Computers in Human Behavior 85 (2018) 125-134

Contents lists available at ScienceDirect

Computers in Human Behavior

journal homepage: www.elsevier.com/locate/comphumbeh

Full length article

Perceived message consistency: Explicating how brand messages being processed across multiple online media

Yuhmiin Chang

Department of Advertising, College of Communication, National Chengchi University, 64, Sec. 2, Zhinan Rd., Taipei, 11605, Taiwan, Republic of China

ARTICLE INFO

Article history: Received 28 August 2017 Received in revised form 8 February 2018 Accepted 22 March 2018 Available online 26 March 2018

Keywords: Consistency Cross-media Expectancy evaluation Relevancy evaluation Message consistency scale Online media

ABSTRACT

People tend to search product information from various online media. Although high perceived message consistency is crucial to a brand's success, how multiple online brand messages being processed and how can it be measured have not been elucidated and tested. This study initiates an attempt to articulate the mechanism underlying perceived message consistency across multiple online media and to develop a scale using a rigid scale development procedure. Three survey studies have been conducted. The findings demonstrated that perceived message consistency results from the relevancy and expectancy evaluations. Relevancy and expectancy evaluations are either positively or negatively correlated in the highrelevancy situation and not correlated in the low-relevancy situation. In addition, the eight scale items developed by this study have been demonstrated to be valid and reliable to measure perceived message consistency across individuals of different ages (i.e., from 18 to 61), product categories (i.e., bottled water, movie, and notebook), and online media (i.e., YouTube, news site, and review site). The scale items were also demonstrated to be better than existing scales that involve only relevancy evaluation items.

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1. Introduction

People are exposed to multiple brand messages from various online media such as YouTube, news sites, and blogs along their decision journey. Many scholars believe that consistency across brand messages is the necessary antecedent of synergy. Consistency is essential for brand messages to be successfully integrated into individuals' brand memory networks, leading to synergized communication effects such as more positive brand attitude and higher consumer-based brand equity (Duncan, 2005; Keller, 2009). One study that involved 27,000 individuals across 14 industries also found that higher perceived message consistency increases satisfaction by 20 percent and increases revenue by up to 15 percent (Pulido, Stone, & Strevel, 2014). Because high perceived message consistency is crucial to a brand's success, marketers strive to ensure brand messages to be perceived as consistent. Nonetheless, what is perceived message consistency, and how can it be measured?

Conceptually, perceived message consistency involves two aspects: message elements and an evaluation mechanism. In other words, perceived message consistency is the result of consumers'

E-mail address: changy@nccu.edu.tw.

In addition, among the nine message consistency scales found,

evaluation of various message elements across multiple brand messages. Previous integrated marketing communication (IMC)

studies have suggested that brand messages should be consistent in

terms of their strategic and executional elements (Delgado-

Ballester, Navarro, & Sicilia, 2012; Kanso, Alan Nelson, & Kitchen,

2015; Lee & Park, 2007; McGrath, 2011; Nowak & Phelps, 1994).

What is unclear is how consumers evaluate the strategic and exe-

cutional elements of multiple brand messages. The evaluation

mechanism between multiple brand messages has not received

enough attention (Delgado-Ballester et al., 2012). Previous studies

have focused on the evaluation mechanism involving only one

brand message, such as the visual-verbal consistency of a print

advertisement (Heckler & Childers, 1992) and ad-brand consistency

(Halkias & Kokkinaki, 2014). The few studies that have focused on

multiple brand messages do not elucidate the evaluation mecha-

nisms (McGrath, 2011; Navarro-Bailón, 2012; Navarro, Sicilia, & Delgado-Ballester, 2009). Speed and Thompson (2000) and

Gwinner and Eaton (1999), whose scales were adapted in studies

relating to the strategic element of message consistency (Navarro

et al., 2009; Navarro-Bailón, 2012) also failed to demonstrate a clear theoretical foundation. This study, thus, initiates an attempt to

articulate evaluation mechanisms in the context of multiple brand

messages on the Web.







four are related to brand managers' perceptions of message consistency (Chen, 2011; Lee & Park, 2007; Low, 2000; Reid, 2005). Although the remaining five scales are related to consumers' perception of message consistency, three of them focus on the strategic element (Delgado-Ballester et al., 2012; Navarro et al., 2009; Navarro-Bailón, 2012) and two of them focus on the executional element (McGrath, 2011; Wang & Nelson, 2006). None of the scales was focused on both elements or was tested through the rigid scale development process. Therefore, this study also aims to develop a scale that manifests the message elements and evaluation mechanisms of consumers' perception of message consistency through a more rigid scale development procedure.

The subsequent sections follow the scale development and analysis procedure of Gerbing and Anderson (1988), Worthington and Whittaker (2006), and DeVellis (2012). According to them, scale development involves three stages: conceptualization, item generation, and scale purification. At the conceptualization stage, this study articulates the message elements and evaluation mechanisms related to perceived message consistency. At the item generation stage, twenty-four initial items were generated from various sources. At the scale purification stage, three studies have been conducted to optimize scale length; examine the factor structure, validities, and reliabilities of the scale; and test the relationship between relevancy and expectancy evaluations.

2. Stage one: conceptualization and theoretical background

2.1. Message elements of perceived message consistency

In the early 1990s, scholars suggested that message consistency involves both strategic and executional elements. Keller (1996) suggests that strategically and executionally consistent brand messages can create an integrated and extensive brand memory network that are strongly associated with a brand's core concept. Duncan (2005) also suggest that consistency at the executional level is only the tip of the iceberg. Consistency should go deeper to the strategic or even the corporate mission level so that consumers can enjoy a consistent brand experience across various touchpoints.

Consistency at the strategic level refers to brand messages communicating brand positioning or similar brand meaning. Nowak and Phelps (1994) and Phelps and Johnson (1996) have suggested that message consistency involves maintaining a clear positioning across all communication tools, such as advertising and publicity. Duncan (2005) also believes that marketers should tailor their messages to various stakeholders while maintaining a single brand positioning, a notion that has been accepted in the recent literature on message consistency (Chen, 2011; Chen & Wong, 2012). Navarro-Bailón (2012) is one of the first to examine consumers' perception of the strategic element of message consistency. Because most consumers do not know brands' positioning, Navarro-Bailón (2012) defines the construct as the existence of a common brand meaning shared among multiple means of communication.

In contrast, consistency at the executional level refers to brand messages that communicate similar verbal, visual, or tonal elements. Nowak and Phelps (1994) and Phelps and Johnson (1996) have used the term "one-voice and one-look" communication to describe message consistency. This concept emphasizes the need for a brand to integrate key verbal and visual foci across all brand messages. Key verbal foci include headlines, slogans, or other verbal elements of brand messages (Heckler & Childers, 1992; Kanso et al., 2015). Key visual foci include characters (e.g., the Jolly Green Giant), settings (e.g., Marlboro's Western imagery), typefaces, logos, colors, and other design elements (Duncan, 2005; McGrath, 2011; Voorveld & Valkenburg, 2015). McGrath (2011) also suggests that brand messages' overall tone should be consistent at the executional level. Key tonal execution refers to how executional elements are expressed to induce similar subjective feelings (Daignault, Soroka, and Giasson 2013; McGrath, 2011).

Therefore, the current belief about perceived message consistency is that it is necessary to maintain a single brand meaning (i.e., the strategic element) and to share common verbal, visual, and tonal foci (i.e., the executional elements) across different brand messages, thus ensuring that consumers perceive various brand messages as consistent.

2.2. Evaluation mechanisms of perceived message consistency

Heckler and Childers (1992) propose that consumers' perception of the visual-verbal consistency of a print advertisement involves both relevancy and expectancy evaluations. A relevancy evaluation is a process in which consumers evaluate a print advertisement's visual and verbal messages in terms of the degree to which the two message elements contribute to the clear identification of the common communication theme. The two message elements are perceived to be highly relevant if consumers can clearly identify the common communication theme. For example, if the visual message shows a fleet of delivery trucks cruising at high speed and a verbal message says "express," consumers will perceive the visual and verbal elements as highly relevant because they can identify the common communication theme of rapid delivery. In contrast, expectancy evaluation is the process through which consumers evaluate message elements in terms of the degree to which message elements fit existing schema evoked by the common communication theme (Lee & Mason, 1999). The message elements will be perceived as expected if consumers are not surprised, because the presentation of those message elements fit the existing schema of the common communication theme. For a campaign with a common theme of rapid delivery, an expected visual message can be a fleet of delivery trucks cruising at high speed. A unexpected visual message can be a fleet of delivery trucks with bullet-shaped containers cruising at high speed (Lee & Mason, 1999). In other words, Heckler and Childers (1992) believe that consistency evaluation is a two-step process; relevancy evaluation followed by expectancy evaluation. Higher perceived relevancy and expectancy result in higher perceived consistency.

This study takes a step further to extend the two evaluation mechanisms to the context of multiple brand messages on the basis of the exemplar model of classification, schema congruity theory, and norm theory. The exemplar model of classification is used to explain the relevancy evaluation of brand extension consistency (Goh, Chattaraman, and Forsythe, 2013). The exemplar model of classification suggests that a new object is compared against memory representations of the exemplars or brand nodes. Brand nodes that either have high memory strength or are highly relevant to the new object are more likely to be retrieved and therefore to influence the classification decision the most strongly. The new object will then be stored in the memory category with which it shares the greatest overall relevancy (Kruschke, 2011; Nosofsky, 2011). In the same vein, the relevancy evaluation of multiple brand messages involves three steps: (1) retrieve memory nodes of previously exposed brand messages in terms of key brand meaning and verbal/visual/tonal executions that are high in memory strength or relevancy to the new brand message, (2) perform a relevancy evaluation between the new brand message and the retrieved memory nodes, and (3) determine the level of relevancy (see Fig. 1).

In the case of a YouTube commercial film followed by an online publicity situation, a consumer will retrieve a recently viewed YouTube commercial film about Zara from his or her brand memory

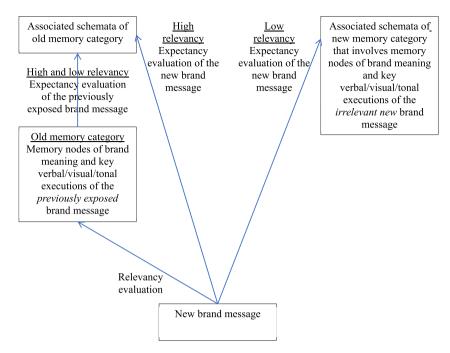


Fig. 1. The conceptual framework of the relevancy and expectancy evaluations of perceived message consistency.

network because of high memory strength and/or relevancy when he or she sees a new online news article (i.e., publicity) of Zara. The consumer will evaluate whether the new online publicity involves a similar brand meaning (e.g., instant fashion) and similar key verbal (e.g., the campaign name "Zara Woman Campaign"), visual (e.g., the celebrity model), and tonal executions (e.g., the evoked feeling) as the retrieved YouTube commercial film. If the consumer considers both brand messages to address instant fashion, the Zara Woman Campaign, and the celebrity model and to evoke a similar feeling, the two brand messages are perceived as high in relevancy. In contrast, the two brand messages will be perceived as low in relevancy if the consumer considers the new online publicity to share few or none of its key elements with the retrieved YouTube commercial film.

In addition, schema congruity and norm theories help clarify expectancy evaluation in the context of multiple brand messages. Schema congruity theory (Mandler, 1982) has been the most widely embraced theory in studies relating to the consistency, match, or congruence of two elements, such as a celebrity and a product, within a message (Lee & Thorson, 2008). Schema congruity means that information conforms to consumer expectations based on activated schema (Mandler, 1982). Schema incongruity, instead, is "a case of interruption of expectations and predictions (Mandler, 1982, p. 21)." The norm theory proposed by Kahneman and Miller (1986) further suggests that consumers focus on the point of difference when making a judgment. The fewer differences that are observed, the greater schema congruity consumers feel (Wansink & Ray, 1996).

According to schema congruity theory, relevant new information is stored in an old memory category involving previously exposed brand messages. An expectancy evaluation of relevant brand messages involves three steps: (1) activate schemata associated with an old memory category that involves the common communication theme (i.e., brand meaning and key verbal/visual/ tonal executions) (2) perform an expectancy evaluation (i.e., schema congruity evaluation) by comparing previously exposed and new brand messages with schemata associated with the old memory category, and (3) determine the level of expectancy (see Fig. 1). Therefore, the consumer will store the new brand message in the same memory category as the previously exposed brand messages and activate the associated schemata in the higher relevancy situation. The consumer will then determine how different the old and new brand messages and the activated schemata are. If the consumer is not surprised because the contents of the two brand messages do not deviate excessively from the consumer's impression of instant fashion (i.e., the schema evoked by Zara's shared brand meaning), the Zara Woman Campaign, the celebrity model, and the sentiment (i.e., the schemata evoked by the key verbal/visual/tonal memory nodes of the brand), the two brand messages are perceived high in expectancy (i.e., the highrelevancy- high-expectancy situation; HRHE). It is also possible that a consumer considers the two brand messages relevant but is surprised because the contents of one or both brand messages are very different from the consumer's impression of instant fashion, the Zara Woman Campaign, the celebrity model, and the sentiment. The two brand messages are perceived as low in expectancy (i.e., the high-relevancy-low-expectancy situation; HRLE).

Instead, irrelevant new information is stored in the new memory category. The expectancy evaluation of irrelevant brand messages also involves three steps: (1) activate the schemata associated with old and new memory categories, (2) perform an expectancy evaluation by comparing the previously exposed brand message with schemata associated with the old memory category and comparing the new brand message with schemata associated with the new memory category, and (3) determine the level of expectancy (see Fig. 1). A consumer may not feel surprised either because the presentations of the previously exposed and the new brand messages regarding the key elements contain clichés (i.e., the lowrelevancy-high-expectancy situation; LRHE) or may feel surprised because the presentations of the two brand messages are innovative (i.e., the low-relevancy-low-expectancy situation; LRLE).

Taken together, these three theories suggest that perceived message consistency involves relevancy and expectancy evaluations of both the strategic and executional elements of brand messages. The two evaluation mechanisms result in four possible consistency combinations: HRHE, HRLE, LRHE, and LRLE. HRHE Y. Chang / Computers in Human Behavior 85 (2018) 125-134

represents high consistency, LRLE represents low consistency, and HRLE/LRHE represent moderate consistency.

Heckler and Childers (1992) suggest that the two evaluation mechanisms can be positively or negatively correlated, but they did not empirically test that proposition. Adapting Heckler and Childers (1992), Fleck and Quester (2007), in their scale development study of sponsorship-brand consistency, found that relevancy and expectancy evaluations were not significantly correlated (r = .099). Those two studies have not articulated the theoretical reasoning for this proposition and finding. This study argues that the significance of correlation between the two evaluation mechanisms is contingent upon the level of relevancy. In high-relevancy situations, relevancy and expectancy evaluations are related to the memory nodes of the old memory category. Therefore, relevancy and expectancy evaluations in high-relevancy situations are either positively correlated (i.e., HRHE) or negatively correlated (i.e., HRLE) at a significant level. Nevertheless, the relevancy evaluation is related to the memory nodes of the old memory category and the expectancy evaluation is related to the schemata associated with the old and new memory categories in low-relevancy situations. Therefore, the relevancy and expectancy evaluations in the low-relevancy situations can be insignificantly correlated (i.e., LRHE and LRLE). That is, relevancy and expectancy evaluations can independently influence consumers' perception of message consistency in the lowrelevancy situations. Based on the above discussions, the following hypotheses will be tested.

H1. Relevancy and expectancy evaluations are significantly and positively correlated in the HRHE situation.

H2. Relevancy and expectancy evaluations are significantly and negatively correlated in the HRLE situation

3. Stage two: item generation

Items for the initial scale were generated from three sources. First, the nine existing message consistency scales were revised to develop several relevancy items of message consistency. The existing scales need to be revised because many of them were developed for marketing managers, not consumers (see Table 1). Second, the scales developed by Fleck and Quester (2007) and used by Halkias and Kokkinaki (2014), which have focused on a single brand message, were revised to develop expectancy items because previous consistency studies did not measure expectancy. Third, eighteen consumer interviews were conducted to ascertain that scale items contained a vocabulary that is naturally used by consumers. The twenty-four initial scale items are shown in the Appendix. Participants rated their responses on 7-point Likert scales.

4. Stage three: scale purification

Scale purification involves both scale length optimization and reliability and validity testing (DeVellis, 2012; Gerbing & Anderson, 1988). Three studies have been conducted. In study one, the scale length of the initial scale items was optimized through exploratory factor analysis (EFA). In study two, the factor structure, validities, and reliabilities of the scale items were initially tested in the context of HRHE through confirmatory factor analysis (CFA). Hypothesis 1, which suggests relevancy and expectancy evaluations being significantly and positively correlated in the HRHE situation, was also tested. In study three, the factor structure, validities, and reliabilities of the eight scale items were cross-validated with different participants, product categories, and online media. Hypothesis 2, which suggests that relevancy and expectancy evaluations are positively and negatively correlated in the HRLE

situation, was also tested.

4.1. Study 1: scale length optimization

4.1.1. Method

The traditional survey method used in most scale development studies (Netemeyer et al., 2004) is not suitable for the development of a message consistency scale. Consumers may find it difficult to comment on message consistency in absolute terms. Adapting from Fleck and Quester (2007) and Rosengren and Dahlén (2015), this study tested twenty-four initial scale items through an online survey method with two YouTube commercial films. An online survey was conducted because most major marketers shift their marketing communication budget online (Johnson, 2017; Mariani & Mohammed, 2014; Wallace, Buil, and De Chernatony 2012).

A total of 639 individuals participated in the online survey. After deleting those with the same IP addresses, e-mail addresses and unreasonable response times (e.g., completed the entire survey in less than 4 min, the minimum response time generated from a pilot study), 419 valid cases remained. The sample size exceeded the minimum 300 cases for conducting an EFA, which is recommended for the initial appraisal of the underlying factor structure (Worthington & Whittaker, 2006). The respondents were mostly female (66.6%) and aged between 18 and 54, with a mean age of 29.39 (SD = 8.802). One-sample t tests with the test value of the midpoint of the scale (i.e., 4) showed that respondents had high brand familiarity, M = 5.35, SD = 1.00, t (418) = 27.45, p < .001, and high brand marcom familiarity, M = 5.09, SD = 1.09, t (418) = 20.39, p < .001. In other words, participants had extensive brand schema, which is crucial for expectancy evaluation.

This study tested sixteen items in relation to two commercial films about a bottled-water brand that were moderate in consistency (Fleck & Quester, 2007). Bottled water and the brand were selected because of their high usage rate and familiarity across age groups (E-ICP, 2015). Higher brand familiarity is important because the evaluation mechanisms are related to brand schemata. YouTube commercial films were selected because they are frequently exposed and easier to process than brand messages across other marketing communication tools such as advertising and publicity. The two commercial films were selected from a list of seven of the target bottled-water brand's commercial films from the previous five years. Researchers compared each pair of commercial films from the list and selected the pair that was perceived to be moderate in relevancy and expectancy by most researchers (Fleck & Quester, 2007). Moderate consistency was selected because studies have demonstrated that moderate consistency can motivate individuals to process brand messages better than their extremely consistent or inconsistent counterparts (Halkias & Kokkinaki, 2014). Therefore, exposing participants to moderately consistent commercial films of a renowned bottled-water brand increases researchers' ability to observe relevancy and expectancy evaluations because participants have higher motivation and extensive brand schemata to process the brand messages.

A purposive sampling technique, which recruited individuals over the age of 18, was employed because this age range represents habitual Web users (Haluza, Naszay, Stockinger, & Jungwirth, 2016; Prensky, 2001). In September 2016, participants were recruited via online platforms such as bulletin boards or discussion forums targeting various age groups. To participate in the survey, interested individuals clicked a link in the recruitment letter. The survey was conducted using the SurveyMonkey site. Participants first answered the filter question, which asked them to declare their age. Those who were not in the intended age range were thanked and could not participate in the survey. The qualified participants read and approved the consent form. They proceeded to the first

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Table 1		
Existing message	consistency	scales.

Source	Concept	Conceptual definition	Scale
A. Manager-oriented Low (2000)	ІМС	The strategic coordination of all messages and media used by an organization to influence its perceived brand value	 Different marcom tools are planned by the same manager. The elements of the marcom program are strategically consistent. The marcom tools focus on a common message.
Reid (2005)	Strategic Consistency	Brand messages support the identity and reputation of the brand	 You regularly review your marketing plan to ensure the relevance and consistency of your brand messages and strategic brand positioning. Your major promotional theme for the brand is conceptually broad enough to allow for different sub-campaigns aimed at all key stakeholder groups. You carefully coordinate the messages being sent by all of your operations, such as pricing, distribution, product performance, and service operations, to ensure consistency of brand positioning.
Lee and Park (2007)	Unified communications for consistent message and image	The intended message is communicated consistently on all communications tools and channels	 Our company carefully examines whether our intended message is consistently delivered through all communication tools and channels (e.g., advertising, publicity, packaging, direct mail, POP display, banner, and website). Our company maintains consistency in all visual components of communication (e.g., trademarks, logos, models, and color). Our company maintains consistency in all linguistic components of communication (e.g., slogans and mottos). Insuring a consistent brand image is one of the most important goals of our marketing communications program. Our company does not alter its brand image, even as its context changes, but maintains its consistency from the long-term perspective.
Chen (2011)	Message consistency	The relevancy and coordination of different messages and marketing communications mix pertaining to a new product	 The communicated messages were consistent with one another from beginning to end. We sent dissimilar messages in different launch-supporting activities. (Reverse) We varied messages when they were conveyed to different audiences. (Reverse)
B. Consumer-oriented Wang and Nelson (2006)	l Varied multiple-source messages	Different brand messages originated from multiple sources	1. How different messages in the advertisement were from messages in the article.
McGrath (2011)	Visual consistency	The level to which the same product strategic message featured visually consistent executions across the touchpoints	 Visual appearance of the materials. Messages contained in the materials. Overall tone and personality portrayed by the materials.
Delgado-Ballester et al. (2012); Navarro-Bailón (2012); Navarro et al. (2009)	Strategic consistency	The information conveys share meaning and content among multiple means of communication with the purpose of creating and reinforcing common brand associations	 There is a logical connection between the ad and the event. The event and the ad communicate the same brand image. The ad and the event stand for similar things. The ad and the event fit together well. The ideas I associate with the ad are related to the ideas I associated with the event. My image of the ad is very different from the image I have of the event.

questionnaire containing brand familiarity and brand marcom familiarity measures because expectancy evaluation is related to brand and brand marcom schemata. Participants rated the degree to which they were familiar with, experienced with, or knowledgeable about either the test brand (Cronbach's $\alpha = 0.813$) or the brand's promotional materials (Cronbach's $\alpha = 0.886$) on a sevenpoint Likert scale, which was adapted from Kent and Kellaris (2001). After completing the first questionnaire, participants viewed two commercial films. They were then asked to answer the second questionnaire containing the initial message consistency and demographics items. Finally, they were thanked and informed that they would be contacted with the raffle result. The entire research method was approved by the IRB office.

4.1.2. Results

The study used SPSS 21 to conduct a series of EFAs, which is recommended for scale length optimization (Worthington & Whittaker, 2006). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used to evaluate factorability. Tabachnick and Fidell (2007) suggested that a KMO value of 0.60 and higher is required for a good factor analysis. Principal-axis factoring was used because it is demonstrated to have good capability for correct extraction (Worthington & Whittaker, 2006). The varimax rotation method was selected because relevancy and expectancy evaluations can be weakly correlated. This study deleted items that had the lowest factor loading and have low conceptual consistency with other items on the factor to optimize scale length (Worthington & Whittaker, 2006).

The results showed a KMO value of 0.779, exceeding the 0.60 threshold. The rotated factor matrix showed two distinct factors: one for expectancy evaluations (factor loading = 0.576-0.857; variance explained = 50.304%; Cronbach's α = 0.875) and the other for relevancy evaluations (factor loading = 0.393-0.810; variance explained = 14.946%; Cronbach's α = 0.736). Each factor was composed of four items, resulting in eight scale items (see Table 2).

4.1.3. Discussion

Study one optimized the scale length from twenty-four to eight scale items. The results EFA supported the proposition that perceived message consistency across two YouTube commercial films involves both relevancy and expectancy evaluations of the strategic and executional elements of multiple brand messages.

Table 2		
Results	of EFA and	CFA.

Scale item		Study 1 (EFA)	Study 2 (CFA)	Study 3 (CI	(CFA)	
		Factor loading	HRHE <i>β</i>	HRLE β	LRLE β	
A. Releva	ancy evaluation					
R_st	There is a logical connection between the two brand messages and the brand's previous promotional theme.	.393	.597***	.359**	.445***	
R_ve	The key verbal elements of the two brand messages are similar.	.486	.670****	.631***	.754***	
R_vi	The key visual elements of the two brand messages are similar.	.700	.717***	.806***	.684***	
R_to	A similar tone/personality/feeling is conveyed by the two brand messages.	.810	.698***	.681***	.756***	
B. Expec	tancy evaluation					
E_st	The promotional theme of the two brand messages does not surprise me.	.794	.762***	.774***	.890***	
E_ve	The verbal elements of the two brand messages do not surprise me.	.857	.846***	.847***	.848***	
E_vi	The visual elements of the two brand messages do not surprise me.	.692	.875****	.816***	.838***	
E_to	The tone/personality/feeling of the two brand messages does not surprise me.	.576	.802***	.825***	.877***	
C. Correl	ation	-	.654***	289*		

Note. st = strategic; ve = verbal; vi = visual; to = tonal; p < .05; p < .01; p < .001.

After obtaining a theoretically meaningful factor structure via EFA, the logical next step is the use of a CFA with a new sample to examine factor structure, validities, and reliability (Worthington & Whittaker, 2006).

4.2. Study 2: reliability and validity testing

The objectives of the second study are twofold: (1) test the factor structure, validities, and reliabilities of the eight scale items; and (2) test the relationship between relevancy and expectancy evaluations in the HRHE situation through a CFA.

4.2.1. Method

An online survey with two brand messages about the target movie, "The Fate of the Furious", was employed. This study recruited individuals over the age of 18 who had watched at least one of the movies in the "The Fast and the Furious" series to ensure that they were habitual Web users and familiar with the target movie. A total of 405 individuals participated in the online survey. After deleting those with the same IP addresses, e-mail addresses, incomplete data, and unreasonable response times (e.g., completed the entire survey in less than 6 min or more than 22 min or watched the movie trailer or review article in less than 1 min or more than 6 min, the minimum response times generated from a pilot study), 200 valid cases remained. The sample size matches the minimum 200-case requirement for a CFA through structural equation modeling (SEM) (Kline, 2015; Worthington & Whittaker, 2006). The participants were equally split in gender (female: 50.5%), were aged 18 to 61, and had a mean age of 27.88 (SD = 6.42). One-sample t tests with the test value of the midpoint of the scale (i.e., 4) showed that they had both high brand familiarity, M = 4.62, SD = 1.39, t (199) = 6.26, p < .001, and high brand marcom familiarity, M = 4.83, *SD* = 1.26, *t* (199) = 9.30, *p* < .001.

The survey procedure was similar to study one except that study two involved one movie trailer on YouTube and one online movie review article and study two tested the eight scale items. The movie trailer was the real trailer, which lasted approximately 1 min. The movie review, which was revised, was from a famous movie review site. Based on the eight scale items developed in study one, a one-sample test with the test value of the midpoint of the scale "5" showed that the two brand messages were significantly high in both relevancy, M = 6.13, SD = 1.23, t (199) = 12.95, p < .001, and expectancy, M = 6.08, SD = 1.30, t (199) = 11.70, p < .001. The research method was approved by the IRB office.

4.2.2. Results

This study used AMOS 21 with the maximum likelihood

iteration method to validate the factorial structure of the scale. The results of the first-order CFA showed that the data were normally distributed because the absolute values of the z-scores for the skewness and kurtosis of all the variables were less than 1.96 (Field, 2005). A model with a nonsignificant chi-square, a standardized root mean squared residual (SRMR) below 0.08, a normed fit index (NFI) above 0.90, a parsimonious normed fit index (PNFI) above 0.50, and a comparative fit index (CFI) above 0.95 can be considered a good-fitting model. A significant chi-square is acceptable because the chi-square test is very sensitive to sample size and almost always statistically significant for models with large sample sizes (Byrne, 2010). The model fit indices showed that the model fit the data very well: $\chi^2(19) = 53.054$, p < .001; SRMR = 0.041; NFI = 0.931; PNFI = .632; and CFI = 0.954. The standardized coefficients ranged from 0.597 to 0.875 (see Table 2).

The following criteria were adapted to test the reliability, convergent validity, and discriminant validity of the scale: (1) composite reliability (CR) > 0.70 to be reliable; (2) average variance extracted (AVE) > 0.50 or > 0.40 with CR > 0.60 to have convergent validity; and (3) square root of AVE > correlations to have discriminant validity (Dubihlela & Dhurup, 2014; Fornell & Larcker, 1981; Fraering & Minor, 2006; Hair, Black, Babin, & Anderson, 2010; Huang, Wang, Wu, & Wang, 2013). The CR values for relevancy and expectancy were .766 and .883, which were greater than the cutoff value of 0.70 and indicated high reliability. The AVE value for relevancy was 0.452 and the AVE value for expectancy was .676, which were greater than the cutoff value and indicated high convergent validity. Finally, the values of the square root of AVE for relevancy and expectancy were .672 and .822, which were greater than the correlations (r = 0.654), indicating high discriminant validity (see Table 3).

To test whether relevancy and expectancy evaluations are two distinct evaluation mechanisms, the other approach is to use chisquare difference test to examine whether a significant loss in fit occurs when going from the two-factor model (unrestricted) to the one-factor model (restricted) in which the correlation between the two factors and the variances of the two factors in the two-factor model were set to a value of 1.0 (Worthington & Whittaker, 2006). If the Chi-square difference test is significant, the two-factor model fits the data better than the one-factor model (Byrne, 2010; Jose, 2013). The chi-square difference test supported the two-factor model, $\Delta \chi^2$ (3) = 96.099, *p* < .001. Therefore, both relevancy and expectancy evaluations were again demonstrated to be distinct mechanisms for perceived message consistency.

Existing consumer-oriented message consistency scales have focused only on the relevancy evaluation (Delgado-Ballester et al., 2012; Navarro et al., 2009; Navarro-Bailón, 2012). The expectancy

 Table 3

 Results of reliability and validity testing.

	CR	AVE	Relevancy	Expectancy
A. Study 2: HRH	IF			1 9
Relevancy	.766	.452	.672 ^a	
Expectancy	.893	.676	.654 ^b	.822 ^a
B. Study 3: HRL	E			
Relevancy	.722	.410	.640	
Expectancy	.888	.666	289	.816
C. Study 3: LRLE	E			
Relevancy	.760	.451	.672	
Expectancy	.921	.746	.058	.864

Note.

^a The values in the diagonal axis represent the square root of the AVE.

^b Correlation coefficient.

evaluation is completely ignored. To compare the competing model that involves only the relevancy evaluation, the chi-square difference test was employed to examine whether a significant loss in fit occurs when going from the two-factor model (unrestricted) to the one-factor mode (restricted). In this test, the correlation between the two factors, the variance of expectancy evaluation, and the factor loadings of expectancy items in the two-factor model were set to a value of 0. If the chi-square difference test is significant, the two-factor model fits the data better than the one-factor model that involves only the relevancy evaluation (Byrne, 2010; Jose, 2013). The chi-square difference test supported the two-factor model, $\Delta\chi^2$ (5) = 528.880, p < .001. Therefore, using relevancy and expectancy items to measure perceived message consistency was demonstrated to be better than using only relevancy items.

The findings of the study showed that the proposed scale was valid, reliable and better than the competing model. Thus, hypotheses 1 can be tested. As expected, two evaluation mechanisms were significantly and positively correlated in the HRHE situation (r = 0.654, p < .001). Therefore, hypotheses 1 was supported (see Table 2).

4.2.3. Discussion

Study two showed that the eight scale items fit the model well, were highly reliable, and had high convergent and discriminant validities. The eight scale items also fit the data better than the competing model that involved only relevancy items. In addition, relevancy and expectancy evaluations were significantly and positively correlated in the HRHE situation, consistent with the speculation of the study. This study suggests that the correlation between relevancy and expectancy evaluations is significant in the high-relevancy situation.

Worthington and Whittaker (2006) recommend that research should cross-validate the scale's factor structure by collecting another sample of data. Accordingly, study three cross-validated the eight scale items with different participants, product categories, and promotional materials. If the eight scale items yield results similar to those in study two, the items can be trusted as valid and reliable measures for perceived message consistency and are better than competing measures that involve only relevancy items.

4.3. Study 3: cross-validation

Study three's objective is to cross-validate the factor structure, validities, and reliabilities of the eight scale items. Study three also aims to test hypothesis 2, which suggests that relevancy and expectancy evaluations are significantly and negatively correlated in the HRLE situation. In addition, study three involved the LRLE situation to examine the speculation that relevancy and expectancy

evaluations are insignificantly correlated in the low-relevancy situation.

4.3.1. Method

A lab survey with two messages about a notebook-computer brand was employed. Two hundred and two students participated in the study: 102 for HRLE and 100 for LRLE. The sample size exceeded the minimum 200 cases requirement for a CFA through SEM (Kline, 2015; Worthington & Whittaker, 2006). The participants were mostly female (66.3%) with an age range from 19 to 30 years old and a mean age of 21.20 (SD = 1.76). The chi-square test showed no significant differences between the two groups in terms of gender, $\chi^2(1) = 0.987$, p = .320. One-sample t tests with the test value of the midpoint of the scale (i.e., 4) showed that participants had high brand familiarity, M = 5.07, SD = 1.28, t(201) = 11.865, p < .001, and moderate brand marcom familiarity, M = 4.06, SD = 1.17, t(201) = 0.741, p = .460. That is, the participants had extensive schemata for expectancy evaluation.

The two brand messages involved an online commercial film followed by an online publicity for the Asus ZenPad notebook. The Asus ZenPad notebook was selected because of its positive brand image and high usage rate among college students (E-ICP, 2015). Online commercial films and publicity were selected because advertising and publicity are two communication tools frequently used by professionals and studied in IMC studies (Jin, Suh, and Donavan, 2008; Micu & Thorson, 2008; Wang, 2006). In addition, recent studies have shown that consumers tend to search for product information on YouTube, followed by product publicity (Edelman, 2010; Weng, 2016). The ad-publicity sequence aims to simulate participants' online search behavior.

The online commercial films and publicity for the Asus ZenPad notebook were adapted from existing promotional materials. The online commercial films were different, but the online publicity was the same for HRLE and LRLE. Relevancy was manipulated as involving similar or dissimilar key voices, looks, and tones in the two brand messages. Expectancy was manipulated as involving typical or atypical presentation styles. In the HRLE situation, both the online commercial film and online publicity featured the product's high level of sound quality (i.e., key voice), ancient Chinese people and setting (i.e., key look), and humor (i.e., key tone). In the LRLE situation, the online commercial film featured enjoyment of life (i.e., key voice), Western people and a modern setting (i.e., key look), and luxury (i.e., key tone), whereas the online publicity featured sound quality, ancient Chinese people and setting, and humor. Both commercial films lasted approximately 1 min. The online publicity appeared in a famous online newspaper site.

The eight scale items developed in study one were used to evaluate the perceived message consistency of the brand messages. For the HRLE brand messages, one-sample t tests with the test value of the midpoint of the scale (i.e., 4) showed that participants perceived the two brand messages as significantly high in relevancy, M = 4.74 SD = 0.94, p < .001, and moderate in expectancy, M = 4.13, SD = 1.41, p = .372. For the LRLE brand messages, one-sample t tests showed that participants perceived the two brand messages as significantly low in relevancy, M = 3.79, SD = 0.99, p = .036, and moderate in expectancy, M = 3.93, SD = 1.17, p = .549.

The procedure of the lab survey was similar to those used in studies one and two. Participants were recruited through a university mailing system and randomly assigned to see HRLE or LRLE brand messages. After arriving at the laboratory, participants read and signed a consent form and answered the first questionnaire containing items on brand familiarity and brand marcom familiarity. Participants were then exposed to a YouTube commercial film and an online publicity with an earphone, and they answered the second questionnaire containing the eight scale items and demographic information. They were thanked and provided with monetary compensation at the end of the study. The IRB office approved the research method.

4.3.2. Results

Similar analytical approaches were applied as in study two. The results showed that the absolute values of the z-scores for the skewness and kurtosis of all variables were less than 1.96, indicating normal distribution (Field, 2005). The model fit indices showed that the model fit the data very well: $\chi^2(38) = 50.248$, p = .088; SRMR = 0.0732; NFI = 0.933; PNFI = .633; and CFI = 0.982. The standardized coefficients ranged from 0.359 to 0.847 for HRLE and from 0.445 to 0.890 for LRLE (see Table 2).

For HRLE, the CR value for relevancy and expectancy were .722 and .888, which were greater than the cutoff value of 0.70 and indicated high reliability (see Table 3). The AVE values for relevancy and expectancy were .410 and .666, which was greater than the cutoff value and indicated high convergent validity. Finally, the values of the square root of AVE for relevancy and expectancy were .640 and .816, which were greater than the correlations (r = -0.289), indicating high discriminant validity. Similarly, for LRLE, the CR values for relevancy and expectancy were .760 and .921, indicating high reliability. The AVE values for relevancy and expectancy were .451 and .746, indicating high convergent validity. Finally, the values of the square root of AVE for relevancy and expectancy were .672 and .864, which were greater than the correlations (r = 0.058), indicating high discriminant validity.

This study also used the chi-square difference test to test whether relevancy and expectancy evaluations are two distinct evaluation mechanisms. Similar to study two, the two-factor model was unrestricted and the one-factor model was restricted, setting the correlation between the two factors and the variance of the two factors to a value of 1.0 (Worthington & Whittaker, 2006). The chi-square difference test supported the two-factor model in the HRLE, $\Delta\chi^2$ (1) = 46.777, p < .001, and LRLE, $\Delta\chi^2$ (1) = 24.221, p < .001. In other words, relevancy and expectancy were distinct mechanisms for perceived message consistency in both situations.

Chi-square difference tests were also employed to compare the competing one-factor model that involves only a relevancy evaluation with the proposed two-factor model. The two-factor model was unrestricted and the competing one-factor model was restricted, with the correlations of the two factors, the variance of expectancy evaluation, and factor loadings of the expectancy items were set to a value of 0. The chi-square difference test again supported the two-factor model in the HRLE, $\Delta \chi^2$ (1) = 202.115, p < .001, and in the LRLE, $\Delta \chi^2$ (1) = 288.145, p < .001. That is, using relevancy and expectancy items to measure perceived message consistency was better than using only relevancy items.

After the proposed scale was supported, this study tested hypothesis 2. The results supported hypothesis 2 by showing that the two evaluation mechanisms were significantly and negatively correlated in the HRLE situation (r = -0.289, p = .026). This study also found an insignificant correlation in the LRLE situation (r = 0.058, p = .625).

4.3.3. Discussion

The results of study three showed that the eight scale items fit the data very well. The relevancy and expectancy items were high in reliability, convergent validity, and discriminant validity in both the HRLE and the LRLE situations. The chi-square difference tests demonstrated that relevancy and expectancy were distinct evaluation mechanisms and that they were better than using only relevancy items to measure consumers' perception of message consistency. In addition, the two evaluation mechanisms were significantly and negatively correlated in the HRLE situation, supporting hypothesis 2. The correlation was insignificantly correlated in the LRLE situation, which supported the speculation that significant correlation only occurs in the high-relevancy situation.

5. General discussion

5.1. Theoretical contributions

Message consistency is a necessary antecedent of synergistic communication effects, customer satisfaction, and a brand's revenue (Duncan, 2005; Keller, 2009; Pulido et al., 2014). The conceptual and operational definitions of consumers' perception of message consistency, however, have not yet been clarified and tested. This study initiates an attempt to articulate the concept and develop a scale through a more rigid scale development procedure in the context of multiple brand messages. Three survey studies have conducted across different participants (i.e., aged from 18 to 61), product categories (i.e., bottled water, movie, and notebook), and online media (i.e., YouTube, online news site, and online movie review site). The results of this study make several theoretical contributions.

First, this study elucidates the evaluation mechanism of multiple brand messages across multiple online media. The three studies demonstrated that perceived message consistency is the result of relevancy and expectancy evaluations of both the strategic (i.e., common brand meaning) and the executional (i.e., key verbal/visual/tonal) elements of multiple brand messages. Heckler and Childers (1992) propose that consumers' perception of a print advertisement's visual-verbal consistency involves both relevancy and expectancy evaluations. The findings extend Heckler and Childers (1992) by elucidating evaluation mechanisms in the context of multiple brand messages, which are more complex than mechanisms involving only one brand message. The existing scales of consumers' perception of message consistency focus only on relevancy evaluation of either the strategic or the executional element (Delgado-Ballester et al., 2012; Navarro et al., 2009; Navarro-Bailón, 2012). This study extends previous scales by demonstrating that both evaluation mechanisms and message elements were crucial in determining perceived message consistency.

According to these theories and findings, consumers will retrieve memory nodes of previously exposed brand messages in terms of key brand meaning and verbal/visual/tonal executions that are high in memory strength or relevancy to the new brand message. They will perform a relevancy evaluation between the new brand message and the retrieved memory nodes to determine the level of relevancy. If consumers perceive the two brand messages as high in relevancy, they will store relevant new information in an old memory category that involves the previously exposed brand messages and activate the associated schemata. Finally, they will perform an expectancy evaluation by comparing the old and new brand messages with schemata associated with old memory category to determine the level of expectancy. If consumers perceive the two brand messages as low in relevancy, the processing mechanism is more complicated, because irrelevant new information is stored in the new memory category. Consumers will activate schemata associated with old and new memory categories. They will perform an expectancy evaluation by comparing the previously exposed brand message with schemata associated with the old memory category and comparing the new brand message with schemata associated with the new memory category to determine the level of expectancy. Higher relevancy and higher expectancy result in higher perceived message consistency.

Second, this study clarifies the relationship between relevancy

and expectancy evaluations. This study demonstrated that the two evaluation mechanisms are either positively (i.e., HRHE) or negatively (i.e., HRLE) correlated at a significant level in the highrelevancy situation and insignificantly correlated in the lowrelevancy situation (i.e., LRLE). Heckler and Childers (1992) and Fleck and Ouester (2007) suggest that relevancy and expectancy evaluations can be significantly or insignificantly correlated but have not explained their theoretical reasoning or empirically tested their propositions. On the basis of the exemplar model of classification, schema congruity theory, and norm theory, this study argues that the significance of the correlation between the two evaluation mechanisms is contingent upon the level of relevancy. Relevancy and expectancy evaluations are related to the memory nodes of the same memory category in high-relevancy situations, and therefore, the two evaluation mechanisms are either positively or negatively correlated at a significant level. Nonetheless, the two evaluations are related to the memory nodes of different memory categories in low-relevancy situations, resulting in a nonsignificant correlation between the two evaluations.

The eight-item scale has been demonstrated to be valid, reliable, and better than the competing model that involves only relevancy evaluation items, as in previous studies (Delgado-Ballester et al., 2012; Navarro et al., 2009; Navarro-Bailón, 2012). It is a comprehensive and valid measurement tool with which to observe consumers' perceptions of brand messages.

5.2. Limitations and directions for future research

The scale was tested in the contexts of non-durable (i.e., bottled water), durable (i.e., notebooks), and entertainment (i.e., movies) product categories and in the contexts of different online media such as a YouTube, online news site, and online movie review site. Future research is encouraged to test the evaluation mechanisms of consumers' perception of message consistency in different product categories and media outlets so that the generalizability of the scales can be fully understood. In addition, except study two, the participants of the three studies were mostly female, the applicability of the findings and scale to males should be further examined.

Finally, although the three studies involved participants aged between 18 and 61 years old, the mean age was still young. More mature consumers may evaluate message consistency via different evaluation mechanisms. Future research is encouraged to investigate the evaluation mechanisms of more mature generations to understand the applicability of the scale.

6. Conclusion

Perceived message consistency across online media is the result of the relevancy and expectancy evaluations of strategic (i.e., common brand meaning) and executional elements (i.e., key verbal/visual/tonal elements) of multiple brand messages. The two evaluation mechanisms are either positively (i.e., HRHE) or negatively (i.e., HRLE) correlated at a significant level in the highrelevancy situation and insignificantly correlated in the lowrelevancy situation (i.e., LRLE). Higher relevancy and higher expectancy result in higher perceived message consistency. The eight-item scale has been developed through a rigid scale development procedure across participants with a wide range of ages, product categories, and online media. The scale has been demonstrated to be valid, reliable, and better than the competing model that involves only relevancy evaluation items. It is a comprehensive, valid, and reliable measurement tool for anyone who aims to observe consumers' perceptions of brand messages.

Funding

The work was supported by the Ministry of Science and Technology (MOST) of Taiwan, Republic of China under Grant number: MOST 103-2628-H-004 -005 -MY2.

Appendix A. Initial scale items

Scale item	
A. Relevancy evaluation	
S_st1	The promotional theme of the two brand messages is conceptually similar to that of previous campaigns.
S_st2 ^a	There is a logical connection between the two brand messages and the brand's previous promotional theme.
S_st3	The two brand messages focus on a message similar to that of a previous campaign.
S_ve1	The two brand messages maintain relevancy in all the linguistic components of communication.
S_ve2 ^a	The communicated verbal elements of the two brand messages are similar.
S_ve3	The verbal components of the two brand messages are consistently delivered.
S_vi1	The two brand messages maintain relevancy in all the visual components of communication.
S_vi2 ^a	The communicated visual elements of the two brand messages are similar.
S_vi3	The visual components of the two brand messages are consistently delivered.
S_to1	The tone/personality/feeling of the two brand messages is relevant.
S_to2 ^a	A similar tone/personality/feeling is conveyed by the two brand messages.
S_to3	The tone/personality/feeling portrayed by the two brand messages is consistent.
B. Expectancy evaluation	
E_st1	The promotional theme of the two brand messages is predictable.
E_st2	The promotional theme of the two brand messages is expected.
E_st3 ^a	The promotional theme of the two brand messages does not surprise me.
E_ve1	The verbal elements of the two brand messages are predictable.
E_ve2	The linguistic components of the two brand messages are expected.
E_ve3 ^a	The verbal elements of the two brand messages do not surprise me.
E_vi1	The visual elements of the two brand messages are predictable.
E_vi2	The visual appearance of the two brand messages is expected.
E_vi3 ^a	The visual elements of the two brand messages do not surprise me.
E_to1	The tone/personality/feeling of the two brand messages is predictable.
E_to2	The tone/personality/feeling of the two brand messages is expected.
E_to3 ^a	The tone/personality/feeling of the two brand messages does not surprise me.

Note. a = Final scale items.

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