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Placing products in humorous scenes: Its impact on brand perceptions

Dr Fanny Fong Yee Chan

Department of Marketing
Hang Seng Management College
The Hang Seng University of Hong Kong
Hang Shin Link, Siu Lek Yuen, Shatin
New Territories, Hong Kong
email: fannychan@hsu.edu.hk

Professor Ben Lowe

Kent Business School
University of Kent,
Canterbury, United Kingdom
email: b.lowe@kent.ac.uk

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Placing products in humorous scenes: Its impact on brand perceptions

Structured Abstract

Purpose

This study extends the literature on marketing communications by exploring the effect of placing products in humorous scenes. It aims to ascertain the prevalence of placement scenes associated with humor in television programs and the effect of humor on brand persuasiveness.

Design/methodology/approach

The study used a two-phase research process. A content analysis of prime-time television programming was conducted to map the relative prevalence of brands placed in humorous contexts and for the selection of research stimuli. This was followed by a large-scale experimental study of 1100 television viewers in Hong Kong with real stimuli that had been digitally manipulated.

Findings

The study found that a humorous context did enhance recall of placed brands but its effect on brand attitudes was mediated by audience involvement in the viewing and moderated by psychological trait reactance. Interestingly, and in contrast to conventional advertising, placing brands in a humorous context led to lower involvement in the viewing which in turn resulted in lower brand attitudes. Individuals with low trait reactance were more positive toward brands placed in a non-humorous context than individuals with high trait reactance while individuals with high trait reactance were more positive toward brands placed in a humorous context, though the difference was less prominent.

Research implications

The findings help to illustrate when and how a humorous context contributes to the recall of and attitudes toward placed brands. The results also facilitate marketers and program producers to choose the best placement context and design more effective placement strategies.

Originality/value

This research is the first to empirically examine the effect of a humorous context on the unaided recall of and attitudes toward brands placed in television programs.

Keywords: Product placement; humor; audience involvement; psychological trait reactance; brand recall; brand attitude

Introduction

Unlike traditional advertising, product placement may overcome consumers' advertising avoidance techniques and allow marketers to communicate with a more captive audience. Product placement is a fast-growing practice and has recorded several consecutive years of growth in revenues (PQ Media, 2020). Product placement is widely researched, and researchers have looked at a range of executional factors that influence its effectiveness, including brand prominence (Marchand *et al.*, 2015), brand congruence (Ferguson and Burkhalter, 2015), character types (Dias *et al.*, 2017), plot/character connection (Pantoja *et al.*, 2016), and placement modality (Hang, 2012), among others. Viewing context factors such as time of viewing and viewing environment (Lehu and Bressoud, 2008), and types of viewing companions (Coker and Altobello, 2018) have also been examined. A few studies have contrasted the effect of product placement with other forms of promotion (Davtyan and Cunningham, 2017; Dens *et al.*, 2018) or tested their joint effect (Uribe, 2016). However, the effect of product placement context, which refers to the circumstances under which a brand is placed, is less widely researched. In particular, the role of humor in product placement effectiveness has seldom been explored, though previous content analyses have shown that product placement is frequently associated with humorous programs (Avery and Ferraro, 2000; Chan and Lowe, 2018; La Ferle and Edwards, 2006). Davtyan and Cunningham (2017) and Ong (2004) also commented that the context of humorous programs is an ideal setting for product placements.

The role of humor in traditional advertising is more widely researched. Crawford and Gregory (2015) found a total of 198 published journal articles on humor in advertising in the last seven decades reflecting an upward trend over time. Likewise, there has been growth in the amount spent on humorous advertising (Lee and Lim, 2008; ZenithOptiMedia, 2018). It is widely believed that the perception of an advertisement could be influenced by the context in which the advertisement appears (Belch and Belch, 2020). Humor captivates audiences and enhances mood,

which can have positive consequences for brands. For example, humorous programs broadcast before a humorous commercial have been shown to lead to a more positive mood and enhance the affect and intensity of humor that individuals perceive in the advertisement (De Pelsmacker *et al.*, 2002). Similarly, the context of a humorous scene may also exert a significant influence on the perception of a placed brand. However, research in this area is comparatively sparse.

The study focuses on product placement, rather than product integration, which reflects a more strategic and integrated approach to placing brands within media content (Belch and Belch, 2020). Two variables (i.e., audience involvement and psychological reactance) have been identified as critical factors in many persuasion and information processing theories and Noguti and Russell (2014) call for future research to examine how personality traits interact with contextual effects in influencing consumer attitudes. Therefore, the moderating role of psychological trait reactance and the mediating role of audience involvement are examined to provide further insight into the effects of humor in product placement. A content analysis of product placement in prime-time television programs was used to map the relative prevalence of brands placed in humorous contexts. It also assisted in identifying realistic stimuli for the subsequent experimental study.

The purpose of product placement is usually to enhance brand salience and reinforce brand meaning. Consumer perceptions of humor are believed to be dynamic, therefore, a combination of cognitive and affective processing theories and measures were employed in this study to provide theoretical explanations of those effects. Unaided recall was used to gauge placement effectiveness because it is an established measure and has been widely adopted in previous research (Bressoud *et al.*, 2010; Dens *et al.*, 2018). Studies have also shown that recall (unaided) is a more effective measure than recognition (aided) for emotion-eliciting stimuli (Bradley *et al.*, 1992). Karrh, McKee and Pardun (2003) found that American practitioners were generally concerned about whether a product was used in a favorable light and they considered

unaided recall as the best measure of placement effectiveness compared to aided recall and brand recognition. Practitioners also regard brand attitude as an appropriate measure of placement effect though are also clearly concerned about variables such as sales. We used attitudes toward placed brands as a proxy for placement effectiveness because previous studies have shown that product placements were more likely to lead to attitudinal changes than changes in purchase intentions or behaviors (Gillespie *et al.*, 2012; Guo *et al.*, 2019).

This research is the first to empirically examine the effect of humor on the unaided recall of and attitudes toward brands placed in television programs. The results make significant theoretical and practical contributions to the field. Theoretically, product placement is a covert form of marketing communication, so humor may possess different effects when compared to traditional advertising. Humor in traditional advertising is designed to draw attention to the advertisement by cutting through advertising clutter. Humor may serve a similar function in product placement by drawing consumer attention toward the placement scene. However, this attention drawing attribute may actually weaken the covert nature of product placement and make its promotion intent become more explicit. Therefore, it is anticipated that humor may play a different role in product placement. Lee and Lim (2008) found that the effectiveness of humor in advertising is regulated by an individual's humor processing and cultural orientation. Most previous studies on humor in advertising and product placement have been conducted in Western contexts with student samples. The current research further contributes to the literature by conducting the research in an Asian context with a sample of the general public to see how these effects relate to other segments of the population. Managerially, understanding the role of humor in product placement facilitates marketers to choose the best placement context and design more effective placement strategies.

Literature Review and Hypothesis Development

The effectiveness of traditional advertising is widely believed to be influenced by its

context (Murphy *et al.*, 1979) and several research studies have focused on examining how context plays a role in advertising effectiveness. Despite increasing research about less conventional advertising tools such as product placement, the role of context is less well understood. Prior research has shown that humorous programs are typical contexts for placing brands (Avery and Ferraro, 2000; Chan and Lowe, 2018; La Ferle and Edwards, 2006). The processing of humor is often seen to be comprised of a cognitive phase and an affective phase. The cognitive phase helps to resolve schema-incongruity, allowing comprehension of the humor, which leads to an affective phase of feeling relaxed (Strick *et al.*, 2012). Humor has been shown to have a significant impact on advertising effectiveness (Eisend, 2009; 2011), but its effect within embedded advertising has rarely been examined. Past research reveals more consistent findings about the cognitive effect of humor in traditional advertising while its impact upon affect has shown mixed results. It is important to investigate to what extent these effects may extend to product placement, which is likely to exhibit differences in response to more conventional scenarios.

Recall of brands placed in humorous context

Humor has been found to enhance the recall of traditional advertising when the commercials were inserted in particular program types. Specifically, humorous commercials are recalled better when inserted within documentary or action programs while non-humorous commercials are recalled better when inserted in comedies (Murphy *et al.*, 1979). This may be related to humor expectancy. A low humor expectancy may draw more attention toward the humorous message thus enhancing the memory of it. One is less likely to expect humorous content when watching a documentary or action program, therefore, the humorous commercial becomes more memorable. A more recent study also showed similar findings. On examining recall of advertising claims, Kellaris and Cline (2007) found that unexpected and relevant humor generally increased ad recall. The joint effects of the two (i.e., a low expectation of humor

occurrence and a high perceived relevancy of humor to the advertising claim) tend to lead to higher message claim recall. Previous studies also suggest that humor, which is integrated in advertising claims, led to higher recall of brands and brand claims (Eisend, 2011). Individuals perceived ads featuring humorous disparagement as more humorous and recalled more advertising claims accurately when they had high power motivation (Newton *et al.*, 2016). This was because featuring disparaging humor in an ad enhanced one's sense of superiority.

The effect of humor on unaided brand recall has yet to be tested in the product placement domain. Free or unaided recall tests how well individuals can retrieve a piece of information without any cues. Humor may have a significant cognitive effect in product placement because it may enhance brand recall by creating relaxing context and it may act as a vehicle to draw attention toward the placed brand (Cowley and Barron, 2008). Previous research has shown that emotion-eliciting stimuli appears to be better stored than stimuli which does not elicit any emotions (Bradley *et al.*, 1992; Lang *et al.*, 1995). The effect was found to be greater for recall (unaided) than recognition (aided) measures (Bradley *et al.*, 1992; Karrh *et al.*, 2003). Encoding is a selection process which is driven by both automatic and controlled processes (Lang, 2000). An automatic process is activated by the relevancy of the information to the individual while a controlled process could be guided by changes or unexpected occurrences.

The presence of humor in the message is likely to activate the controlled process hence people may pay closer attention to the emotion-eliciting message, finding it harder to ignore (Lang, 2000). The heightened attention may then spill over to brands integrated in the humorous scene, which enhances brand encoding (Cowley and Barron, 2008). Unlike traditional advertising in which the appearance of brands and their promotional intent are expected, audiences are comparatively less likely to expect seeing brands in television programs. When brands are placed in a humorous context (i.e., brands are placed at the time that humor occurs), the heightened attention paid to the humorous scene may also draw attention toward the

“unexpected” placed brand and trigger more cognitive elaboration, resulting in higher brand recall. Therefore, it is hypothesized that setting product placements within humorous scenes will facilitate the recall of the placed brand:

H1: A brand that has been placed in a humorous context is better recalled than the same brand placed in the same program but in a non-humorous context.

Previous studies have shown that recall of placed brands does not necessarily lead to improved brand attitudes (Russell, 2002). Van Reijmersdal (2009) pointed out that certain kinds of placement execution (e.g., prominence) could be good for brand memory but bad for brand attitudes. Jeong *et al.* (2011) found that placing brands in violent video games enhanced brand recall but led to negative attitude change, which may discourage marketers from placing brand messages in violent contexts. The effect of humor on the persuasiveness of placed brands has not been systematically examined in past research. Gillespie *et al.* (2018) used humorous and non-humorous statements to induce affective reactions and to manipulate the affective fit between a placement and the emotional tones elicited by the program. Respondents reported more favorable brand attitudes when the placement was congruent with the story plot (cognitive fit) and affective tone (affective fit). Humor was used to manipulate the affective fit and the role of humor in product placement was not empirically examined in their study. Jin and Villegas (2007) examined the role of humor in product placement in movies and found that placing brands in a humorous context led to positive emotional responses and favorable attitudes toward the placement scene, but the positive affect did not transfer to brand attitudes. The study used humorous and non-humorous scenes edited from different movies and the brands might have been portrayed differently. A further understanding of the role of humor on brand persuasiveness in product placement is thus needed.

In traditional advertising, it is believed that humor enhances persuasion by creating

positive affect or by distracting receivers from constructing counterarguments (Duncan, 1979; Duncan and Nelson, 1985; Osterhouse and Brock, 1970). Eisend (2009; 2011) conducted two meta-analyses and concluded that humor decreases negative affect and negative cognitions associated with advertisements. Humorous advertisements have been found to generate relaxed, happy feelings that could transfer to the advertised brand and result in positive brand attitudes (Chan, 2011; Weinberger and Gulas, 1992). Redondo (2012) also found that the positive mood from playing games transferred to positive attitudes toward the brands placed in the game. Incongruity resolution theory regards humor processing as a cognitive problem-solving task, which elicits positive emotions (Alden *et al.*, 2000). Emotions are believed to be an important component of consumer responses in a persuasive context (Lewinski *et al.*, 2014). In other words, humor may affect brand attitudes directly, or indirectly through inducing affective responses toward advertisements (Zhang, 1996). According to the elaboration likelihood model (ELM), individuals who are in a good mood are less likely to disagree with a persuasive message (Bless and Schwarz, 1999). Nabi *et al.* (2007) found that humor interrupted the formation of counterarguments toward a political speech.

Unlike traditional advertisements, which usually appear in a fixed commercial break, product placement involves embedding brands casually in a program, so the persuasive intent of product placement is subtler. Humor may generate positive affect and distract one's counterarguing process but as something which draws attention, it also brings one's attention toward the placed brand which may then be more carefully scrutinized. Therefore, brands placed in a humorous context may not be perceived as positively. In addition, the processing of the humorous scene and the perception of the placed brand may be subjected to an individual's involvement in the viewing. This processing may also prompt different levels of psychological reactance which leads to different interpretations of the placed brand (Brehm and Brehm, 1981). Therefore, the roles of audience involvement and psychological reactance on the processing of

humor and placed brands were examined, for the first time, in this study.

Attitudes toward brands placed in a humorous context and audience involvement

Soldow and Principe (1981) pointed out that one is less likely to notice ads when reading an absorbing article in a magazine (i.e., highly involved in the editorial content) while the same person is probably more likely to pay attention to ads when he/she is reading a magazine casually (i.e., a less involved situation). Unlike television commercials which are clearly separated from programs, product placements are part of a program. Therefore, it is anticipated that the processing of a placed brand may have an impact on one's involvement in the viewing (Buijzen *et al.*, 2010; Petty *et al.*, 1983). Involvement is defined as "an active, motivated state, signifying interest and arousal induced" by something (Moorman *et al.*, 2007, p. 131). In other words, involvement could be viewed as one's motivation and ability to process the information they are exposed to (Zhang and Zinkhan, 2006). As discussed above, humor draws attention and helps to direct individuals to focus on the embedded brand. The arousal of the presence of commercial initiatives may then prompt individuals to respond in a critical, defensive and less positive way (Friestad and Wright, 1994). This competes for one's cognitive resources in processing the program content. Individuals who engage in conscious processing of the persuasive attempt and counterarguing the appearance of the placed brand may devote less attention to the later part of the storyline and the content of the program. As a result, one's involvement in the program is reduced due to the effortful processing of the placed brand (Petty *et al.*, 1983; Chan *et al.*, 2016b).

Individuals may activate critical processing and develop counterarguments only when they realize that someone might be trying to influence them. Humor enhances the identification of the placed brand and consumers may form a more critical evaluation of the persuasive message and produce more counterarguments. Successfully decoding program content and the development of involvement require "concurrent retrieval", a process of continuously retrieving previously known information during viewing to follow the storyline of the television program

(Lang, 2000). The cognitive resources allocated to the counterarguing process may compete with the retrieval of information from long-term memory to aid the understanding of the program content (Lang, 2000). According to the affect transfer model (Lutz, 1985), individuals who encounter more obstacles in the concurrent retrieval process may develop less positive emotion toward the program content and the brands integrated. In contrast, individuals who experience smoother retrieval when processing could then be more involved in the program and this positive feeling may extend to the placed brand. Therefore, it is anticipated that humor has a negative effect on attitude toward a placed brand via the mediator audience involvement. Specifically,

H2a: Participants who are exposed to brands placed in a humorous context will be less involved in the viewing.

H2b: Participants who are less involved in the viewing will have less positive attitudes toward the placed brand.

Attitudes toward brands placed in a humorous context and psychological trait reactance

Psychological reactance is another critical factor affecting consumer responses to promotion content as identified in persuasion theories (Brehm and Brehm, 1981). It represents a motivational state to fight for and regain one's freedoms when those freedoms are being threatened (Chadee, 2011). Psychological reactance could be situational but it could also be a trait, which characterizes an individual's tendency for reactance independent of the situation (Brehm and Brehm, 1981; Hong and Faedda, 1996). Previous studies in humor advertising have taken account of situational reactance. It has been shown that the positive emotions elicited by humor help to minimize one's psychological reactance toward a public service announcement (Skalski *et al.*, 2009). Humorous messages in advertising about safe driving reduce psychological reactance by making persuasive intent less obvious (Jäger and Eisend, 2013). This process helps to prevent the formation of negative brand attitudes. Thus, findings in traditional advertising

suggest that situational psychological reactance may attenuate the effect of humor on brand persuasiveness.

A validated situational reactance scale in product placement processing has yet to be developed. Unlike traditional advertising, the selling intent of product placement is deemed to be subtler. Explicitly measuring it may pose the threat of arousing respondents about a placement and hence they may experience more reactance. Therefore, this study focuses on the effect of trait reactance in placement processing in response to previous calls. It is envisaged that trait reactance may exert a similar effect and in fact little has been done in advertising to examine psychological reactance as an individual trait (Noguti and Russell, 2014). Trait reactance represents a natural tendency to resist messages, which may reduce one's freedom (Hong, 1992). Individuals with high trait reactance are more likely to be alerted by persuasive attempts and are more skillful in counterarguing, whereas individuals with low trait reactance are less reactant toward a persuasive situation (Hong and Faedda, 1996). In other words, individuals with high trait reactance are more likely to recognize the persuasive intent of a placed brand in general. When a brand is placed in a non-humorous context, which is less attention drawing, individuals with low trait reactance are even less likely to engage in effortful processing of the placement, unlike individuals with high trait reactance. As a result, they are less resistant to it and are more positive toward the placed brand than individuals with high trait reactance.

The effect of trait reactance may differ for brands placed in a humorous context where brands are more likely to be noticed. A more humorous scene may direct individuals to have more cognitive processing of the placed brand (Petty et al., 1983). Individuals with low trait reactance are less inclined to counterargue over persuasive attempts and thus may find it more cognitive demanding in developing counterarguments (Lang, 2000). It is therefore anticipated that they will be more negative toward brands placed in a humorous context. On the contrary, it takes fewer cognitive resources for individuals with high trait reactance to counterargue as their

associative memory network is more complex and highly available. Therefore, these individuals are more likely to experience processing fluency and the positive affect brought by humor (Jäger and Eisend, 2013). As a result, individuals with high trait reactance are anticipated to be more positive toward brands placed in a humorous context than individuals with low trait reactance. Therefore, it is hypothesized that psychological trait reactance moderates the effect of humor on the persuasiveness of the placed brand. Specifically,

H3a: When a brand is placed in a non-humorous context, participants with low trait reactance will report a more positive attitude toward the brand than participants with high trait reactance.

H3b: When a brand is placed in a humorous context, participants with high trait reactance will report a more positive attitude toward the brand than participants with low trait reactance.

Figure 1 details the proposed relationships to be examined in this study. One thing to note here is that this study focuses on placing brands in a humorous context regardless of whether it is a humorous program or not. A product may be placed in a humorous scenario in a program that is largely serious in nature or a product may be placed in a serious manner in a program that is relatively lighthearted (Gillespie et al., 2018). Therefore this study considers the context where the placed brand occurs. Previous studies showed that enhancing brand memory does not necessarily improve brand attitudes. For example, incongruity between placed modality and plot connection (Russell, 2002) or prominence (Van Reijmersdal, 2009) improves brand memory but not brand attitudes. Therefore no interaction between recall and attitude is proposed in this study.

Methodology

A two-phase research process was implemented. The first stage of the research involved

a content analysis of a month of Hong Kong prime-time programming. It helps to sketch the current level of brand appearance in television programs and reveal the prevalence of humorous product placement scenes. It also helps to identify potential research stimuli (i.e., humorous placement scenes) for the next stage. Although vignettes have been commonly used in previous studies (d'Astous and Seguin, 1999; Roehm *et al.*, 2004), participants may perceive them as less real when comparing to genuine video clips. Therefore, actual placement scenes were used to enhance the realism and external validity of the research. A graduate student and five final year students were trained to be the coders. They examined a total of 225 hours of prime-time programs and 1225 brand appearances were identified. The context in which a brand appeared was assessed using codes adopted from previous studies, such as serious/boring, neutral and funny/humorous context (La Ferle and Edwards, 2006). A total of 140 (11.5%) brands were found to appear in a funny/humorous context. The inter-coder reliability coefficient was 0.86 (Perreault and Leigh, 1989), which was higher than the guidance offered by Neuendorf (2002).

The second stage involved a one factor between-subjects web-based experimental study exploring the effect of humor on brand persuasiveness. Moorman *et al.* (2007) point out the limitations of using laboratory research to measure brand recall/recognition and Gillespie *et al.* (2012) suggest that further placement studies be conducted in theatre settings. A web-based experimental setting was administered which permits advertising avoidance (Paech *et al.*, 2003) and passive viewing of television (Krugman *et al.*, 1995) as in the real world so to maximize external validity of the findings (Romaniuk, 2009).

Manipulation of Research Stimuli and Pretests

There is no consensus about the definition of humor (Chan, 2011). A humor typology simply classifies humor into aggressive, sexual and incongruous/nonsense (Goldstein and McGhee, 1972; Madden and Weinberger, 1982). Considering that aggressive and sexual humor may be more sensitive to some individuals and may evoke negative emotional reactions such as

anger, offense or embarrassment (Warren *et al.*, 2019), the milder form “incongruous/nonsense” was used in this study. Incongruity humor is also the most frequently used humor typology in advertising, which accounts for 69-82% of humorous ads worldwide and it is believed to be a global humor dimension (Alden *et al.*, 1993; Spotts *et al.*, 1997).

Previous studies have been criticized for using extremely short 1-minute videos (e.g., Janssen *et al.*, 2016; Jin and Villegas, 2007; van Reijmersdal *et al.*, 2013), subtle placements, or placements that lacked connection with the main character (Balasubramanian *et al.*, 2006; Davtyan and Cunningham, 2017). In the present study, episodes of television programs that featured brands naturally placed in the scene and were used by the main character were selected. An episode of a Hong Kong drama series is usually shown in four sessions (i.e., 12 minutes each session). A 5-minute extract with a brand placed visually was used as a research stimulus in this study. Gillespie *et al.* (2012) also used 5-minute clips. It is believed that this moderate length could avoid the placement appearing to be too obvious and it also helps to control the length of the experiment to enhance the quality of the data. Five humorous product placement scenes were shortlisted. The five potential research stimuli were first shown to 50 participants followed by a short survey (Pretest 1) asking participants to evaluate how humorous each video was. The most humorous one was selected as the research stimulus.

Cacioppo and Petty (1984) pointed out that the source of messages might serve as shortcuts for attitude formation. In the case of product placement, a source could be the placed product itself, the program, the character using the placed product, or any other executional styles associated with the placed product. Therefore the non-humorous counterpart was selected from the same program with the same placed brand being used by the same character. This controlled the confounding variables of character fit and attitudes toward the character. The prominence of the placed brand was also controlled as it has been found to be a significant factor in placement effectiveness (Chan *et al.*, 2016a; Cowley and Barron, 2008; Gupta and Lord, 1998). Kamleitner

and Jyote (2013) suggest using scenes featuring character-brand interactions instead of close-up shots of the placed brand to make the placement looks less obtrusive. The humorous video featured the main character using the placed product to take photos in a funny way while the non-humorous video showed the same character taking photos with the same phone but in a serious manner. The product with the brand name was shown on the screen in successive scenes for about 14 seconds for both conditions. The videos were largely the same across the two conditions except the manipulated level of humor. This is regarded as a product placement instead of product integration. There are more than 10 definitions of product placement that have been used interchangeably by scholars (Balasubramanian, 1994). Product placement and product integration are similar in the sense that both involve the inclusion of brands in the media content. Product integration involves a higher level of integration of the product/brand into the storyline. It is a more strategic approach in which the integrated product/brand drives the creative form and content of the entertainment. In this case, the product was incorporated as a prop instead of being a strategic part of the plot and hence was regarded as a product placement.

The two video clips were subsequently shown to ten participants (Pretest 2) followed by a short interview to make sure that the manipulations were perceived by respondents in the way intended. Specifically, participants were asked to report how humorous they found the video clips, how attentive they were while watching the video clips, and any differences between the placement scenes and the relevant prominence of the placed brands in the two videos. The prominence level was judged based on the criteria suggested in previous literature (i.e., the size of the placed product, its location on the screen and the duration of exposure). Following Davtyan and Cunningham (2017), this pretest provides face validity for the research stimuli.

Research Measures and Procedures

The measures and scales used to assess the key constructs were adapted from previous studies. Participants rated humor on three semantic differential items including ‘not

humorous/humorous', 'not funny/funny' and 'not playful/playful' ($\alpha = 0.81$, $CR = 0.89$; Chattopadhyay and Basu, 1990; Nabi *et al.*, 2007). Audience involvement was measured by six statements adapted from Moorman *et al.* (2012), such as 'My thoughts wandered off during watching the video' and 'I paid attention to the video' ($\alpha = 0.83$, $CR = 0.87$). Psychological trait reactance was measured by the refined Hong Psychological Reactance Scale (Hong and Faedda, 1996) and included items such as 'I resist the attempts of others to influence me' and 'When someone forces me to do something, I feel like doing the opposite' ($\alpha = 0.83$, $CR = 0.81$).

Two main dependent variables were measured. Unaided recall was measured by asking participants to type any brands they recalled seeing in the video clip. The method has been used in several advertising (e.g., Till and Baack, 2005) and product placement studies (e.g., Gupta and Lord, 1998; Huang and Yan, 2012). A score of 1 was assigned if participants correctly mentioned the placed brand while a score of 0 was assigned if they did not. Attitude toward the placed brand was measured by six semantic-differential items such as 'dislikeable/ likeable', 'unfavorable/favorable' and 'unappealing/appealing' ($\alpha = 0.94$, $CR = 0.95$; Gupta and Gould, 1997; Matthes *et al.*, 2007). A 7-point Likert scale was employed for the above measures.

Participants were recruited via an online consumer panel in Hong Kong to provide feedback on entertainment programs and personal consumption. Invitations were sent and 3050 participants clicked the link to access the study while about half of them have participated in it. The study could only be accessed via computers (i.e., no mobile phones or tablets) to control the screen size which may have an influence on the prominence of the placed brand. The experiment contained three sections, which were portrayed as separate studies with different cover stories to mask the research purpose. In section 1, participants were invited to report their media habits, and some demographic data for quota checking. In section 2, participants who met the selection criteria (i.e., aged 18 or above and who watch television for at least once a week) were randomly exposed to a 5-minute program extract followed by some factual questions about the video.

Participants who failed to answer any of the factual questions were screened out. The factual questions were very simple and straightforward and were included merely to check that the participants did watch the video. Participants did not need to be highly involved in the video to answer the factual questions. Those who answered all the factual questions accurately were asked to evaluate the program content, their involvement level, and to report any brands that they could recall.

Previous studies found that prior exposure to a movie increased brand recall (Bressoud *et al.*, 2010; Yang and Roskos-Ewoldsen, 2007) or had no significant effect on brand memory (Park and Berger, 2010). Participants who had heard/watched the program before were not eliminated in this study but their prior exposure to the program was assessed. 478 participants reported that they had not heard about the program before. For those who had heard about the program before, a Chi-square analysis showed that participants of varied prior exposure frequency were allocated relatively equally to the humorous and non-humorous groups ($\chi^2(5, n = 622) = 1.642, p = 0.90$). Although measuring participants' prior attitudes toward the placed brand, the character and the program for post-exposure comparison could be more precise, the research aim may have become too explicit and alerted respondents to its true purpose. The random allocation of participants to videos with humorous and non-humorous placement scenes helped to ensure any extraneous differences (e.g., prior attitudes) were randomly distributed across the two groups. In addition, the selected program was aired about two years prior to the study taking place so consumers' memory might have been weakened even though they may have been exposed to it before.

In section 3, participants were asked to report their consumption of different product categories and preferences toward a list of branded products (i.e., the placed brand and a few filler brands). Finally, participants' psychological trait reactance was assessed, their demographic information was collected and they were invited to speculate on the purpose of the

study. The whole study lasted about 25 minutes and the participants were compensated with reward points that could be accumulated for gifts. Incomplete responses and participants who were suspected speeders were excluded from further analysis. The final sample consisted of 1,100 participants with a broad demographic profile reflecting the Hong Kong population (see Table 1). The response rate of 70% in this study compares favorably to other similar research (e.g., Davtyan and Cunningham, 2017). The presence of non-response bias was estimated. Following the procedures of Armstrong and Overton (1977), differences between early and late respondents were not detected using Mann Whitney U tests for key constructs measured in the study. Early and late respondents were classified as the first and last 25% of participants who responded to the study, respectively.

[Please insert Table 1 about here]

Results

Scale Reliability and Manipulation Checks

Reliability tests show that all the scales had adequate Cronbach's alphas above 0.75 and composite reliabilities above 0.80. The high internal consistencies of the scales suggest that they are suitable for summation in further analysis (Nunnally, 1978). An independent samples t-test shows that the manipulation of humor was successful ($M_{non-humorous} = 4.55$, $SD = 1.14$ versus $M_{humorous} = 4.83$, $SD = 1$; $t(1098) = -4.40$, $p < 0.0001$). A series of Chi-square tests were conducted and show that none of the participants' demographics had a significant impact on brand recall. A univariate analysis of variance also shows that none of the participants' demographics had a significant impact on brand attitudes. The interactions among demographics were also insignificant. Participants exposed to brands placed in the humorous and non-humorous contexts did not differ in the level of psychological trait reactance ($M_{non-humorous} = 4.07$, $SD = 0.68$ versus $M_{humorous} = 4.11$, $SD = 0.62$; $t(1098) = -1.09$, $p = 0.274$); attitude toward the character ($M_{non-humorous} = 4.98$, $SD = 1.08$ versus $M_{humorous} = 4.94$, $SD = 1.00$; $t(1098) = 0.62$, $p =$

0.532); and brand familiarity ($M_{non-humorous} = 4.03$, $SD = 1.79$ versus $M_{humorous} = 3.99$, $SD = 1.76$; $t(1098) = 0.46$, $p = 0.644$).

Hypothesis Testing

The first hypothesis proposed that a brand is better recalled when placed in a humorous context compared to a non-humorous context. Among 1100 participants, 32.6% of participants reported seeing a brand placed in the video and were asked to recall the brand name without aids. A Chi-square analysis reveals that a significantly higher proportion of participants recalled the brand placed in a humorous context correctly as opposed to participants exposed to the brand in a non-humorous context (57% versus 43%; see Table 2). Therefore, the analysis shows strong support for H1.

[Please insert Table 2 about here]

The second and third set of hypotheses examined the mediating role of audience involvement and the moderating role of psychological trait reactance on the relationship between humor and perceived brand attitude, respectively. PROCESS Model 5 with ordinary least squares regression and bootstrap estimation (with 5000 bootstrapped samples) was used for testing the mediating and moderating effects proposed in Hypotheses 2 to 3 (Hayes, 2013). The results show that the negative effect of humor on brand evaluation was mediated by level of audience involvement in the viewing (see Table 3). Results show that audience involvement in the viewing decreased when exposed to a brand placed in a humorous-context ($b = -0.13$, $t = -2.15$, $p < 0.05$) and lower involvement led to less positive evaluation of the placed brand ($b = 0.14$, $t = 4.10$, $p < 0.0001$), supporting Hypothesis 2a and 2b.

[Please insert Table 3 about here]

The analysis also shows that the direct effect of humor on brand attitudes was insignificant, while it was significantly moderated by psychological trait reactance ($b = 0.29$, $t = 2.73$, $p < 0.01$; see Table 3). Psychological trait reactance was then dichotomized into two groups

as either high trait reactance (above 4) or low trait reactance (below 4). The average scores for the low and high trait reactance groups are significantly different ($M_{low\ trait\ reactance} = 3.58$, $SD = 0.47$ versus $M_{high\ trait\ reactance} = 4.55$, $SD = 0.42$; $t = -36.07$, $p < 0.0001$). Mean difference in brand attitude was estimated for comparison to illustrate the interaction between humor and psychological trait reactance visually (see Figure 2). Participants with low trait reactance reported a more positive attitude toward a brand that was placed in a non-humorous context than participants with high trait reactance ($M_{low\ trait\ reactance} = 4.74$, $SD = 1.10$ versus $M_{high\ trait\ reactance} = 4.44$, $SD = 1.17$). When a brand was placed in a humorous context, participants with high trait reactance reported a slightly more positive attitude toward the placed brand than participants with low trait reactance, though the difference was insignificant ($M_{low\ trait\ reactance} = 4.43$, $SD = 1.24$ versus $M_{high\ trait\ reactance} = 4.50$, $SD = 1.14$). Therefore, the results show strong support for H3a. Although H3b is not supported, the direction of the differences is consistent with what was proposed.

An independent samples *t*-test was also conducted to see if there were any differences in brand attitudes by brand recall. It shows that participants who correctly recalled the placed brand were not necessarily more positive toward the placed brand ($M_{incorrect\ recall} = 4.65$, $SD = 1.08$ versus $M_{correct\ recall} = 4.83$, $SD = 1.20$; $t(356) = -1.47$, $p = 0.143$).

[Please insert Figure 2 about here]

Discussion and Implications

Constant change in the media landscape has threatened the traditional interruptive model of advertising and consumers have become more resistant toward persuasion attempts. Product placement has become a creative alternative to reach such consumers. The results of this research show that the attention-drawing nature of humor may actually be a double-edged sword in the product placement context. Placing brands in humorous scenes enhanced consumers' brand recall but seems to have had a less positive impact on their brand attitudes. Consistent with

hypothesis 1, humor significantly enhanced the unaided recall of the placed brand and greatly reduced incorrect recall. People are more likely to engage with cognitive works of an unfamiliar (Lee and Mason, 1999) and emotion-eliciting stimulus (Bradley *et al.*, 1992; Lang *et al.*, 1995). Although we did not measure attention specifically, the results suggest that placing brands in a humorous context may have directed one's attention toward the placed brand, which may lead to increased cognitive encoding of the placed brand. This enhanced unaided brand recall. Humor in product placement appeared to be a vehicle for drawing attention toward brands, which were placed at the time that humor occurs (Cowley and Barron, 2008; Eisend, 2009).

While the humorous context has a positive impact on the recall of placed brands, its effect on brand attitudes is more complicated. The results show that the humorous context has a negative effect on attitude toward a placed brand, which was mediated by audience involvement in the viewing. Previous studies identified audience involvement as an important predictor to persuasion (Buijzen *et al.*, 2010; Petty *et al.*, 1983). Product placements are part of a program and hence audience involvement exercised a significant effect on the perception of the placed brands. Humor involves incongruity resolution, so the comprehension of humor usually requires effortful processing (Lee and Mason, 1999; Strick *et al.*, 2012). A humorous context is also an attention drawing device which directs one's attention toward the placed brand. The effortful processing of humor and the critical processing of the placed brand may make a viewer cognitively exhausted. Audience involvement in the viewing involves a concurrent retrieval process in which audiences have to retrieve what they already know about the program to interpret the new program content. Individuals who cannot activate the concurrent retrieval process smoothly might become less involved in the viewing and develop less positive emotions toward it. Audiences who found the viewing less involving and engaging are more likely to lose interest in the program (Lutz, 1985). Participants who were less involved in the viewing had more cognitive resources to process the placed brand and hence displayed less positive attitudes

toward it.

Following prior calls for more research in the area of psychological trait reactance and product placement (e.g., Noguti and Russell, 2014), it was found that trait reactance is a distinctive trait in influencing humor perception. It appears that placing brands in a non-humorous context is more effective for individuals with low trait reactance while a humorous context is more effective for individuals with high trait reactance. Individuals with high trait reactance were in general more predisposed to notice and counterargue with persuasive attempts than individuals with low trait reactance. When a brand was placed in a non-humorous context, the high trait reactance individuals were more likely to notice it and critically process it while the low trait reactance individuals were less predisposed to notice it and engage in counter-arguing. Therefore participants with low trait reactance showed more positive attitudes toward brands placed in a non-humorous context.

When brands were associated with a humorous scene, both high and low trait reactance individuals were likely to be alerted to the persuasive attempt. Individuals with high trait reactance appeared to be more motivated and proficient in counterarguing hence they were more likely to experience processing fluency and the positive affect brought by humor (Jäger and Eisend, 2013). However, individuals with low trait reactance might find it more cognitively demanding in the counter-argumentation process. Therefore, individuals with low trait reactance displayed a slightly less positive brand attitude than individuals with high trait reactance though the difference was insignificant.

Humor in product placement appeared to draw attention toward the placed brand and hence enhanced brand recall. However, there was also a higher likelihood that the placed brand might be susceptible to criticisms of its commercial intent. The study has significant theoretical and managerial implications to the field. Theoretically, the study extends the existing advertising literature by mapping the processing of placed brands in a humorous context and the possible

mediating and moderating effects. The findings help to illustrate when and how humor contributes to the recall of and attitudes toward placed brands. Placing brands in humorous scenes could stimulate stronger brand memory but may also reduce brand attitudes via the mediator audience involvement. Psychological trait reactance appears to be a product placement specific consumer trait factor, which should be taken into consideration when integrating brands in television programs to influence consumers. The effect of humorous placements is subject to individual differences.

Practically, it is suggested that advertisers should place brands in humorous scenes when their communications objectives involve generating brand awareness. This might be important for newer and less familiar brands, for example. Marketers who aim to enhance brand attitudes might better avoid placing brands in humorous scenes and they have to identify programs, which are more popular and engaging to place brands in. Given the complex role of humor in product placement, it suggests marketers and brand managers should take a more systematic and strategic approach to product placement execution. Program producers may also be advised not to integrate brands in humorous scenes as it may lower consumers' involvement in the viewing, which may ultimately affect the program rating. Instead, they should develop more scenes, which are appropriate for placement and are more involving for attracting placement deals. The results serve as useful references for program producers to derive suitable pricing schemes for placement deals in humorous scenes. In addition, psychological trait reactance is suggested to be adopted as a variable of psychographic segmentation in the consumer context, in particular in designing marketing communication campaigns.

Limitations and Future Research

This research is limited by some methodological issues, which are discussed below along with potential areas for future research. This study focused on unaided recall and brand attitudes as these are common measures used in other studies on product placement. Future studies could

measure other constructs further down the hierarchy of effects such as brand choice, sales, press coverage and return on investment, but this largely depends upon communication objectives, which are not always about sales. In addition, we measured audience involvement in this research, consistent with prior studies (Buijzen *et al.*, 2010; Petty *et al.*, 1983; Zhang and Zinkhan, 2006). However, involvement is a multi-faceted construct and individuals may exhibit different levels of involvement with the placed brand, the context, the program and the character. While we used a measure that was general in nature, future research could develop a more multi-faceted measure of audience involvement to acknowledge the different aspects of involvement that may exist in this setting. This study did not measure one's persuasion knowledge, which may play a role in the underlying mechanism of processing persuasive messages in a humorous context. It is suggested that future studies should take account of its role where relevant.

Need for cognition is another individual trait that is becoming more widely researched in persuasion theory. High need for cognition individuals generally find non-humorous advertisements to be more persuasive than low need for cognition people (Cline *et al.*, 2003). According to previous research participants with low need for cognition are more likely to have favorable attitudes toward humorous commercials than participants with high need for cognition (Chan, 2011; Zhang, 1996). This finding suggests that need for cognition could be another moderator of an individual's responses toward brands placed in a humorous context. This study measured need for cognition with a shorter 5-item scale and did not find any significant effect. Future studies may measure the construct with a more comprehensive scale and examine its effect on the perception of humor in product placement.

Lee and Lim (2008) found that participants from cultures with higher uncertainty avoidance and more collectivistic orientations reacted to the uncertainty elements in humor advertising more strongly. Similarly, individuals of different cultures may have a different need for humor (Crawford and Gregory, 2015) and different standards regarding novelty (Lang, 2000)

resulting in different effects to those found here. Future research may extend to other cultures or involve a cross-cultural comparison to investigate the robustness of these effects further.

Instead of assuming humor to influence message processing peripherally, Nabi *et al.* (2007) argue that humor could encourage deeper message processing and discount message argument strength. Following this argument, one may expect a “sleeper effect” on brands placed in a humorous context. In other words, the immediate persuasive effect of humor in product placement may not be very robust but it may enhance over time. Future research may measure the effect of humor on attitude toward a placed brand after a time gap. Longitudinal studies may also be conducted to explore how the effect of humor in product placement manifests over time.

This study examines brands appearing in a humorous context in which humor and the placed brand occurred at the same time. It would be theoretically and practically useful to explore the timing of humor occurrence on placement effectiveness. For example, if a brand is placed some time before or after the humorous scene, would humor distract one from the processing of the placed brand instead of drawing attention toward it? In addition, the study investigates the effect of humorous versus non-humorous contexts. It is believed that the intensity of humor is worthy of further exploration. For instance, is there a saturation point of the effect of humor on the recall of and attitudes toward the placed brand? Will too much humor be beneficial to placement effectiveness or will non-linear effects be exhibited? This study has controlled the prominence of the placed brand. Future research may manipulate the prominence level and explore the interaction between humor and prominence. The level of relevancy of humor to the placed brand is also worth further investigation.

Furthermore, this study focuses on incongruity humor, which is the most frequently employed humor type in traditional advertising. Future studies may examine the effect of different humor types and the intensities of connection between humor and the placed brand. This study used a 5-minute video clip for the research stimuli. It may be argued that the results

here are less likely to apply to media content with longer duration as involvement may weaken over time. However, a shorter clip was used for methodological and theoretical reasons. First, we were trying to test the presence of a humor effect so a shorter and more controlled clip was deemed as being appropriate for internal validity. Second, given the set-up of the study it would not have been practical to ask respondents to watch a full-length TV episode (i.e., 48 minutes) as more would likely have withdrawn from the study. Third, the length of the clip in our study compares favorably with other product placement research (Janssen *et al.*, 2016; Jin and Villegas, 2007; van Reijmersdal *et al.*, 2013). It is also the case that the effects observed here may strengthen with repeated exposure, which was not accounted for in this experiment. Future research into product placement would benefit from establishing generalizability of the findings using research stimuli with longer duration. A scale to measure situational reactance in product placement processing has yet to be developed. Future research may explore this possibility and the possible link between trait and situational reactance in processing brands placed in a humorous context.

References

- Alden, D.L., Hoyer, W.D., and Lee, C. (1993), "Identifying global and culture specific dimensions of humor in advertising: A multinational analysis", *Journal of Marketing*, Vol. 57 No. 2, pp. 64-75.
- Alden, D.L., Mukherjee, A., and Hoyer, W.D. (2000), "The effects of incongruity, surprise and positive moderators on perceived humor in television advertising", *Journal of Advertising*, Vol. 29 No. 2, pp. 1-15.
- Armstrong, J.S. and Overton, T.S. (1977), "Estimating nonresponse bias in mail surveys", *Journal of Marketing Research*, Vol. 14 No. 3, pp. 396-402.
- Avery, R.J. and Ferraro, R. (2000), "Verisimilitude or advertising? Brand appearances on prime-time television", *Journal of Consumer Affairs*, Vol. 34 No. 2, pp. 217-244.
- Balasubramanian, S.K., Karrh, J.A., and Patwardhan, H. (2006), "Audience response to product placements: An integrative framework and future research agenda", *Journal of Advertising*, Vol.35 No.3, pp. 115-141.
- Belch, G.E. and Belch, M.A. (2020), *Advertising and Promotion: An Integrated Marketing Communication Perspective* (12th ed.), Boston: McGraw-Hill Irwin Publishing.
- Bless, H. and Schwarz, N. (1999), "Sufficient and necessary conditions in dual process models: The case of mood and information processing" in S. Chaiken and Y. Trope (Eds.), *Dual Process Theories in Social Psychology*, New York, NY: Guilford Press, pp. 423-440.
- Bradley, M.M., Greenwald, M.K., Petry, M.C., and Lang, P. J. (1992), "Remembering pictures: Pleasure and arousal in memory", *Journal of Experimental Psychology*, Vol. 18 No. 2, pp. 379-390.
- Brehm, S. and Brehm, J.W. (1981), *Psychological reactance: A theory of freedom and control*, New York: Academic Press.
- Bressoud, E., Lehu, J.M., and Russell, C.A. (2010), "The product well placed: The relative impact of placement and audience characteristics on placement recall", *Journal of Advertising Research*, Vol. 50 No. 4, pp. 374-385.
- Buijzen, M., Van Reijmersdal, E. A., and Owen, L. H. (2010), "Introducing the PCMC model: An investigative framework for young people's processing of commercialized media content", *Communication Theory*, Vol. 20 No. 4, pp. 427-450.
- Chadee, D. (2011), "Toward freedom: Reactance theory revisited", in: Chadee, D. (Ed.), *Theories in social psychology*, New York: Blackwell Publishing Ltd., pp. 13-43.
- Chan, F.F.Y. and Lowe, B. (2018), "Product placement practices in prime-time television programs in Hong Kong", *International Journal of Advertising*, Vol. 37 No. 6, pp. 984-1009.
- Chan, F.F.Y., Petrovici, D. and Lowe, B. (2016a), "Antecedents of product placement effectiveness across cultures", *International Marketing Review*, Vol. 33 No. 1, pp. 5-24.
- Chan, F.F.Y., Lowe, B. and Petrovici, D. (2016b), "Processing of product placements and brand persuasiveness", *Marketing Intelligence and Planning*, Vol. 34 No. 3, 355-75.
- Chattopadhyay, A. and Basu, K. (1990), "Humor in advertising: The moderating role of prior brand evaluation", *Journal of Marketing Research*, Vol. 27 No. 4, pp. 466-476.
- Coker, K.K. and Altobello, S. A. (2018), "Product placements in social settings: The impact of covieing on the recall of placed brands", *Journal of Business Research*, Vol. 87, pp. 128-136.
- Cowley, E. and Barron, C. (2008), "When product placement goes wrong: the effects of program liking and placement prominence", *Journal of Advertising*, Vol. 37 No. 1, pp. 89-98.
- Crawford, H.J., and Gregory, G.D. (2015), "Humorous advertising that travels: A review and call for research", *Journal of Business Research*, Vol. 68 No. 3, pp. 569-577.
- D'Astous, A. and Seguin, N. (1999), "Consumer reactions to product placement strategies in television sponsorship", *European Journal of Marketing*, Vol. 33 No. 9/10, pp. 896-910.
- Davtyan, D. and Cunningham, I. (2017), "An investigation of brand placement effects on brand

- attitudes and purchase intentions: Brand placements versus TV commercials”, *Journal of Business Research*, Vol. 70, No. 1, pp. 160-167.
- De Pelsmacker, P., Geuens, M., and Anckaert, P. (2002), “Media context and advertising effectiveness: The role of context appreciation and context/ad similarity”, *Journal of Advertising*, Vol.31 No. 2, pp. 49-61.
- Dens, N., De Pelsmacker, P. and Verhellen, Y. (2018), “Better together? Harnessing the power of brand placement through program sponsorship messages”, *Journal of Business Research*, Vol. 83, pp. 151-159.
- Dias, J.A., Dias, J.G. and Lages, C. (2017), “Can negative characters in soap operas be positive for product placement?”, *Journal of Business Research*, Vol. 71, pp. 125-132.
- Duncan, C.P. (1979), “Humor in advertising: A behavioral perspective”, *Journal of the Academy of Marketing Science*, Vol. 7 No. 4, pp. 285-306.
- Duncan, C.P., and J.E. Nelson. (1985), “Effects of humor in a radio advertising experiment”, *Journal of Advertising* Vol. 14 No. 2, pp. 33-40, 64.
- Eisend, M. (2009), “A meta-analysis of humor in advertising”, *Journal of the Academy of Marketing Science*, Vol. 37 No. 2, pp. 191–203.
- Eisend, M. (2011), “How humor in advertising works: A meta-analytic test of alternative models”, *Marketing Letters*, Vol. 22, No. 2, pp. 115-132.
- Ferguson, N.S. and Burkhalter, J.N. (2015), “Yo, DJ, that's my brand: An examination of consumer response to brand placements in hip-hop music”, *Journal of Advertising*, Vol. 44 No. 1, pp. 47-57.
- Friestad, M. and Wright, P. (1994), “The persuasion knowledge model: How people cope with persuasion attempts”, *Journal of Consumer Research*, Vol. 21 No. 1, pp. 1-31.
- Gillespie, B., Joireman, J., and Muehling, D. (2012), “The moderating effect of ego-depletion on viewer brand recognition and brand attitudes following exposure to subtle versus blatant product placements in television programs”, *Journal of Advertising*, Vol. 41 No. 2, pp. 55-65.
- Gillespie, B., Muehling, D.D., and Kareklasc, I. (2018), “Fitting product placements: Affective fit and cognitive fit as determinants of consumer evaluations of placed brands”, *Journal of Business Research*, Vol. 82, pp. 90-102.
- Goldstein, J.H. and McGhee, P.E. (1972), *The Psychology of Humor: Theoretical perspectives and empirical issues*, New York: Academic Press.
- Guo, F., Ye, G. Hudders, L., Lv, W., Li, M., and Duffy, V.G. (2019), “Product placement in mass media: A review and bibliometric analysis”, *Journal of Advertising*, Vol. 48 No. 2, pp. 215-231.
- Gupta, P.B. and Gould, S.J. (1997), “Consumers’ perceptions of the ethics and acceptability of product placements in movies: Product category and individual differences”, *Journal of Current Issues and Research in Advertising*, Vol. 19 No. 1, pp. 37-50.
- Gupta, P.B. and Lord, K.R. (1998), “Product placement in movies: The effect of prominence and mode on audience recall”, *Journal of Current Issues and Research in Advertising*, Vol. 20 No. 1, pp. 47-59.
- Hang, H. (2012), “The implicit influence of bimodal brand placement on children: Information integration or information interference?”, *International Journal of Advertising*, Vol. 31 No. 3, pp. 465-484.
- Hayes, A.F. (2013), *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-based Approach*. New York: Guilford Press.
- Hong, S.M. (1992), “Hong’s psychological reactance scale: A further factor analytic validation”, *Psychological Reports*, Vol. 70 No. 2, pp. 512-514.
- Hong, S.M. and Faedda, S. (1996), “Refinement of the Hong psychological reactance scale”, *Educational and Psychological Measurement*, Vol. 56 No. 1, pp. 173-182.
- Huang, J. and Yan, T. (2012), “The effectiveness of in-game advertising: The impacts of ad type

- and game/ad relevance”, *International Journal of Electronic Business Management*, Vol. 10 No. 1, pp. 61–72.
- Jäger, T. and Eisend, M. (2013), “Effects of fear-arousing and humorous appeals in social marketing advertising: The moderating role of prior attitude toward the advertised behavior”, *Journal of Current Issues & Research in Advertising*, Vol. 34 No. 1, pp. 125-134.
- Janssen, L., Franssen, L.M., Wulff, R. and Van Reijmersdal, E.A. (2016), “Brand placement disclosure effects on persuasion: The moderating role of consumer self-control”, *Journal of Consumer Behaviour*, Vol. 15, pp. 503-515.
- Jeong, E.J., Bohil, C.J., and Biocca, F.A. (2011), “Brand logo placements in violent games”, *Journal of Advertising*, Vol. 40 No. 3, pp. 59-72.
- Jin, C.H. and Villegas, J. (2007), “The effect of the placement of the product in film: Consumers’ emotional responses to humorous stimuli and prior brand evaluation”, *Journal of Targeting, Measurement and Analysis for Marketing*, Vol. 15 No. 4, pp. 244–255.
- Kamleitner, B. and Khair, J.A. (2013), “How using versus showing interaction between characters and products boosts product placement effectiveness”, *International Journal of Advertising*, Vol. 32 No. 4, pp. 633-653.
- Karrh, J.A., McKee, K.B., and Pardun, C.J. (2003), “Practitioners’ evolving views on product placement effectiveness”, *Journal of Advertising Research*, Vol. 43 No. 2, pp.138-149.
- Kellaris, J.J. and Cline, T.W. (2007), “Humor and ad memorability: On the contributions of humor expectancy, relevancy, and need for humor”, *Psychology & Marketing*, Vol. 24 No. 6, pp. 497-509.
- Krugman, D.M., Cameron, G.T. and White, C.M. (1995), “Visual attention to programming and commercials: the use of in-home observations”, *Journal of Advertising*, Vol. 24 No. 1, pp. 1–12.
- La Ferle, C. and Edwards, S.M. (2006), “Product placement: How brands appear on television”, *Journal of Advertising*, Vol. 35 No. 4, pp. 65–86.
- Lang, A., Dhillon, P., and Dong, Q. (1995), “Arousal, emotion, and memory for television messages”, *Journal of Broadcasting and Electronic Media*, Vol. 38, pp. 1–15.
- Lang, A. (2000), “The limited capacity model of mediated message processing”, *Journal of Communication*, Vol. 50 No. 1, pp. 46–70.
- Lee, Y.H. and Lim, E.A.C. (2008), “What’s funny and what’s not: The moderating role of cultural orientation in ad humor”, *Journal of Advertising*, Vol. 37 No.2, pp. 71–84.
- Lee, Y.L. and Mason, C. (1999), “Responses to information incongruity in advertising: The role of expectancy, relevancy, and humor”, *Journal of Consumer Research*, Vol. 26 No. 2, pp. 156–169.
- Lehu, J. and Bressoud, E. (2008), “Effectiveness of brand placement: New insights about viewers”, *Journal of Business Research*, Vol. 61 No.10, pp. 1083–1090.
- Lewinski, P., Franssen, M.L., and Tan, E.S. (2014), “Predicting advertising effectiveness by facial expressions in response to amusing persuasive stimuli”, *Journal of Neuroscience, Psychology, and Economics*, Vol. 7 No.1, pp. 1–14.
- Lutz, R.J. (1985), “Affective and cognitive antecedents of attitude toward the ad: A conceptual framework,” in L.F. Alwitt and A.A. Mitchell (Eds.), *Psychological Processes and Advertising Effects: Theory, Research and Application*, Hillsdale, NJ: Erlbaum (1985), pp. 45-63.
- Mackay, T., Ewing, M., Newton, F., and Windisch, L. (2009), “The effect of product placement in computer games on brand attitude and recall”, *International Journal of Advertising*, Vol. 28 No. 3, pp. 423–438.
- Madden, T.J. and Weinberger, M.G. (1982), “The effects of humor on attention in magazine advertising”, *Journal of Advertising*, Vol. 11 No.3, pp. 8-14.
- Marchand, A., Hennig-Thurau, T. and Best, S. (2015), “When James Bond shows off his Omega:

- Does product placement affect its media host?", *European Journal of Marketing*, Vol. 49 No. 9/10, pp. 1666–85.
- Matthes, J., Schemer, C. and Wirth, W. (2007), "More than meets the eye: Investigating the hidden impact of brand placements in television magazines", *International Journal of Advertising*, Vol. 26 No. 4, pp. 477-503.
- Moorman, M., Neijens, P.C., and Smit, E.G. (2007), "The effects of program involvement on commercial exposure and recall in a naturalistic setting", *Journal of Advertising*, Vol. 36 No. 1, pp. 121-137.
- Moorman, M., Willemsen, L.M., Neijens, P.C., and Smit, E.G. (2012), "Program involvement effects on the processing of embedded and successive advertising", *Journal of Advertising*, Vol. 41 No. 2, pp. 25-38.
- Murphy, J.H., Cunningham, I.C.M. and Wilcox, G.B. (1979), "The impact of program environment on recall of humorous television commercials", *Journal of Advertising*, Vol. 8 No. 2, pp. 17-21.
- Nabi, R. L., Moyer-Gusé, E., and Byrne, S. (2007), "All joking aside: A serious investigation into the persuasive effect of funny social issue messages", *Communication Monographs*, Vol. 74 No. 1, pp. 29-54.
- Neuendorf, K.A. (2002), *The content analysis guidebook*. Thousand Oaks, CA: Sage.
- Newton, J.D., Wong, J. and Newton, F.J. (2016), "Listerine—for the bridesmaid who's never a bride", *European Journal of Marketing*, Vol. 50 No. 7/8, pp. 1137-1158.
- Noguti V. and Russell, C.A. (2014), "Normative influences on product placement effects: Alcohol brands in television series and the influence of presumed influence", *Journal of Advertising*, Vol. 43 No. 1, pp. 46-62.
- Nunnally, J.C. (1978), *Psychometric Theory, 2nd edition*, New York: McGraw-Hill.
- Ong, B.S. (2004), "A comparison of product placements in movies and television programs: An online research study", *Journal of Promotion Management*, Vol. 10 No. 1-2, pp. 147-158.
- Osterhouse, R. and Brock, T. (1970), "Distraction increases yielding to propaganda by inhibiting counterarguing", *Journal of Personality and Social Psychology*, Vol. 15 No. 4, pp. 344-358.
- Paech, S., Riebe E. and Sharp, B. (2003), *What do people do in advertisement breaks?*, ANZMAC Conference, Adelaide, 2(H)3.
- Pantoja, F., Rossi, P. and Borges, A. (2016), "How product-plot integration and cognitive load affect brand attitude: A replication", *Journal of Advertising*, Vol. 45 No.1, pp. 113-119.
- Park, D.J. and Berger, B. K. (2010), "Brand placement in movies: The effect of film genre on viewer recognition", *Journal of Promotion Management*, Vol. 16 No. 4, pp. 428-444.
- Perreault, W.D. and Leigh, L.E. (1989), "Reliability of nominal data based on qualitative judgments", *Journal of Marketing Research*, Vol. 26 No. 2, pp. 135-48.
- Petty, R.E., Cacioppo, J. T., and Schumann, N. (1983), "Central and peripheral routes to advertising effectiveness: The moderating role of involvement", *Journal of Consumer Research*, Vol. 10 No.2, pp. 135-146.
- PQ Media (2020), "Global product placement spend up 14.5% last year.", available at: http://www.insideradio.com/free/pq-media-global-product-placement-spend-up-14-5-last-year/article_dea0be76-a636-11ea-b2cf-fba58349746c.html (accessed 1st July 2020).
- Roehm, M.L., Roehm, H.A. and Boone, D.S. (2004), "Plugs versus placements: A comparison of alternatives for within-program brand exposure", *Psychology and Marketing*, Vol. 21 No. 1, pp. 17-28.
- Romaniuk, J. (2009), "The efficacy of brand-execution tactics in TV advertising, brand placements and internet advertising", *Journal of Advertising Research*, Vol. 49 No.2, pp. 143-150.
- Redondo, I (2012), "The effectiveness of casual advergames on adolescents' brand attitudes", *European Journal of Marketing*, Vol. 46 No. 11/12, pp. 1671-88.

- Russell, C. (2002), "Investigating the effectiveness of placements in TV shows: The role of modality and plot connection congruence on brand memory and attitude", *Journal of Consumer Research*, Vol. 29 No.3, pp. 306-318.
- Skalski, P., Tamborini, R., Glazer, E. and Smith, S. (2009), "Effects of humor on presence and recall of persuasive messages", *Communication Quarterly*, Vol. 57 No. 2, pp. 136-153.
- Soldow, G.F. and Principe, V. (1981), "Response to commercials as a function of program context", *Journal of Advertising Research*, Vol. 21 No. 2, pp. 59-65.
- Spotts, H.E., Weinberger, M.G. and Parsons, A.L. (1997), "Assessing the use and impact of humor on advertising effectiveness: A contingency approach", *Journal of Advertising*, Vol. 26 No.3, pp. 17-32.
- Strick, M., Holland, R.W., van Baaren, R.B. and van Knippenberg, A. (2012), "Those who laugh are defenseless: How humor breaks resistance to influence", *Journal of Experimental Psychology: Applied*, Vol. 18 No. 2, pp. 213-223.
- Till, B. and Baack, D.W. (2005), "Recall and persuasion. Does creative advertising matter?", *Journal of Advertising*, Vol. 34 No.3, pp. 47-57.
- Uribe, R. (2016), "Separate and joint effects of advertising and placement", *Journal of Business Research*, Vol. 69 No. 2, pp. 459-465.
- Van Reijmersdal, E.A. (2009), "Brand placement prominence: Good for memory! Bad for attitudes?", *Journal of Advertising Research*, Vol. 49 No. 2, pp. 151-153.
- Van Reijmersdal, E.A., Tutaj, K., and Boerman, S.C. (2013), "The effects of brand placement disclosures on scepticism and brand memory", *The European Journal of Communication Research*, Vol. 38 No. 2, pp. 127-146.
- Warren, C., Carter, E.P., and McGraw, A.P. (2019), "Being funny is not enough: The influence of perceived humor and negative emotional reactions on brand attitudes", *International Journal of Advertising*, pp. 1-21.
- Weinberger, M.G. and Gulas, C.S. (1992), "The impact of humor in advertising: A review", *Journal of Advertising*, Vol. 21 No. 4, pp. 35-59.
- Yang, M. and Roskos-Ewoldsen, D.R. (2007), "The effectiveness of brand placements in the movies: Levels of placements, explicit and implicit memory, and brand-choice behavior", *Journal of Communication*, Vol. 57 No. 3, pp. 469-489.
- ZenithOptimedia (2020), "ZenithOptimedia forecasts 4.1% growth in global adspend in 2013", available at: <https://www.zenithmedia.com/zenithoptimedia-forecasts-4-1-growth-in-global-adspend-in-2013/> (accessed 13th April 2020).
- Zhang, Y. (1996), "Responses to humorous advertising: The moderating effect of need for cognition", *Journal of Advertising*, Vol. 25 No. 1, pp. 15-32.
- Zhang, Y. and Zinkhan, G.M. (2006), "Responses to humorous ads: Does audience involvement matter?", *Journal of Advertising*, Vol. 35 No. 4, pp. 113-127.

Figure 1 The conceptual framework of the study

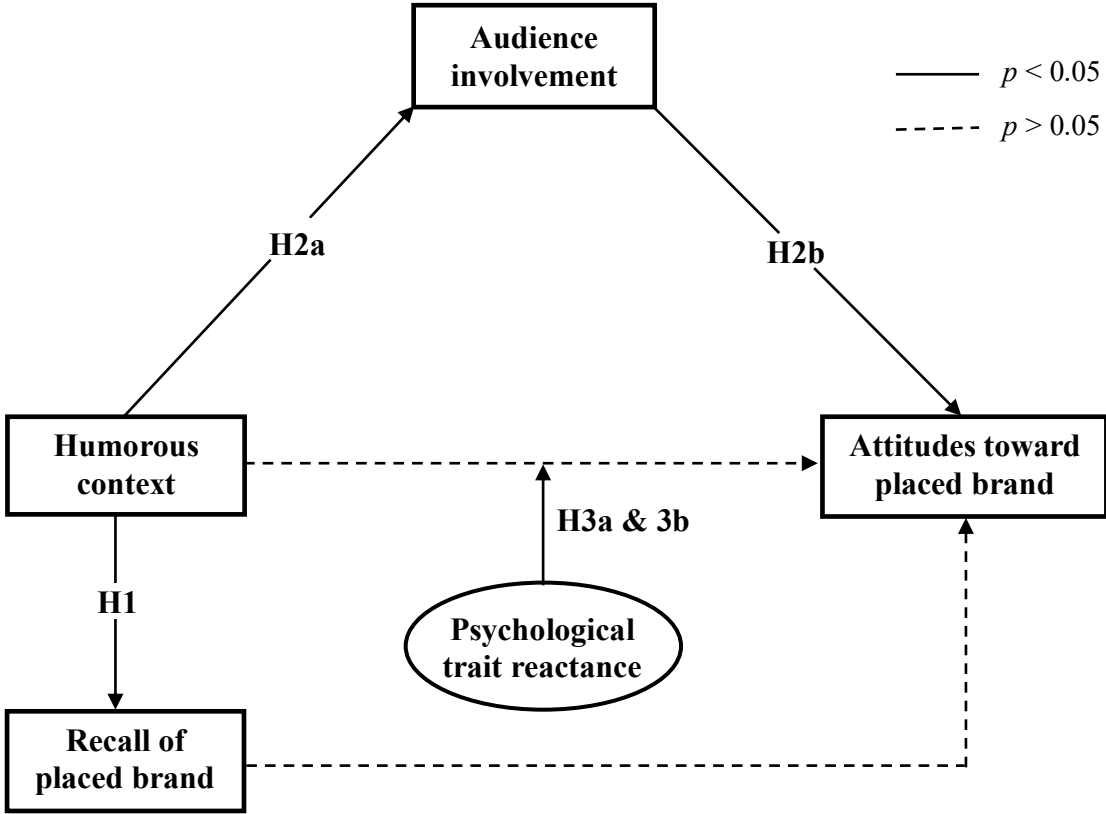


Figure 2 The moderating role of psychological trait reactance on the effect of humor on brand attitudes

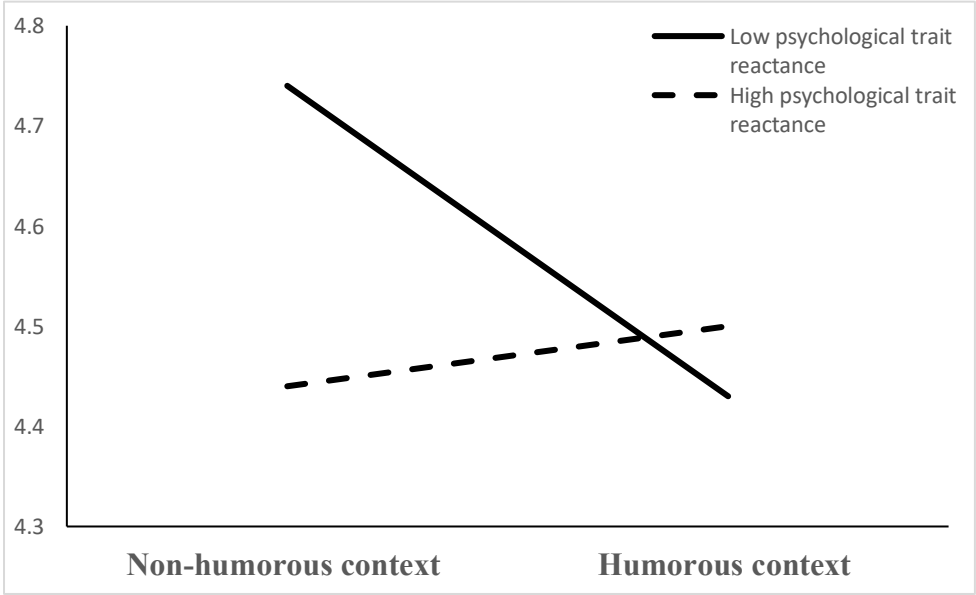


Table 1 Sample profile of the experimental study

Demographics	<i>N</i> = 1100 (%)
<i>Gender</i>	
Male	556 (51%)
Female	544 (49%)
<i>Age Group</i>	
18-34	371 (34%)
35-49	377 (34%)
50 or above	352 (32%)
<i>Education Level</i>	
Secondary or below	377 (34%)
Post-secondary/Technical College	188 (17%)
Bachelor	412 (38%)
Master or above	123 (11%)
<i>Occupation</i>	
Full-time employed	875 (80%)
Part-time employed/Student/Homemaker	225 (20%)
<i>Monthly Household Income</i>	
HK\$24,999 or below	301 (27%)
HK\$25,000-39,999	281 (26%)
HK\$40,000-59,999	260 (24%)
HK\$60,000 or above	226 (20%)
Prefer not to state	32 (3%)
<i>Frequency of watching TV per week</i>	
1 or 2 times	106 (10%)
3 or 4 times	148 (13%)
5 times or more	846 (77%)

Table 2 Unaided recall of placed brands by context

Context	Brand Recall	
	Correct	Incorrect
Humorous	108 (57%)	55 (33%)
Non-humorous	82 (43%)	113 (67%)

$\chi^2 (1, N = 358) = 20.89, p < 0.0001$

Table 3 Mediating and moderating effects for humor on brand attitudes

Bootstrap analyses						
Effect	Description	Coefficient	SE	<i>t</i> - statistic	<i>p</i> - value	95 % CI
a	Humor on audience involvement	-0.131	0.061	-2.15	< 0.05	-0.250, -0.011
b	Audience involvement on brand attitudes	0.143	0.035	4.10	< 0.001	0.075, 0.211
c'	Humor on brand attitudes	-0.093	0.070	-1.32	0.19	- 0.230, 0.045
d	Psychological trait reactance on relation between humor and brand attitudes	0.292	0.107	2.73	< 0.01	0.082, 0.502

Notes: Bootstrap analyses are based on 5,000 resamples; the coefficients are unstandardized; SE = standard error; CI = confidence interval.