explained from two perspectives: perception perspective and content feature perspective. From the user perception perspective, informativeness implies consumer's recognition and understanding concerning information quality of the content while persuasiveness describes consumer's view and feeling concerning the power of persuasiveness based on the content (Cuevas et al., 2020; Ducoffe, 1996; Zhang, 1996). From the content feature perspective, informativeness refers to message that informs consumer about the product or service such as specific brand, price, discount, link and physical location, while persuasiveness describes message that conveying preferences including emotion, net slang, humor, small talk or interaction (Lee et al., 2013; De Vries et al., 2012).

Social media ads are relevant to both informative factors (e.g., price, brand, link) and persuasive factors (e.g., emotion, humor, interaction). Consumers can receive and process both informative factors and persuasive factors during purchasing (Rosen and Olshavsky, 1987). Thus, we consider both ad informativeness and ad persuasiveness as systematic factors, and adopt the perception perspective to examine their influence on consumer attitude.

We proposed that ad informativeness and ad persuasiveness will be positively associated with purchase intention and brand awareness for the following reasons. First, ads that contain high-quality message tend to improve the hedonic motivation of consumers, thus improve the brand awareness (Dabbous and Barakat, 2020). Second, informative ads provide sufficient product or service details to consumers and enable them to rationally and logically make a consideration between different brands and product (Lou and Yuan, 2019). The consideration process may help consumers digest the value conveyed by the ads and build brand image in their mind. Third, persuasive ads are usually linked with greater source credibility, which can result in higher brand awareness latterly (De Jans et al., 2020). The use of persuasive element (i.e.

Internet slang) can give consumer a sense of innovativeness, and further impact their brand awareness (Liu et al., 2019). Thus, based on above discussions, we propose that:

H2a. Ad informativeness positively affects brand awareness.

H2b. Ad persuasiveness positively affects brand awareness.

2.2.3. Bias effect between heuristic and systematic factors

The co-existence of heuristic and systematic information processing is explained by the attenuation effect and bias effect (Zhang et al., 2014). The attenuation effect suggests that although people adopt heuristic information processing mode first, this mode will be weakened when people are motivated to elaborate the information systematically later. On the other hand, the heuristic information processing may implicitly change consumer's behavior by biasing systematic processing due to the bias effect, which has been found in social psychology studies (Chaiken and Maheswaran, 1994).

In social media advertising, people tend to spend more cognitive effort when the message comes from a famous expert instead of an unidentified ordinary user (Zhang et al., 2014). This initial heuristic cognitive behavior may affect the subsequent logical thinking process either positively or negatively (Liberman and Eagly, 1989). Similarly, when consumers find the ad is posted by their admired influencers or trusted firm, they may form an expectation of ad content and elaborate it, which may indirectly bias their brand awareness. Moreover, prior study also suggests that social media ads posted by influencers contribute to greater consumer's engagement in the brand than firm posters. And consumers post more comments with positive sentiment under influencer posted ads than on firm posted ads (Lou et al., 2019). Therefore, we propose the following hypotheses:

H3a. Ad poster category moderates the effect of ad informativeness on consumer brand awareness.

H3b. Ad poster category moderates the effect of ad persuasiveness on consumer brand awareness.

2.2.4. Brand awareness and purchase intention

This paper adopts brand awareness and purchase intention to examine the effectiveness of social media ads (Chakraborty and Bhat, 2018). Purchase intention represents the degree of probability and willingness for consumers to buy certain products or services (Kim and Ko, 2012). And brand awareness indicates the consumers' recognition and recall of the brand, which can reflect consumer's attitude toward brand (Aaker, 1996). Prior research studies find that there exists a close association between attitude and purchase intention, and brand awareness has been proved to be an important precedent of purchase intention (Aaker, 2009; Keller, 1993; Laroche et al., 1996; Lu et al., 2014). Thus, we put forward the following hypothesis to enable the examination of indirect effects of ad information cues:

H4. Consumer brand awareness positively affects their purchase intention.

H5. Ad heuristic and systematic cues indirect influence the consumer purchase intention through the mediation of brand awareness.

H5a. Ad informativeness indirect influence the consumer purchase intention through the mediation of brand awareness.

H5b. Ad persuasiveness indirect influence the consumer purchase intention through the mediation of brand awareness.

H5c. Ad poster category indirect influence the consumer purchase intention through the mediation of brand awareness.

3. Methodology

3.1. Research design

We employed the survey method featuring two types of social media ad posters to investigate the influences of ad informativeness and ad persuasiveness on consumer’s attitude change. The data collection task was conducted on an online survey agency (www.credamo.com/), and the survey was distributed randomly to participants from the Credamo sample pool which has more than 2.6 million of members with various background. The ad content is controlled to be consistent when posted by different posters. As shown in Fig. 2, we diversified the product types to avoid the bias caused by consumer’s attitude towards specific brand. Respondents were asked to read ads that posted by one type of ad poster and answer the designed questionnaire. The questionnaire contains two parts. The first part measures consumer’s perceptions of the ad informativeness, ad persuasiveness, brand awareness, and purchase intention. The second section collects participants demographic information.

3.2. Measurement scale

In this paper, the measurement items for our constructs in the conceptual model were selected from existing literature. Descriptions for some measurement items were adjusted to adapt to our research context. Appendix A presents the questions and references for measurement items. There are 15 questions regarding to consumer’s perceptions and attitudes, and 2 questions about consumer’s gender and age.

3.3. Data collection

Data from 279 respondents were collected in the survey, and 267 valid responses were used. The gender and age information of the valid respondents are shown in Table 1. Among the 267 data samples, 128 (47.9 %) respondents viewed the social media ads posted by firm and

Table 1
Details of respondents.

Gender	Male	114	42.7 %
	Female	153	57.3 %
Age	18 or below	0	0.0 %
	18–25	101	37.8 %
	25–30	124	46.4 %
	30–40	39	14.6 %
	40–50	3	1.1 %
	Above 50	0	0.0 %

139 (52.1 %) respondents viewed ads posted by influencers.

4. Data analysis

4.1. Measurement model estimation

AMOS was used to test the reliability and validity of the focal constructs. Three items (IN4, IN5, PE4) were removed due to their factor loadings lower than 0.5. According to the results in Table 2, the Cronbach’s alpha of the four constructs are all above 0.6, which are well above the recommended level (Nunnally, 1978). Factor loadings are all above 0.68. The composite reliability values of all the constructs are above 0.7 which is higher than the required level (Hair et al., 2009). All AVE values were higher than the minimum requirement of 0.5, indicating sufficient convergent validity (Bagozzi and Yi, 1988). Discriminant validity results are presented in Table 3. The figures on the diagonal represent the square root of the AVE. Overall, the diagonal figures are greater than the off-diagonal figures in the corresponding rows and columns, demonstrating high discriminant validity (Fornell and Larcker, 1981). The fitness of proposed model also achieved sufficient construct validity ($\chi^2/df = 2.256$, RMSEA = 0.069, LO90 = 0.052, HI90 = 0.086; CFI = 0.937, IFI = 0.938, TLI = 0.915). Therefore, we continue to test the hypothesized associations between the constructs.

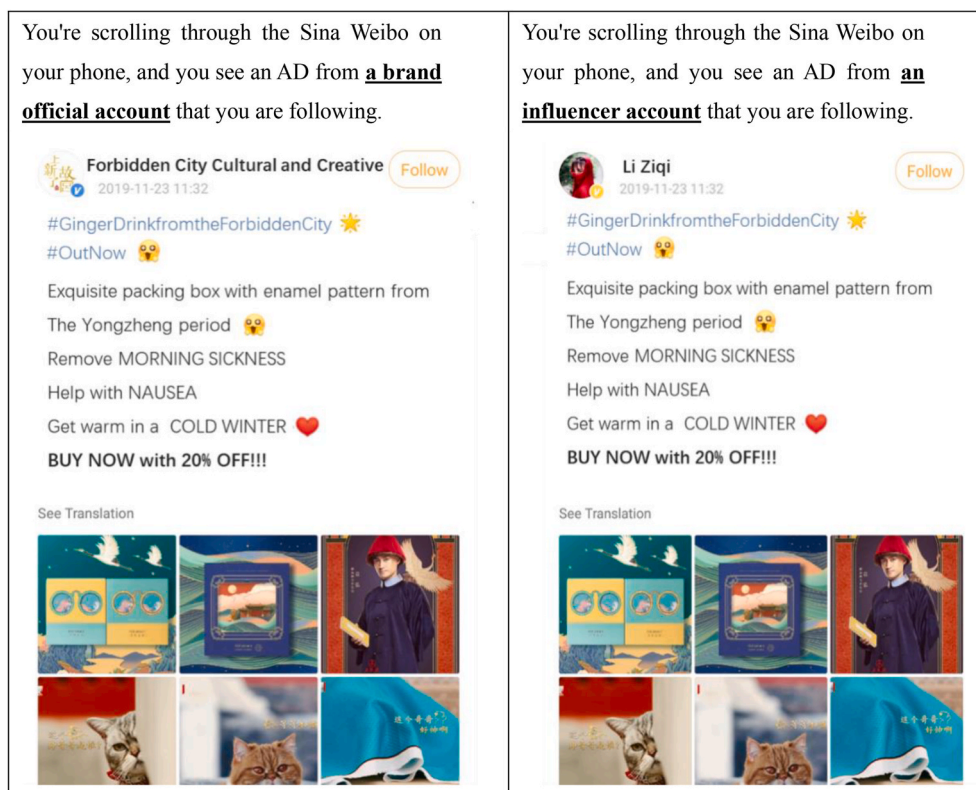


Fig. 2. Ad sample from social media platform.

Table 2
Construct reliability and validity results.

		Factor loading	Cronbach's alpha	AVE	CR
Ad Informativeness	IN1	0.693	0.623	0.513	0.759
	IN2	0.688			
	IN3	0.765			
Ad Persuasiveness	PE1	0.758	0.679	0.542	0.780
	PE2	0.744			
	PE3	0.706			
Brand Awareness	BA1	0.783	0.624	0.528	0.770
	BA2	0.689			
	BA3	0.705			
Purchase Intention	PI1	0.726	0.782	0.548	0.784
	PI2	0.753			
	PI3	0.741			

4.2. Common method bias

This paper deployed self-reported survey measures, which may result in common method bias (MacKenzie and Podsakoff, 2012). Thus, we performed Harman's single-factor analysis to test the common method bias. The result of main component factor analysis showed that there are four latent factors. The first main component accounted for 28 % (less than 40 %). It did not account for most of the variance. In addition, following the research of Liang et al. (2007), we added a common method factor consisting of all the indicators to examine common method bias. As shown in Table 4, the average variance of substantive factor loadings is 0.614, while the average variance of method factor loading is 0.044. Furthermore, most of the method factor loadings were not significant, so the survey method did not lead to serious common method bias.

5. Results

ANOVA analysis was conducted to investigate that whether the degree of brand awareness varies between ad poster categories (influencer/firm). As reported in Table 5, significant difference ($F = 7.143, p = 0.008$) exists between the brand awareness obtained after consumer views ads posted by different posters (influencer/firm). This supports the postulation that poster category can impact the consumer brand awareness, and indicate that we can proceed to test the structural model.

5.1. Structural model results

5.1.1. Mediating model results

First, we used AMOS to test the direct effect of ad informativeness and ad persuasiveness on purchase intention. According to the results in Table 6, ad informativeness ($b = 0.512, p = 0.004$) and ad persuasiveness ($b = 0.385, p = 0.002$) positively affect consumer purchase intention.

Second, we tested the mediating effects of brand awareness, and the results are shown in Table 7 and Fig. 3. Both ad informativeness ($b = 0.626, p = 0.001$) and ad persuasiveness ($b = 0.324, p = 0.029$) have positive influence on brand awareness. Additionally, brand awareness ($b = 0.926, p < 0.001$) has a significant positive effect on purchase intention. Thus, the brand awareness mediates the influence of ad informativeness and persuasiveness on purchase intention.

Table 3
Discriminant validity results.

	Ad Informativeness	Ad Persuasiveness	Brand Awareness	Purchase Intention
Ad Informativeness	0.716			
Ad Persuasiveness	0.232	0.736		
Brand Awareness	0.152	0.223	0.727	
Purchase Intention	0.202	0.338	0.225	0.740

5.1.2. Moderating model results

Considering that the "poster category" variable is categorical (with 1 represents influencer poster and 0 represents firm poster), we employed the SPSS process model 7 (Hayes, 2013) to examine its moderating effect on the path from ad informativeness and ad persuasiveness to brand awareness. According to the result in Table 8, test 1 results show that ad poster category significantly moderates the effect of ad informativeness on brand awareness, while test 2 results indicates a non-significant moderating effect on the path from ad persuasiveness to brand awareness. A noteworthy finding is that the selection of influencer poster can intensify the effect of ad informativeness on brand awareness in comparison to selecting firm poster ($b = 0.284, p = 0.004$). However, regarding to the direct effect on brand awareness, firm poster outperforms influencer poster ($b = -1.477, p = 0.000$). As shown in Fig. 4, when the perceived ad informativeness increases, the improvement of brand awareness varies between different posters. The brand awareness increases faster when the ad is posted by influencer, while the selection of firm poster leads to higher overall consumer brand awareness.

Table 4
Common method bias results.

Construct	Indicator	Substantive factor loadings (R1)	R ¹²	Method factor loading (R2)	R ²²
Ad Informativeness	IN1	0.653***	0.426	-0.087*	0.008
	IN2	0.865***	0.748	-0.188*	0.035
	IN3	0.741***	0.549	-0.227*	0.052
Ad Persuasiveness	PE1	0.647***	0.419	0.325*	0.106
	PE2	0.874***	0.764	0.020	0.000
	PE3	0.809***	0.654	-0.294*	0.086
Brand Awareness	BA1	0.728***	0.530	0.476	0.227
	BA2	0.789***	0.623	0.038	0.001
	BA3	0.75***	0.563	0.048	0.002
Purchase Intention	PI1	0.841***	0.707	-0.032	0.001
	PI2	0.839***	0.704	0.094	0.009
	PI3	0.828***	0.686	-0.063	0.004
Average		0.780	0.614	0.009	0.044

Table 5
ANOVA results (ad Poster Category and brand awareness).

	Sum of squares	df	Mean square	F	Sig.
Between groups	2.553	1	2.553	7.143	0.008
Within groups	94.721	266	0.357		
Total	97.274	267			

Table 6
Direct effect results.

Independent	Dependent	Purchase Intention
Ad Informativeness		0.512**
Ad Persuasiveness		0.385**

Table 7
Mediating model results.

Independent	Dependent	Brand Awareness	Purchase Intention
Ad Informativeness		0.626***	\
Ad Persuasiveness		0.324*	\
Brand Awareness		\	0.926***



Fig. 3. Mediation model results.

6. Discussion

6.1. General discussion

This study distinguishes between social media ad heuristic information cue (poster category) and systematic information cue (ad informativeness and persuasiveness) and explores their effects on consumer brand awareness through the heuristic and systematic information processing with respectively. The moderating role of ad poster category on the influencing path from ad informativeness and persuasiveness to brand awareness is investigated to gain deeper understanding of the interactions between heuristic information processing and systematic information processing. The effect of ad information cues on consumer brand awareness is also examined. The findings of this empirical study reveal that both heuristic and systematic information cues contribute positively to greater consumer brand awareness, and subsequently the purchase intention, which are in line with prior studies (Chakraborty and Bhat, 2018; Lu et al., 2014; Zhang et al., 2014). One explanation is that informative ads provide sufficient product or service information that enables and motivates consumers to elaborate the information, and sometimes, share the information with friends and spread the word of mouth (Cho et al., 2015). And this cognitive and sharing process might lead to greater impression of the brand in consumer’s mind. The ad persuasiveness is usually affected by conveying emotion, humor, or interaction elements, which may motivate consumers spend more time on the ad (Lee et al., 2013; De Vries et al., 2012).

A noteworthy finding in study is that, compared with influencer poster, firm poster achieves higher level of consumer brand awareness when controlling the ad content the same. It confirms the existing findings that, although 75 % of consumers engaged in influencer marketing, only 36 % were convinced it was effective (ANA, 2018; Taylor, 2020). By contrast, this result differs from prior finding that influencer’s product sharing receives higher involvement and cult-like appreciation from consumers (Lou et al., 2019). It is probably because that in most cases influencers post product sharing content with their personalized characteristics or specialized experience, which enhances the persuasiveness and informativeness of the content. However, our research aims to specify the pure effect of choosing posting channels (i.e. influencer,

firm) when ad content contains equal amount of information and equal level of persuasiveness. Our results indicate that selecting firm poster is more effective than influencer poster when the ads design remains the same. It also needs to note that other ad content attributes such as perceived originality and uniqueness, brand control over the influencer’s message, and commercial orientation of the post might be reasons why influencer posting channel are not that effective (Vrontis et al., 2021).

The significant moderating effect of ad poster category on the influencing path from ad informativeness to brand awareness implies that, as the ad informativeness increases, the brand awareness increases faster when the ad is posted by influencer. That is, choosing influencer poster for social advertising can positively bias the consumer’s expectations or perceptions in the systematic information processing. Moreover, the mediating effect of consumer brand awareness between ad information cues and consumer purchase intention proves the applicability of prior findings in the social media advertising context (Arli, 2017).

6.2. Theoretical contributions

We believed that this paper generates several important theoretical contributions to the existing research. First, although prior literature suggests that certain social media ad features may enhance consumer engagement or brand awareness (Dabbous and Barakat, 2020; Lee et al., 2018), we are able to elaborate the different information processing mode when consumers consider heuristic information and systematic information. Second, through controlling the ad content consistent, it is found that selecting firm posters can achieve better promotion outcome, which is opposed to previous finding (Lou et al., 2019). This indicates that the superior marketing performance of influencers may work through their carefully designed ad content with individual characteristics or stories. Third, the interactions between ad poster category and ad informativeness in their influencing process provide support for the bias effect that explains the co-occurrence of two information processing modes.

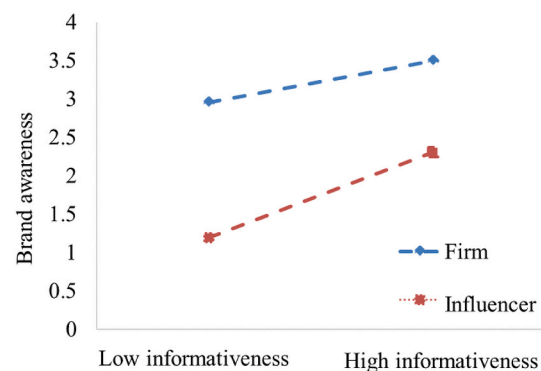


Fig. 4. Moderating effect of ad poster category (ad informativeness → brand awareness).

Table 8
Moderating model results.

Test	Path	b	S.E.	t value	Sig.
Test 1	Ad Informativeness → Brand Awareness	0.27	0.061	4.44	***
	Poster Category → Brand Awareness	-1.477	0.416	-3.551	***
	Ad Informativeness * Poster Category → Brand Awareness	0.284	0.099	2.848	.004
Test 2	Brand Awareness → Purchase Intention	0.444	0.061	7.284	***
	Ad Persuasiveness → Brand Awareness	0.33	0.062	5.26	***
	Poster Category → Brand Awareness	-0.066	0.325	-0.202	.839
	Ad Persuasiveness * Poster Category → Brand Awareness	-0.019	0.081	-0.239	.811
	Brand Awareness → Purchase Intention	0.446	0.059	7.481	**

6.3. Practical implications

We expect that our study findings also make contributions to marketers with practical implications. First, to optimize the influence of ad systematic information cues, marketers can improve the ad quality in the two mentioned dimensions: informativeness and persuasiveness. This enables consumers to have enough information and motivation to digest the ad content. Ad designers can use different elements, i.e. interactive games and humorous statement, in the ads as suggested in previous studies to engage consumers (Gao et al., 2009). Second, our findings show that selecting different marketing channels (influencer or firm) may result in different influencing outcome. When the ads are carefully designed, posting them through the firm account may still achieve satisfactory outcome, and may also reduce the marketing budget. Inviting influencers for marketing may obtain stronger consumer response when the ad content is customized with personal traits of the influencer compared with official ad content.

7. Limitations

This paper is subject to a few limitations that point to our future research. First, we consider two categories of ad poster while multiple other types of posters exist. We may include other categories in our future work. Second, we only consider two dimensions of the ad content feature, namely, informativeness and persuasiveness. Including other dimensions may also generate some interesting findings. Third, only empirical evidence was collected while other forms of data, i.e. consumer clicks and comments, may also indicate consumer perceptions toward ads. Combining multi-model data source may contribute more insights into this emerging stream of literature.

8. Conclusion

The increasing amount of social media users makes social media advertising a critical marketing choice. However, how to engagement consumers and build brand awareness is still a challenging question for marketers. To obtain deeper understanding of the influencing mechanism of social media ads, this paper empirically explores these issues by distinguishing between two modes of information processing when consumers deal with different ad information cues. Our findings indicate that selecting firm poster is more appropriate when the ad content design is informative and persuasive enough. The superior marketing performance of influencer occurs when ad content is redesigned and personalized according to the influencer style. Overall, these findings suggest that practitioners should ensure the informativeness and persuasiveness of ad content, and select appropriate poster for ad posting.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jretconser.2021.102696>.

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