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PERSUASIVE LOCATION-BASED MESSAGING TO ATTRACT CONSUMERS TO A PHYSICAL STORE: A CONSTRUAL LEVEL THEORY APPROACH

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ABSTRACT

Although it appears increasingly important yet potentially challenging to attract consumers to physical stores, location-based messaging has been said to enable such attraction. Still, existing studies offer very limited insight into which particular location-based persuasion approach retailers should use. This study aimed to establish and compare the potential of two discrepant persuasion strategies to influence consumers' experiences and thereby stimulate them to visit the retailer's physical store. Drawing on persuasion theory and construal level theory, and using a vignette-based online survey method, we determined that scarcity is a more effective persuasion strategy in the studied context than social proof; scarcity-focused messages are experienced as more informative, more entertaining and less irritating, are therefore valued more, and are thus more likely to induce store visits. We discuss these findings and their implications for theory as well as for practice.

KEYWORDS

1 INTRODUCTION

Recent years have shown substantial changes in the retail landscape, with for example increasing online sales putting competitive pressure on the physical channels of many retailers (Blut, Teller, and Floh, 2018; Bolton and Shankar, 2018; Reinartz, Wiegand, and Imschloss, in press). While it appears to be increasingly important yet potentially challenging for retailers to attract consumers to their brick-and-mortar stores (Bustamante and Rubio, 2017; cf. Pantano, 2016; Rigby, 2011), location-based messaging (LBM), that is, a mobile telecommunication system that delivers messages using data about the recipient's location when that recipient is near the sender (cf. Luo, Andrews, Fang, and Phang, 2014), has been touted to offer new possibilities to facilitate such attraction (e.g., Ketelaar et al., 2018; Lee, Kim, and Sundar, 2015).

Still, prior empirical research offers very little insight into which particular persuasion approach retailers should adopt when sending location-based messages in order to convince consumers to visit the store. Previous LBM-studies (1) did not compare the effectiveness of such persuasion approaches, and (2) focused on behavioral outcomes such as attitude towards location-based messages (e.g., Gazley, Hunt, and McLaren, 2015), intention to purchase (e.g., Xu, Oh, and Teo, 2009), intention to accept location-based advertising (Limpf and Voorveld, 2015), and mobile coupon redemption tendency (e.g., Wang, Wu, and Teo, 2014), instead of on store visit behavior. Moreover, although persuasion has been a topic of interest to scholars since antiquity and has been investigated in various other settings (see e.g., Dillard and Pfau, 2002), it is context and behavior-specific (Meyers-Levy and Malaviya, 1999; Petty and Wegener, 1998; Shu and Carlson, 2014) and as such our current knowledge of how particular ways of persuasive communication affect consumers' experiences and

behavior in those other settings may not be generalizable to store visit behavior, in an LBM-context.

Therefore, the aim of this study is to examine the effectiveness of discrepant persuasion strategies in terms of their ability to influence location-based message recipients' experiences and thereby stimulate them to visit the retailer's physical store. Drawing on the persuasion literature (e.g., Armstrong, 2010; Seiter and Gass, 2008), construal level theory (e.g., Eyal, Liberman, and Trope, 2009; Trope, Liberman, and Wakslak, 2007) and Ducoffe's (1995, 1996) well-established advertising value framework, we construct a research model centering on the impact of two of the main persuasion strategies used in practice (cf. Griskevicius, Goldstein, Mortensen, Sundie, Cialdini, and Kenrick, 2009; Kaptein and Eckles, 2012), namely the scarcity strategy (i.e., sending messages that emphasize a particular limited offer) and social proof strategy (i.e., sending messages that stress that many others have behaved in a particular manner). In line with this research model, we claim and subsequently establish empirically that these two persuasion strategies differ in their effect on the value that consumers derive from experiencing the message, and therefore in their impact on these individuals' intention to visit the store.

Accordingly, our research makes the following contributions. First, using a vignette-based online survey design, our empirical investigation generates knowledge of the relative influence of two of the most relevant persuasion strategies (i.e., scarcity and social proof) in generating message value and in driving store visit behavior in the underexplored LBM-context. Second, from a theoretical perspective, our study is intended to contribute to the bodies of literature on construal level theory and on persuasion by examining the explanatory value of construal level theory as well as by cross-validating Ducoffe's framework in that particular marketing messaging context. Third, from a pragmatic perspective, the

derived insights serve as directions for retailers when sending persuasive location-based messages to attract consumers to their physical store.

In the subsequent sections of this paper, we will first discuss the theoretical background of our research based on the literature on persuasion and construal level theory. Then, we will present our research model and the underlying theoretical rationale. This is followed by a description of the research methodology and the resulting research outcomes. The most important of these outcomes and their implications for both theory and practice are then discussed. We conclude the paper with an overview of the limitations of our study and some suggestions for future research.

2 Theoretical background

2.1 Persuasive communication and persuasion strategies

Persuasive communication, i.e., the exchange of messages that are "intended to shape, reinforce, or change the responses of another, or others" (Stiff and Mongeau, 2016, p. 4), is a common and important element of our daily lives (Dillard and Pfau, 2002; Petty and Briñol, 2010). Therefore, it may not be surprising that such communication has long been of interest to scholars in multiple scientific disciplines, among which are social psychology and marketing (see e.g., Meyers-Levy and Malaviya, 1999; Petty and Briñol, 2008). For instance, researchers have studied various factors concerning the message source (i.e., sender), the recipient, the message itself and the context in which this message is received, and determined the extent to which they influence persuasion (see e.g., Petty, Wegener and Fabrigar, 1997; Shu and Carlson, 2014).

Many of these persuasion-related factors may prove to be relevant in LBM-settings. Still, the main or even only factor that retailers may be able to directly control in order to convince consumers to visit their stores appears to be the location-based message itself. Prior research on features of persuasive messages in general indicates that such control could include determining or adapting the message topic, argument, organization and style (see e.g., Petty and Wegener, 1998; Shen and Bigsby, 2012). Before companies can actually decide on such tactical aspects of persuasion, however, they will first have to determine a particular, appropriate persuasion strategy (cf. Armstrong, 2010). Such a strategy, also referred to as *compliance-gaining strategy* (cf. Seiter and Gass, 2008) or *influence principle* (cf. Kaptein, Markopoulos, De Ruyter, and Aarts, 2015), concerns the use of a particular set of cues in an organization's communication in order to stimulate message recipients to use a corresponding mental shortcut or heuristic rule, which are typically used by consumers to lessen cognitive effort, and thereby convince this person to take a specific course of action (Griskevicius et al., 2009; Whittler, 1994). For instance, a company may try to influence consumers by basing a message on the heuristic rule that if "a respected person or institution supports the message" it is more believable (Armstrong, 2010, p. 80).

The extant literature shows a wide range of persuasion strategies that, at least to some extent, have been categorized in multiple typologies (Kaptein et al., 2015; Seiter and Gass, 2008), such as those presented by Cialdini (2007), Marwell and Schmitt (1967), McFarland, Challagalla, and Shervani (2006), and Kellermann and Cole (1994). Although such existing typologies show partial overlap, and some effort has been invested in consolidating them for particular research settings (e.g., Ferreira and Teles, 2019), these efforts have been limited and a standardized set of persuasion strategies has not been established. Instead, researchers tend to use a particular subset of these strategies as a basis for their empirical

studies. Such studies focusing on marketing-related situations suggest that *scarcity* and *social proof* are among the most relevant persuasion strategies (cf. Griskevicius et al., 2009; Kaptein and Eckles, 2012). The scarcity strategy concerns the sending of informational cues indicating that the availability of a particular product or service is limited, e.g., in terms of time and quantity, thereby inducing a feeling of urgency and increasing the perceived attractiveness of the product or service (cf. Aggarwal, Jun, and Huh, 2011). The social proof strategy concerns the application of messages that convey that many others, especially those who are similar to the recipient, have conducted themselves in a particular way, thereby stimulating the recipient to behave similarly (cf. Armstrong, 2010).

The impact of such persuasion strategies on recipients' behavioral responses is mediated by psychological processes (Shen and Bigsby, 2012; Whittler, 1994) and is dependent on the particular context (Kaptein & Eckles, 2012). One relatively recent theory that may explain the mechanism underlying this impact in the specific context of LBM (cf. Katz and Byrne, 2013), which is characterized by a limited distance between consumers and the retailer's location when the location-based message is received, is construal level theory.

2.2   CONSTRUAL LEVEL THEORY

Construal level theory (CLT) posits that the particular cognitive process that individuals use to mentally represent an entity (i.e., an object, circumstance or action) as a basis for their evaluations and decisions is dependent on the automatically assessed psychological distance between the individual and that entity (Bar-Anan, Liberman, Trope, and Algom, 2007; Eyal et al., 2009; Trope et al., 2007). This psychological distance represents the extent to which the entity is "present in the direct experience of reality" (Liberman, Trope, and Stephan, 2007, p.

353). Such presence is smaller and thus psychological distance is larger if entities concern (1) an earlier or later point in time, (2) (dissimilar) others instead of the individual himself, (3) a more remote location, or (4) a less probable or more hypothetical situation (Eyal et al., 2009; Trope et al., 2007). Accordingly, the literature on CLT differentiates between four main psychological distance dimensions or types, which are temporal distance, social distance, spatial distance, and certainty distance respectively (Huang, Burtch, Hong, and Polman, 2016; Liberman et al., 2007).

In settings characterized by a relatively large psychological distance, sensory information is less readily available to individuals and their mental representations of entities will tend to be more abstract and focused on key characteristics of the particular entity (Liberman et al., 2007). CLT refers to such abstract mental representations as *high-level construals* (Eyal et al., 2009). These high-level construals concern "schematic, decontextualized representations that extract the gist from the available information" (Trope et al., 2007, p. 83). Conversely, *low-level construals* "are relatively unstructured, contextualized representations that include subordinate and incidental features" (Trope et al., 2007, p. 83) of entities.

One element of CLT that is directly related to persuasive communication is the notion of *congruence* or *fit*. Prior CLT-based studies maintain that a message is more persuasive if the included distance-related cues or the message's level of abstraction and detail are congruent with the psychological distance involved in the focal situation and with the particular construal level applied by the recipient to mentally process the information relevant to that situation (Hernandez, Wright, and Rodriguez, 2015; Katz and Byrne, 2013). As described by Dhar and Kim (2007), a potential explanation for this effect is that recipients tend to be more receptive to a message if it is congruent. Several recent investigations

further explored the impact of congruence on persuasiveness and established this impact empirically, e.g., for the fit between the time until the purchase and the type of appeal stressed in the marketing message (Willems, Brengman, and Van de Sanden, 2017), between the time until the purchase decision and the source of recommendations (Zhao and Xie, 2011), between the time until a future reward and types of visual information used in the message (Lee, Fujita, Deng, and Unnava, 2017), and between the psychological distance to an advertised product and the abstraction level of an in-store mobile ad (Schrage, Hubert, and Linzmajer, 2019). Accordingly, congruence forms an important conceptual underpinning of our research model, which will be further described in the next section.

3 RESEARCH MODEL AND HYPOTHESES

Our research model, which is shown in Figure 1, combines the discussed theory on persuasion strategies and construal level. We specifically focus on the impact of the above-described scarcity and social proof persuasion strategies to assess to what extent these often-applied strategies are effective in an LBM-context.

In line with studies of the effectiveness of persuasive communication in other settings (e.g., Li, Daugherty, and Biocca, 2002; Willems et al., 2017) and following existing research suggesting that intentions can be used as a proxy of actual behavior (Fishbein and Ajzen, 2010), the focal behavioral concept is *store visit intention*. We define this concept as a consumer's estimate of the probability of visiting the store after having received a location-based message (cf. Fishbein and Ajzen, 2010).

The core of our model is directly based on Ducoffe's (1995; 1996) advertising value framework, consisting of the experiential antecedents *informativeness, entertainment* and *irritation,* and the consequence *message value*. Here, informativeness concerns the

experienced degree to which a location-based message provides resourceful and useful information (cf. Ducoffe, 1996; Xu, Oh, and Teo, 2009). Entertainment refers to the experienced degree to which receiving and viewing a location-based message is a fun and pleasant experience, and lifts the spirit (cf. Ducoffe, 1996; also see Verhagen et al., 2012). Irritation is the experienced extent to which a location-based message is annoying or offensive (cf. Ducoffe, 1996). Message value is conceptualized as the recipient's subjective assessment of the relative worth or utility of a location-based message (cf. Ducoffe, 1995).

Ducoffe's framework was incorporated into our model for three reasons. First, as an established conceptual structure it has commonly formed the basis of research models explaining the impact of persuasive communication-related stimuli on consumer behavior in mobile technology-mediated settings (e.g., Kim and Han, 2014; Liu, Sinkovics, Pezderka, and Haghirian, 2012; Tsang, Ho, and Liang, 2004; Xu et al., 2009). Second, Ducoffe's framework includes both favorable (i.e., informativeness and entertainment) and unfavorable (i.e., irritation) factors, and therefore its adoption enables explicitly studying both positive and negative effects of persuasive strategies, as recommended by for instance Kaptein and Eckles (2012). Third, the framework also contains affective components (i.e., entertainment and irritation), which may be especially relevant when studying the effectiveness of persuasive communication in situations characterized by a limited psychological distance since generally the intensity of and reliance on the experienced affect increases as the psychological distance is reduced (Chang and Pham, 2013; Williams, Stein, and Galguera, 2014). In the following sub-sections, we will further describe the hypothesized relationships between the aforementioned concepts.
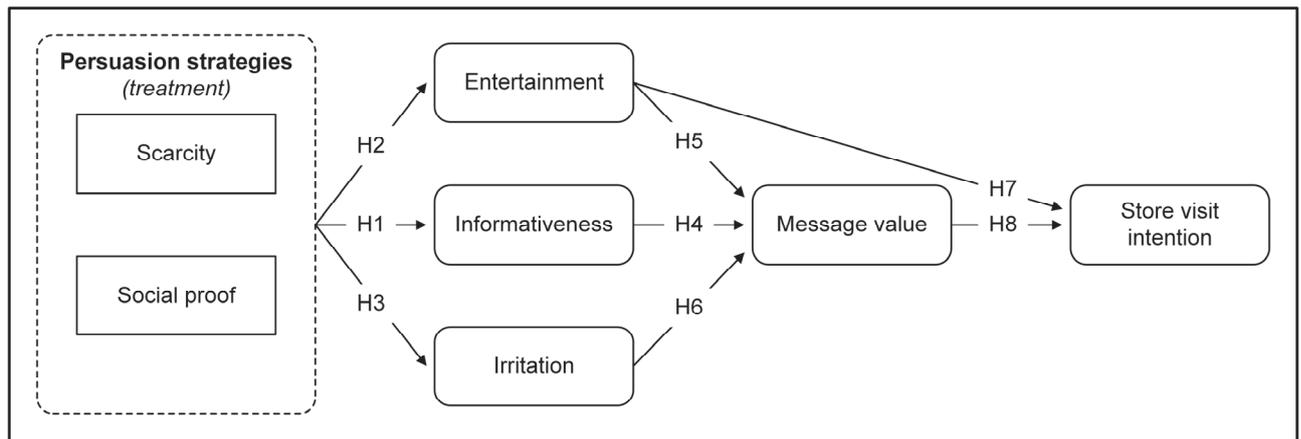
Figure 1 Research model

3.1 THE INFLUENCE OF SCARCITY AND SOCIAL PROOF PERSUASION STRATEGIES

As mentioned in section 2.2, CLT posits that, in case of limited psychological distances, messages are more persuasive if their content contains cues (e.g., words or images) that the recipient associates with being close to someone or something. Recipients are less likely to resist such congruent messages (Katz and Byrne, 2013) since people can construe congruent message cues more easily (Edwards, Li, and Lee, 2002; Hernandez et al., 2015) and hence, tend to experience the message and its content more positively (cf. Hasan, 2016; Kim, Rao, and Lee, 2009). More specifically, as reported in prior empirical marketing studies, congruence between a persuasive message and the surrounding (media) context increases the experienced informativeness (Edwards et al., 2009; Huang, Tan, Ke, and Wei, 2018) and enjoyment or entertainment (Kamins et al., 1991; Peters and Leshner, 2013), and is associated with a decrease in the felt irritation (Edwards et al., 2019; Martí-Parreño, Aldas-Manzano, Curras-Perez, and Sanchez-Garcia, 2013).

When consumers receive a location-based message, they are typically within walking distance from the physical store that sent them the specific message. Therefore, according to

extant research (e.g., Hühn et al., 2017; Katz and Byrne, 2013; Luo et al., 2014), at that time, these individuals are separated from the store by only relatively short temporal and spatial distances, and the resulting psychological distance to the store is limited. A scarcity strategy would be more congruent with this limited psychological distance, and therefore more persuasive, than a social proof strategy given the particular use of distance-related message cues in each of these strategies. Scarcity-focused messages consist of cues that signal *nearness* as they directly center on the recipient's personal gain and thus on *himself* (Aggarwal et al., 2011; Aguirre-Rodriguez, 2013). Conversely, social proof-focused messages contain cues that convey more *distance* since they emphasize *others* (cf. Armstrong, 2010), i.e., people who are inherently more psychologically distant than oneself (see e.g., Eyal et al., 2009; Kim, Zhang, and Li, 2008). In line with the above, we propose that in LBM:

H1: A scarcity strategy has a stronger positive influence on informativeness than a social proof strategy.

H2: A scarcity strategy has a stronger positive influence on entertainment than a social proof strategy.

H3: A scarcity strategy has a stronger negative influence on irritation than a social proof strategy.

3.2   THE EXPERIENTIAL ANTECEDENTS OF MESSAGE VALUE

Message value and its three experiential antecedents (i.e., informativeness, entertainment, irritation), as introduced by Ducoffe (1995, 1996), have received support in the marketing literature (see e.g., Bracket and Carr, 2001), including the LBM-domain (see e.g., Xu, Oh, and

Teo, 2009). While the empirical findings in that particular domain are still limited, they highlight that LBM provides value to consumers when these individuals experience location-based messages as relevant and timely (i.e., informative) (e.g., Hühn et al, 2017), pleasurable and fun (i.e., entertaining) (Kim and Han, 2014), but not cognitively overwhelming and unwelcome (i.e., irritating) (Xu et al., 2009). Drawing upon these findings and following Ducoffe's (1995, 1996) theorizing, we postulate that:

H4: Informativeness has a positive influence on message value.

H5: Entertainment has a positive influence on message value.

H6: Irritation has a negative influence on message value.

3.3 THE DETERMINANTS OF STORE VISIT INTENTION

In line with Ducoffe's propositions (1995, 1996), both entertainment and message value have been modeled and tested in previous LBM-studies as direct determinants of consumers' behavioral responses. For instance, scholars have demonstrated direct influences of entertainment on intentions to use permission-based advertising (Richard and Meuli, 2013) and store patronage intentions (Zhu, Sun, and Chang, 2017). In addition, previous studies have reported direct effects of message value on the intention to use location-based advertising (Schade, Piehler, Warwitz and Burmann, 2018), and on information searches, message sharing, and purchases (Lin, Paragas, and Bautista, 2016). Interestingly, though, there are – to the best of the authors' knowledge – no publications in the LBM-domain that analyze the effects of entertainment and message value on store visit intention. Still, supported by Ducoffe's work (1995) and by existing empirical findings indicating that

entertainment and message value positively affect a variety of behavioral outcomes, it appears justified to posit that:

H7: Entertainment has a direct positive influence on store visit intention.

H8: Message value has a positive influence on store visit intention.

4 RESEARCH METHODOLOGY

4.1 DATA COLLECTION

A vignette-based online survey was used to collect the data. The respondents included customers who had joined a research panel of a Dutch fashion retailer specialized in clothing. With 110 physical outlets, a webstore and their own smartphone app, the fashion retailer is an established player in the Dutch market. In the beginning of the online survey, the respondents were confronted with the imaginary situation that they received a location-based message through the retailer's app on their smartphone while being within walking distance from the store. Reflecting the objectives of this research, each respondent was confronted at random with one of the following two messages, which we had established after consulting a panel of experts:[i] "Visit our store now and benefit only today from a 20% discount on a product of your choice" and "Visit our store now and experience the customer service that other customers rate as excellent". After reading the vignette, the respondents completed the online survey. As incentive, four gift coupons, each worth 25 Euro, and one gift coupon worth 100 Euro, were raffled off among all respondents.

4.2 MEASUREMENT INSTRUMENTS

All measures were taken from previously validated measurement instruments. To measure informativeness, entertainment, irritation and message value, five-point multi-item Likert scales were used. Store visit intention was measured using a five-point multi-item semantic differential scale. To assure that all used scales fitted well to the research setting, the wording of some scales was slightly adapted (e.g., we changed "the website is annoying" to "the location-based message is annoying"). Appendix A lists all multi-item measurement scales, including the supporting references. Next to the multi-item scales, the online survey contained measures for the following socio-demographics: age, gender, frequency of visiting the store, and frequency of buying at the store. In addition, to generate more insight into the characteristics of the sample, two single-item Likert scales (strongly disagree – disagree – neutral – agree – strongly agree) were included to measure respondents' interest in the product under study ("I am very interested in clothing") and one's general attitude towards shopping for this product ("I like shopping for clothing").

4.3 SAMPLE CHARACTERISTICS

A total of 579 respondents completed the online survey. Of the respondents, 68.4% (n = 396) were women and 31.6% (n = 183) were men. The majority of the respondents were between 36 and 55 years old (n = 318, 54.9%). Most respondents indicated to visit the physical outlet(s) of the retailer once per month or a couple of times per year (n = 435, 75.1%) and buy at the outlet(s) a couple of times per year (n = 410, 70.8%). Furthermore, the respondents showed a high interest in clothing, as 69.1% (n = 400) responded to the "I am very interested in clothing" statement with an "agree" or "strongly agree". Comparably,

65.1% (n = 377) stated to agree or strongly agree with the statement "I like shopping for clothing". Overall, the sample characteristics show a bias towards middle-aged women, who visit and buy at the stores once per month or less, and who have a high interest in clothing and shopping for clothing.

5   DATA ANALYSIS AND RESULTS

Independent sample T-testing and Partial Least Squares (PLS) modelling were used to estimate and test our model. The T-tests (IBM SPSS Statistics 24) were used to test the effects of the two types of location-based messages on informativeness, entertainment and irritation. To test the other relationships in our model we used the software SmartPLS 3.0 (Ringle, Wende, and Becker, 2015) to apply the consistent PLS-algorithm. This algorithm was selected as it is recommended when research variables are reflective, is less subject to inflated Type I and Type II errors than the more traditional PLS-algorithm (Dijkstra and Henseler, 2015), and mimics the accuracy of parameter estimation and statistical power of covariance-based structure equation modelling (Hair, Hult, Ringle, and Sarstedt, 2017).

5.1   PSYCHOMETRIC TESTING

We used consistent PLS to assess the psychometric qualities of the multi-item constructs. We first evaluated the convergent validity and reliability of the multi-item scales by computing (standardized) factor loadings, Average Variance Extracted (AVE), Cronbach's alphas and composite reliabilities. Table 1 shows the results and includes recommended values as suggested in the scale development literature (e.g., Devellis, 2012; McKenzie et al., 2011;

Ping, 2004). Except for the factor loading of the second entertainment item, which approaches the 0.70 value, all factor loadings, AVEs and alphas surpass the recommended values. Overall, this leads us to conclude that the convergent validity of the measures is confirmed. Also, the reliability of the measures is established since all AVEs, Cronbach's alphas and composite reliability scores exceed the recommended values.

Construct (number of items)	Factor loadings	AVE	Cronbach's alpha	Composite reliability
Informativeness (5)	0.76, 0.92, 0.96, 0.80, 0.71	0.70	0.92	0.92
Entertainment (5)	0.88, 0.68, 0.83, 0.75, 0.81	0.63	0.90	0.89
Irritation (3)	0.96, 0.97, 0.80	0.83	0.93	0.93
Message value (3)	0.92, 0.88, 0.86	0.78	0.92	0.92
Store visit intention (4)	0.95, 0.94, 0.92, 0.91	0.86	0.96	0.96
Recommended value	*0.70*	*0.50*	*0.70*	*0.70*

Table 1 Convergent validity and reliability indicators

To test the discriminant validity of the measures, we followed Henseler, Ringle and Sarstedt (2015, p. 128) who, driven by substantial critique on the Fornell-Larcker criterion and on the assessment of cross-loadings, presented the heterotrait-monotrait (HTMT) ratio of correlations between constructs as an alternative criterion. The HTMT-values between the constructs as displayed in Table 2 show that none of the values surpasses the conservative criterion of 0.85 (Henseler et al., 2015), hereby providing evidence of the discriminant validity of the measures.

	Informativeness	Entertainment	Irritation	Message value	Store visit intention
Informativeness	1				
Entertainment	0.67	1			
Irritation	0.64	0.54	1		
Message value	0.76	0.63	0.63	1	
Store visit intention	0.66	0.51	0.66	0.75	1

Table 2 HTMT-ratio of correlations

Finally, we decided to test for common method bias by making use of the full collinearity test as suggested by Kock and Linn (2012). For each of our five research constructs, we estimated a model in SmartPLS (consistent PLS, 500 iterations) in which we modelled the construct as dependent variable and the other four constructs as independents. A study of the Variance Inflation Factor (VIF) scores between the constructs showed that there were no VIF-scores exceeding the conservative value of 3.3 for the five estimated models (highest VIF informativeness model: 3.19; highest VIF entertainment model: 2.92; highest VIF irritation model: 3.30; highest VIF message value model: 2.64; highest VIF store visit intention model: 2.39). As such, absence of common method bias was established.

5.2 STRUCTURAL MODEL

We then estimated our structural model by taking two steps. First, we ran three independent sample T-tests (IBM SPSS Statistics 24) using the location-based message type as factor (scarcity: n = 319; social proof: n = 260) and informativeness, entertainment and irritation as dependent variables. The results demonstrate significant differences for each of the dependents (informativeness: t = -14.262, p < .001; entertainment = -7.168, p < .001; irritation: t = 8.045, p < 0.001) and show that the respondents perceived the scarcity

message as significantly more informative (scarcity: M = 4.13 , SD = 0.89; social proof: M = 2.94 , SD = 1.08), entertaining (scarcity: M = 3.22 , SD = 0.96; social proof: M = 2.59, SD = 1.11) and less irritating (scarcity: M = 2.21, SD = 1.12; social proof: M = 3.04, SD = 1.33). The results imply that hypotheses 1, 2 and 3 were supported.

Second, we tested the remainder of the structural model by running consistent PLS (500 iterations; consistent PLS bootstrapping with 500 subsamples). Together, informativeness (β = 0.19, p < .001), entertainment (β = 0.50, p < .001) and irritation (β = -0.20, p < .001) explained 62.5% of the variance of message value. Furthermore, entertainment (β = 0.22, p < .01) and message value (β = 0.58, p < .001) explained 58.6% of the store visit intention variance. Overall, these results support hypotheses 4, 5, 6, 7 and 8.

5.3 ADDITIONAL TESTING

To gain additional insights into the mechanisms connecting persuasive location-based message type to store visit intention, we decided to perform additional testing. The objective was to explore an extended model by adding two more relationships: a direct influence of informativeness on the store visit intention and a direct influence of irritation on the store visit intention. The logic behind this extension comes from recent empirical findings suggesting that both advertising message informativeness (see e.g., Alalwan, 2018; Ozcelik and Varnali, 2019; Shareef, Mukerji, Dwivedi, Rana and Islam, 2019) and irritation (see e.g., Redondo and Aznar, 2018; Ozcelik and Varnali, 2019) may directly predict behavioral outcomes. A demonstration of such effects in our study would be of interest as it would imply that persuasive location-based messages that are informative and low in irritation may contribute to store visit intentions in a more direct way than initially thought. To investigate this eventuality, the alternative model was run in PLS, using the same algorithm and settings

as before. The results show an insignificant effect of informativeness on the store visit intention (β = - 0.05, p = 0.265) and a significant effect of irritation on the store visit intention (β = - 0.27, p < .001). When comparing the extended model with the original model in terms of the beta values and the amounts of variance explained, no differences regarding the influences of informativeness, entertainment and irritation on message value are apparent. A comparison of the effects on the store visit intention reveals that the amount of variance explained is slightly higher for the extended model (62.4%) than for the original model (58.6%), whereas the influences of entertainment and message value remain significant but are slightly lower in magnitude (message value: β = 0.51, p < .001; entertainment: β = 0.13, p < .05). Overall, the additional testing re-confirms the selected nomological structure as derived from Ducoffe's (1995) advertising value conceptualization, while at the same time suggesting a direct path from irritation to store visit intention as a valuable extension.

6 DISCUSSION

6.1 KEY FINDINGS

The objective of this empirical examination was to assess and compare the effectiveness of the location-based message persuasion strategies scarcity and social proof in generating message value and triggering consumers' store visit intentions. The results of our analyses lead to several key findings that serve the retailing field. First, our data show that the scarcity message outperforms the social proof message by being more informative, more entertaining and less irritating, which, following the outcomes of our predictive validity testing, is highly relevant given that informativeness, entertainment, and irritation

significantly contribute to overall message value and store visit intentions. Second, when considering the high amounts of variance explained, the results of our analyses demonstrate that the overall influence of the informativeness, entertainment and irritation of a location-based message on message value and the store visit intention can be labelled as rather strong. Third, in terms of relative importance of the three sources of location-based message value, the found magnitudes of the beta values show that entertainment is the strongest determinant of message value, followed by irritation and informativeness. Regarding the store visit intention, our additional testing shows that irritation is the strongest direct determinant followed by entertainment, whereas informativeness did not have a significant influence at all.

6.2 THEORETICAL IMPLICATIONS

In this study, we empirically tested a research model that has two theoretical underpinnings, namely CLT (Trope et al., 2007) and Ducoffe's (1995, 1996) advertising value model. The results of our empirical testing mainly yield three related theoretical implications. First, predicated upon CLT, the findings imply that the more congruent a message is with the limited psychological distance from the store, the more it will lead to an informative, entertaining, and non-irritating experience, and therefore to increased message value and store visit intentions. Accordingly, CLT appears to be an appropriate explanatory framework when analyzing the effectiveness of different types of persuasion strategies (scarcity and social proof) employed in LBM to attract consumers to a physical store, a particular domain on which prior research, given the context-specific nature of persuasion (e.g., Kaptein and Eckles, 2012; Meyers-Levy and Malaviya, 1999), sheds insufficient light. By establishing these

research outcomes, we answer the call for empirical research to explain the effectiveness of persuasion approaches in mobile messaging contexts based on a combination of CLT and persuasion theory (see Katz and Byrne, 2013).

Second, our findings concerning the impact of informativeness, entertainment and irritation prove the relevance of using these three sources of message value as dependent variables when determining the effects of different persuasive location-based messages. As such, our study corroborates the predictive potential of Ducoffe's (1995, 1996) value model when applied in an LBM-context to explain store visit behavior, and adds to the relatively small number of studies in the upcoming field of LBM-effectiveness (e.g., Gazley et al., 2015; Lee et al., 2015).

Third and finally, the results of our additional model testing show that, next to entertainment, also irritation may influence store visit intention over and above message value. This finding adds to other studies in which Ducoffe's model was modified by directly relating multiple experiential antecedents to behavioral variables (e.g., Dar, Ahmed, Muzaffar, Nawaz, and Zahid, 2014; Lee, Byon, Ammon, and Park, 2016; Shareef et al., 2019), and implies that extensions of this model in terms of the specified relationships could increase its nomological validity still further.

6.3   PRACTICAL IMPLICATIONS

For retailers making use or intending to make use of LBM, the results of our study have several implications. First, the results show that the selected persuasion strategy largely determines how a location-based message is experienced by customers. More precisely, the scarcity message was experienced as more informative, more entertaining and less irritating,

and was therefore valued more than the social proof message. This implies that retailers aiming to send valued location-based messages that induce store visits, would benefit more from applying a scarcity than a social proof strategy. Furthermore, following the CLT-based rationale in this study, retailers should be aware that the effectiveness of a particular LBM-persuasion strategy does depend on the extent to which that strategy is congruent with the typical limited psychological distance from the store. Retailers could not only make use of this knowledge when deciding between adopting a scarcity or a social proof strategy to attract store visitors, but also when evaluating the potential of other persuasion strategies that are sometimes used in practice (see e.g., Cialdini, 2007). Finally, when considering the relative importance of the three experiential antecedents of message value, entertainment and irritation seem to be the most relevant direct and indirect determinants of store visit intention. Retailers could capitalize on this finding by making location-based messages as entertaining and non-irritating as possible, for example by adapting the message content to the individual recipient's interests and lifestyle (Kim and Han, 2014).

6.4 LIMITATIONS AND FUTURE RESEARCH

Our study is subject to four main limitations. First, although the use of a sample of real customers of an actual retailer and the focus on a realistic LBM-scenario increased the external validity of the research, the sample consisted of Dutch consumers only. As suggested in previous studies (e.g., Seiter and Gass, 2008), the effectiveness of particular persuasion strategies could depend on the cultural background of the message recipients. For example, the impact of a social proof strategy might be weaker in individualistic national cultures (e.g., in the Netherlands (Bagozzi, Verbeke, and Gavino, 2003)) since individuals tend to conform

less to others in these cultures (Cialdini and Trost, 1998). Future research could further investigate the impact of national culture on persuasive LBM based on samples from multiple countries with dissimilar cultures.

Second, similar to prior empirical studies, we focused on a subset of potential persuasion strategies, namely scarcity and social proof. While, as was described in section 2.1, these two persuasion approaches are among those most relevant, other strategies may also be useful to retailers when conducting LBM. Therefore, we encourage other scholars to assess the relevance and effectiveness of various discrepant persuasion strategies (see e.g., Cialdini, 2007; Kellermann and Cole, 1994) in future LBM-studies.

Third, since extant research offers extremely limited insight into how to persuade consumers to visit a store using LBM, we focus on persuasion strategies and not on the tactical aspects of persuasion (i.e., content-related aspects such as format, argument wording, organization or style) given that in practice those tactical aspects are likely to be decided on only after a company has established a fitting persuasion strategy (cf. Armstrong, 2010). Hence, although we took great care to ensure that the content of the two messages used in our empirical study are representative, our research does not shed light on how varying the content of a scarcity-focused message or of a social proof-focused message would impact the persuasiveness of each of these two types of messages. For example, it is conceivable that the effectiveness of a scarcity strategy in an LBM-context depends on the extent to which the value represented by the particular message is directly quantified in that message (see e.g., Roehm and Roehm, 2011). Answering related research questions could form an interesting avenue for future research.

Fourth, while establishing all relevant antecedents of message value was not the main objective of our study, and Ducoffe's advertising value framework can be considered a well-

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validated conceptual structure, this framework excludes several experiential antecedents that may also be of relevance in LBM-settings. Among such antecedents are message credibility and customization (Dehghani, Niaki, Ramezani, and Sali, 2016; Kim and Han, 2014; Martins, Costa, Oliveira, Gonçalves, & Branco, 2019). Since the explanatory potential of these concepts in an LBM-setting remains unknown, we advise others to determine this potential empirically and to assess whether including additional experiential antecedents of value into the focal research model would improve our understanding of the persuasiveness of LBM-messages.

APPENDIX A: MEASUREMENT INSTRUMENTS

Informativeness (Five-point Likert scale ranging from highly disagree to highly agree; Xu et al., 2009). Mean (SD) = 3.59 (1.14).

1) The location-based message contains up-to-date information.

2) The location-based message supplies relevant information.

3) The location-based message is a good source of information.

4) The location-based message makes information immediately accessible.

5) The location-based message is a convenient source of information.

Entertainment (Five-point Likert scale ranging from highly disagree to highly agree; Cyr et al., 2006; Xu et al., 2009). Mean (SD) = 2.94 (1.07).

1) The location-based message is enjoyable.

2) The location-based message is fun.

3) The location-based message is cool.

4) The location-based message entertains me.

5) The location-based message excites me.

Irritation (Five-point Likert scale ranging from highly disagree to highly agree; Hausman and Siepke, 2009; Xu et al., 2009). Mean (SD) = 2.58 (1.29).

1) The location-based message is annoying.

2) The location-based message is irritating.

3) The location-based message is frustrating.

Message value (Five-point Likert scale ranging from highly disagree to highly agree; Logan et al., 2012; Xu et al., 2009). Mean (SD) = 2.74 (1.19).

1) The location-based message is useful to me.

2) The location-based message is valuable to me.

3) The location-based message is important to me.

Store visit intention (Five-point semantic differential scales; Li et al., 2002). Mean (SD) = 3.13 (1.17).

Visiting the store is …

1) A bad idea – a good idea.

2) A foolish idea – a wise idea.

3) An unpleasant idea – a pleasant idea.

4) A negative idea – a positive idea.

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NOTES:

[i] These experts had a background in the fashion industry (n = 1), retail research (n = 3), and information systems research (n = 2).