Consumer response to health product communication: The role of perceived product efficacy

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ABSTRACT

This study investigates the persuasiveness effectiveness of the interplay effects of message framing, self-construal, and temporal construal (or construal level) on product attitudes, perceived product efficacy, and behavioral intention. The results indicate that for independent-self individuals, gain-framed messages raise more positive product attitudes, product efficacy, and behavioral intention than loss-framed messages when the temporal construal is distant or construal level is abstract. For interdependent-self individuals, loss-framed and mixed-framed messages raise more positive product attitudes, product efficacy, and behavioral intention than gain-framed messages. Interdependent-self individuals respond with more positive attitudes, product efficacy, and behavioral intention toward mixed-framed messages than independent-self individuals. Furthermore, the perceived product efficacy mediates the interaction between message framing, temporal construal, and self-construal for predicting behavioral intention. A match (vs. mismatch) between the message and temporal construal of an advertisement and the self-view of the recipient leads to systematic changes in advertisement effectiveness.

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1. Introduction

In recent years, it has become quite popular among marketers to advertise the health-related benefits of their products, because this issue has become a major factor in consumers' choices (e.g. Brennan, Czarnecka, Dahl, Eagle, & Mourouti, 2008, Choi, Paek, & King, 2012). Furthermore, marketers also pay close attention to how advertisement messages for health products are presented to consumers, since the way information is framed may have a significant influence on their judgments and decisions (Chang, 2007; Meyers-Levy & Maheswaran, 2004). Using appropriate message frames for health products could increase the persuasiveness of messages to consumers, thereby increasing sales (Gamliel & Herstein, 2012).

One commonly used framework to predict consumer behavior involves comparing messages that depict gain-framed messages (i.e., messages that highlight the positive consequences or benefits of engaging in a particular behavior) versus loss-framed messages (i.e., messages that emphasize the potential negative outcomes if the behavior is not undertaken) (e.g. Chang, 2007, Shiv, Britton, & Payne, 2004, White, MacDonnell, & Dahl, 2011). The research stream regarding the persuasive effects derived from the use of gain- or loss-framing advertisements is not conclusive and there still exist some unresolved issues (Gallagher & Updegraff, 2012; Meyers-Levy & Maheswaran, 2004; O'Keefe & Jensen, 2007). How do people process two different

kinds of message framing (i.e., gain and loss) and how does this influence their attitudes toward health products? These questions form the first element of the motivation for this research.

Advertisements for health products may appeal to people's recognition of the importance of good health for themselves or for their loved ones. Previous studies have already used the concept of self-construal to explain priming for the self or others (e.g. Lee, Aaker, & Gardner, 2000, Lin, Chang, & Lin, 2012). The two types of self-construal are found to exert influence in terms of information processing and persuasion (e.g. Aaker & Lee, 2001, Gardner, Gabriel, & Lee, 1999, Tsai, 2007). This study posits that a priming of self-construal will change people's temporal construal and will further moderate the effects of message framing on the persuasive effectiveness of health products. This is because prior research has suggested the idea that independent-self individuals will focus on abstract thinking and a distant temporal perspective, whereas interdependent-self individuals will focus on concrete thinking and a proximal temporal perspective (Fujita, Trope, Liberman, & Levin-Sagi, 2006; Markus & Kitayama, 1991; Masuda & Kitayama, 2004; Spassova & Lee, 2013).

In other words, information processing is influenced by how people view the self—either as an independent individual (i.e., they have an independent self-view) or in relation to others (i.e., they have an interdependent self-view). More specifically, the basic assumption in this study is that individuals with a more accessible independent self-view tend to construe abstract thinking and a distant temporal perspective, as a consequence of which they tend to focus on the positives. In contrast, those with a more accessible interdependent self-view tend

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to construe concrete thinking and a proximal temporal perspective; thus, they focus on the negatives. Accordingly, the major purpose of this research is to investigate the persuasiveness effectiveness of a match between message framing, self-view, and temporal construal on the persuasive effectiveness of health products (i.e., product attitudes, perceived product efficacy, and behavioral intention). Compared with previous studies, this study provides further contributions in two ways. First, research on the three-way interaction has the potential to provide a more comprehensive and meaningful account of message framing effects than currently exists. Second, this study further highlights a novel mechanism underlying the effects by showing that perceived product efficacy motivates such effects. The present research provides guidance to advertisers interested in persuading consumers to buy health products.

2. Theoretical background and hypothesis development

2.1. Message framing and persuasion

The following three general types of framing effect have been identified: attribute framing, risky choice framing, and goal framing (for a review, see Pinon & Gambara, 2005). This paper focuses on the third type, goal framing, which relates to the persuasive power of presenting the same message in either gain terms when performing an action or loss terms when not performing the same. Stated differently, a positive message frame emphasizes the favorable outcomes of an action, whereas a negative message frame emphasizes the unfavorable outcomes resulting from non-compliance. Goal framing is a popular type of advertising technique, and it is frequently employed in health-related communications (e.g. Chandran & Menon, 2004, Chang, 2007). For example, in a study of health-related behaviors, Chang (2007) discusses how a travel healthcare product for protecting health while abroad can be presented as either a gain from taking action ('People who use insect repellent benefit from a safe and effective way to reduce insect bites') or a loss from inaction ('People who don't use insect repellent lose out on a safe and effective way to reduce insect bites').

An extensive number of studies have demonstrated that losses loom larger than gains; that is, losses have greater motivating power than gains under conditions of high issue involvement (Maheswaran & Meyers-Levy, 1990), enhanced depth of processing (Block & Keller, 1995), and risk-seeking behavior (Meyers-Levy & Maheswaran, 2004). However, prior research has also shown that gain-framed messages are more persuasive than negative messages, both for prevention products and detection products (Chang, 2007), while O'Keefe and Jensen (2007) conducted a meta-analysis related to prevention behaviors and found no statistically significant differences in persuasiveness between gain- and loss-framed messages. A more recent meta-analysis that is related to both prevention and detection health behaviors (Gallagher & Updegraff, 2012) indicated that gain-framed messages appear to be more effective than loss-framed messages in promoting prevention behaviors. Thus, the evidence is not conclusive and leaves some unresolved issues concerning message framing.

To clarify the message framing effects, this study further posits two relevant boundary conditions (i.e., self-view and temporal construal) for the effectiveness of message framing. Prior research has demonstrated that different self-construal (i.e., an independent self-view versus an interdependent self-view) can raise different construal level mind-sets/ temporal construal (i.e., abstract/distant versus concrete/proximal) (Spassova & Lee, 2013). Thus, the fundamental theory employed in this study is based on construal level theory (Trope & Liberman, 2003).

2.2. Construal level theory

Construal level theory (Trope & Liberman, 2003) posits that objects and events represented more abstractly are thought about in terms of superordinate goals (i.e., why one pursues a goal), are explained in terms of more abstract dispositional traits (Nussbaum, Trope & Liberman, 2003), and are placed into a smaller number of broad, higher-order categories (Liberman, Sagristano, & Trope, 2002). A more abstract conceptual representation also broadens perceptual attention, as evidenced by the facilitation of global processing (Förster, Friedman, & Liberman, 2004; Wakslak, Trope, Liberman, & Alony, 2006). In contrast, a more concrete conceptual representation also narrows perceptual attention, as evidenced by the facilitation of local processing (Förster et al., 2004; Wakslak et al., 2006). That is, objects and events represented more concretely are thought about in terms of low-level behavior (i.e., how one pursues a goal), are explained in terms of specific behavior, and are placed into a larger number of narrow, lower-order categories.

Other, more recent findings further suggest that the link between construal level and temporal distance is reciprocal (Liberman & Förster, 2009; Liberman, Trope, McCrea, & Sherman, 2007; for a review, see Trope & Liberman, 2010), such that people perceive events and behaviors described in abstract terms as occurring in the more distant future and those described in specific terms as occurring in the more proximal future (Liberman et al., 2007). For example, when asked to imagine an activity that is described in more abstract, high-level terms (e.g., I will recycle to help the environment), research participants were more likely to think that the activity would take place in the more distant future relative to when the same activity was described in more concrete, low-level terms (e.g., I will recycle by saving paper and aluminum cans). When asked to think *why* they would like to attain a goal (an abstract-level construal) as opposed to *how* they would attain the goal (a concrete-level construal), participants estimated a later start date of working toward the goal, presumably because they thought of the outcome as occurring in the more distant future, and hence there was no need to hurry (Liberman et al., 2007). Similarly, priming global (vs. local) processing led to estimations of greater temporal distance to a future event (Liberman & Förster, 2009).

2.3. Self-construal

Self-construal reflects the extent to which people view themselves either as an individuated entity or in relation to others (Singelis, 1994). The two types of self-construal (i.e., independent versus interdependent) are found to exert systematic influence in terms of information processing and persuasion (e.g. Aaker & Lee, 2001, Gardner et al., 1999, Lin et al., 2012, Tsai, 2007). Individuals with an accessible independent self-view place high value on self-reliance and autonomy. They strive toward being unique, different, and separate from others. Of key importance to an independent self-view individual is the "inner core" of the self—i.e., the internal attributes and traits that are enduring and invariant over time and context (Heine, Lehman, Markus, & Kitayama, 1999; Markus & Kitayama, 1991; Triandis, 1989). In contrast, individuals with a more accessible interdependent self-view value relationships with others and interpersonal harmony. They view the self as part of a social group and strive toward belonging, fitting in, and the desire to succeed relative to others (Heine et al., 1999; Markus & Kitayama, 1991; Triandis, 1989).

Self-construal was initially considered in the context of cross-cultural studies (e.g., Markus & Kitayama, 1991), and subsequent research has shown that the two self-views coexist within an individual, regardless of culture (Gardner et al., 1999; Hong, Morris, Chiu, & Benet-Martinez, 2000; Singelis, 1994). However, extant research has demonstrated that situational primes and other contextual factors can make one or other self-view temporarily more salient, irrespective of chronic accessibility and, in turn, influence subsequent cognitive, emotional, and motivational processes (e.g. Briley & Wyer, 2002, Hong et al., 2000, Lee et al., 2000, Lin et al., 2012).