Message framing and interpersonal orientation at cultural and individual levels
Involvement as a moderator

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On the basis of self-regulatory goals literature, this study predicts that persons with independent and interdependent self-concepts may respond differently to messages with promotion and prevention frames, though the effect may apply only to highly involved persons. The findings confirm these hypotheses at the cultural level (Experiment 1) and the individual level (Experiment 2), showing that greater product involvement increases the effectiveness of self-concept congruent but not incongruent message framing. In addition to the consequence valence explored in Experiment 1, prior research identifies compliance as another important dimension of message framing. Because people with a prevention-/promotion-oriented self-regulatory focus are sensitive to the presence and absence of negative/positive consequences, the superior effects of congruent message framing for highly involved persons should exist regardless of whether the messages emphasise compliance or noncompliance. Experiment 2 confirms these expectations in a collectivistic culture.

Introduction

Increasing research examines the role of culture in processing persuasive messages. The dimension that has drawn the most attention is individualism versus collectivism. According to Kagitcibasi (1994), the most important way to conceptualise individualism/collectivism is in terms of how people relate to one another. A sense of interpersonal independence and separateness describes individualist cultures, whereas interpersonal relatedness and dependence characterises collectivist cultures (Hofstede 1980; Triandis *et al*. 1988). This sense of interpersonal orientation also shapes variations in independent and interdependent self-concepts (e.g. Markus

& Kitayama 1991). Thus, people in different cultures vary in their independent/interdependent self-concepts. Individual differences within the same culture have also been identified; within the same culture, people vary in their independent/interdependent self-concepts (Gardner *et al.* 1999).

Variations in self-concepts or self-construals may help shed light on the differential effectiveness of different communication styles and persuasive messages (e.g. Aaker 2000; Aaker & Lee 2001; Aaker & Sengupta 2000; Lee *et al.* 2000). In particular, self-construal differences may explain why the diagnosticity of persuasive appeals differs for people in different cultures or for individuals with different self-concepts. People are responsive to messages with high diagnosticity, which 'discriminate between alternative hypotheses, interpretations, or categorization' (Herr *et al.* 1991, p. 457); a message cue's diagnosticity depends in part on the receiver's self-concept orientations. Therefore, people in individualist/collectivist cultures or with independent/interdependent self-concepts should perceive message diagnosticity differently and respond differently to the same message.

Independent or interdependent self-concepts also may lead to divergent self-regulatory goal orientations (Lee *et al.* 2000) that could alter their sensitivity to different message frames. People in individualist cultures and those with independent self-concepts likely adopt a promotion regulatory focus and respond to the presence or absence of positive outcomes, whereas people in collectivist cultures and those with interdependent self-concepts are more likely to have a prevention regulatory focus and be responsive to the presence or absence of negative outcomes (Aaker & Lee 2001).

Different responses to positive and negative outcomes have been demonstrated at the individual level for people with independent/interdependent self-concepts (Lee *et al.* 2000; Aaker & Lee 2001). However, prior research into cultural-level differences is not conclusive (e.g. Aaker & Lee 2001), perhaps because the interaction between cultures and message frames depends on involvement. That is, depending on the degree of message elaboration, congruent frame effects may emerge only when participants are involved in message elaboration. To investigate this possibility, Experiment 1 explores the moderating influence of involvement in a cross-cultural setting, and Experiment 2 tests the moderating role of

Figure 1: The proposed model
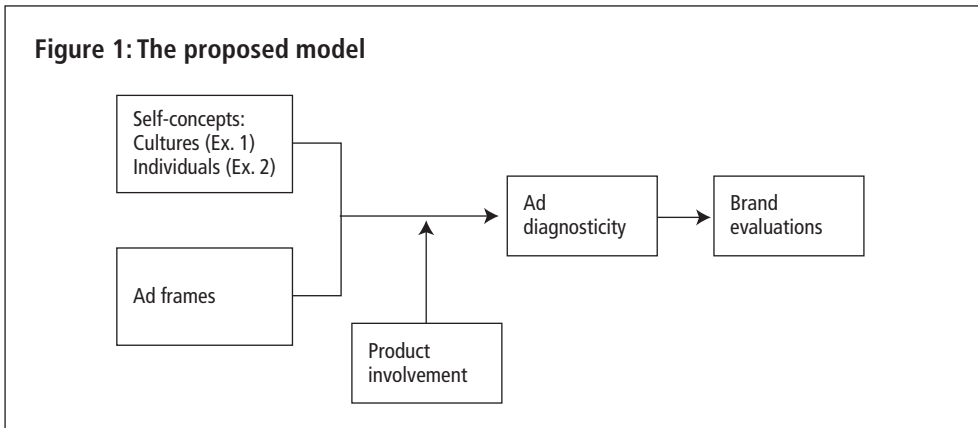
involvement at the individual level (see Figure 1 for the proposed model). Moreover, the mediating role of message diagnosticity has not been established; Experiment 1 tests the potential mediating role of ad diagnosticity.

Framing research suggests that in addition to their positive or negative outcomes, messages vary in whether they focus on compliance or noncompliance behaviours (O'Keefe & Jensen 2006). The relative effects of messages that address the positive and negative outcomes of behaviour compliance for persons with different self-concepts likely generalise to situations in which messages emphasise noncompliance; Experiment 2 tests this hypothesis in a collectivistic culture.

To summarise, this article extends prior literature in three important ways. First, it identifies involvement as an important moderator that helps explain the relative effectiveness of promotion and prevention ad frames on brand evaluations in different cultures; second, it establishes the mediating role of ad diagnosticity in the process; and third, it demonstrates that participants with different self-concepts respond differently to positive and negative outcomes addressed in the ad messages, regardless of whether the ad messages focus on compliance or noncompliance.

Culture, self-concepts and persuasion

Markus and Kitayama (1991, p. 224) propose that 'people in different cultures have strikingly different construals of the self, others and the interdependence of the two'. Specifically, people in individualist cultures hold an independent view of the self as it relates to others, whereas people

in collectivist cultures hold an interdependent view of the self (Markus & Kitayama 1991). Markus and Kitayama argue that these culturally divergent self-construals have both cognitive and affective implications, evoking different responses to information, particularly persuasive information.

Aaker and colleagues have conducted a series of studies to explore how individualism and collectivism moderates the effectiveness of various persuasive strategies (e.g. Aaker 2000; Aaker & Maheswaran 1997; Aaker & Sengupta 2000; Aaker & Williams 1998). Aaker and Maheswaran (1997) reason that cultural values determine the accessibility of independent or interdependent self-concepts and thus the diagnosticity of a message cue and the extent of its influence; when processing information, message receivers should rely more on self-concept relevant cues than on irrelevant ones, because they perceive those messages as more diagnostic. Accessibility of independent/interdependent self-concepts varies not only across different cultures but also across different individuals within the same culture (Aaker & Lee 2001).

Self-concepts and self-regulatory focus

Self-concepts are multifaceted (e.g. Markus & Wurf 1987) and people can have many possible selves (Markus & Nurius 1986). With this assumption, Higgins and colleagues (Higgins 1987, 1989; Higgins *et al* 1985) propose three types of self-presentations: actual self, ideal self and ought self. Higgins *et al*. (1986, p. 6) in turn propose self-discrepancy theory to argue that 'people are motivated to reach a condition where their actual state matches their ideal and ought states', and to the degree that a discrepancy exists, they feel discomfort. In another study, Higgins and colleagues (1985) also reason that people vary in types of self-states they are motivated to meet. Some people hope to meet their ideal self, so their behaviours are more guided by their ideal self; others are motivated to meet their ought self, and their behaviours are guided to a greater degree by this self.

On the basis of self-discrepancy theory, Higgins (1996a, 1996b) identifies two types of self-regulatory focus. That is, self-regulation involves discrepancy reduction, so when people have an ideal self-regulation, their behaviours are regulated by their ideal self. Ideal self-regulation in turn has a *promotion* focus, because people with such a self-regulatory

focus are motivated to obtain 'the positive outcomes from success' and avoid 'the absence of positive outcomes from failure' (Higgins *et al.* 1997, p. 516). A promotion self-regulatory focus is involved with advancement, accomplishments and aspirations (Higgins 1996a, 1996b). When people possess an ought self-regulation, their behaviours are regulated by their ought self, which suggests a *prevention* focus, because they are motivated to obtain 'the absence of negative outcomes from success' and avoid 'the presence of negative outcomes from failure' (Higgins *et al.* 1997, p. 516). A prevention self-regulatory focus is involved with safety, responsibilities and obligation.

People from individualist and collectivist cultures or with independent/interdependent self-concepts differ in their self-regulatory focus (Aaker & Lee 2001; Lee *et al.* 2000). Lee *et al.* (2000; see also Aaker & Lee 2001) thus argue that people with independent self-construals define themselves in terms of unique attributes and tend to pursue goals with an achievement focus. In other words, they regulate their behaviour around positive outcomes, an orientation that is congruent with promotion-focused self-regulatory goals. In contrast, people with interdependent self-construals see themselves in the context of group relations and attempt to avoid social failure by fulfilling social obligations and avoiding risks. That is, they regulate their behaviours around negative outcomes, an orientation congruent with prevention-focused self-regulatory goals.

Message framing effects

Early framing effects research focused on choices of behaviours with various levels of risks (Tversky & Kahneman 1981). Persuasion scholars adopt a similar approach to understand how a message's persuasion effects may vary as a function of how it is framed (e.g. Maheswaran & Meyers-Levy 1990). The positive/negative framing of health issues and product attributes, for example, is an important and widely explored strategy in health and marketing communication (Smith 1996). Positively framed ad or product messages focus on the benefits that result from purchasing a product or adopting a behaviour, whereas negatively framed messages emphasise the adverse consequences of not doing so (Maheswaran & Meyers-Levy 1990; Smith 1996).

Positively framed messages (i.e. owning the product results in positive outcomes) and negatively framed messages (i.e. not owning a product results in negative outcomes) differ on two important dimensions: whether the message focuses on the consequences of compliance or noncompliance and whether the outcomes are desirable or undesirable (see Table 1). More recent research has proposed a typology of message framing that addresses these two dimensions (O'Keefe & Jensen 2006) by defining four distinct message types: compliance to obtain positive outcomes (e.g. if you use suntan lotion, you will have healthy skin), compliance to avoid negative outcomes (e.g. if you use suntan lotion, you can reduce the chance of getting skin cancer), noncompliance that fails to obtain positive outcomes (e.g. if you do not use suntan lotion, you will not have healthy skin), and noncompliance that fails to avoid negative outcomes (e.g. if you do not use suntan lotion, you will not reduce the chance of getting skin cancer). The former two message frames represent gain frames; the latter two are loss frames. Yet O'Keefe and Jensen's (2006) meta-analysis indicates that none of the frames is notably superior, nor do gain and loss frames differ in their persuasiveness. Addressing positive or negative outcomes also does not seem to differ in terms of the persuasiveness of the messages in gain or loss frames.

The similar effects of gain or loss frames reported in O'Keefe and Jensen's meta-analysis may result because these effects get collapsed across different issues (health, socio-political, consumer) in the meta-analysis. Moreover, individual differences are not taken into account. As discussed previously though, persons with a promotion self-regulatory focus should be more sensitive and responsive to messages about positive outcomes, whereas those with a prevention self-regulatory focus should be

Table 1: Typology of persuasive message frames

| Compliance | | Non-compliance | | |
Positive outcomes	Negative outcomes	Positive outcomes	Negative outcomes	Message frames explored
Positive		.	Negative	Chang (2008); Smith (1996)
Gain	Gain	Loss	Loss	O'Keefe & Jensen (2006)
Promotion	Prevention			Aaker & Lee (2001)
ˇ	ˇ			Experiment 1
ˇ	ˇ	ˇ	ˇ	Experiment 2

more sensitive and responsive to messages suggesting negative outcomes. Self-regulatory focus therefore warrants further examination as a potentially important moderator.

Self-regulatory focus and framing effects

Regulatory focuses should influence selective responses to messages in goal-congruent or goal-incongruent frames (Shah *et al*. 1998). Self-regulatory focuses influence responses to persuasive messages, including product advertising (Aaker & Lee, 2001); and according to Aaker and Lee (2001), persons who have more accessible independent self-construals, and thus more accessible approach goals, evaluate a product Web site more favourably and express greater brand affinity when the site content is framed with a promotion focus rather than a prevention focus. In contrast, respondents who have more accessible interdependent self-construals, and thus more accessible avoidance goals, respond more positively when the content is framed with a prevention rather than a promotion focus. Thus, at the individual level, persuasive information appears more effective when delivered within a framework that is compatible with the subject's self-regulatory goals.

However, findings at the cultural level are not as conclusive. In Aaker and Lee's (2001) comparison of US and Hong Kong respondents, they propose the respondents should hold independent and interdependent self-concepts, respectively, yet the interaction between cultures and frames is not significant, nor are the simple effects tests comparing the two message frames within each culture. Perhaps these findings reflect the study's failure to take the degree of participants' involvement into account – an important variable when examining ad effectiveness (Te'eni-Harari *et al*. 2009).

Involvement as a moderator of the culture–frame interaction

The interaction between culture and frames might emerge only when consumers are highly involved with the advertised product and willing to pay attention to ad messages. Those who are not involved may not be responsive to message cues, even if the cues are self-concept congruent.

Product involvement measures the inherent interest in and enduring concern about a product category (for a review, see Salmon 1986). In this perspective, involvement is defined as a pre-existing relationship between an individual and a product class, an internal state that is not triggered by situational stimuli or ads. Persons with enduring interests and concerns about a product class engage in ongoing information searching and processing (Bloch 1981), process ad messages in elaborative manners (Chang 2004), and consult with others for product information (Richins & Bloch 1986).

Individual differences in issue involvement moderate the effectiveness of positively and negatively framed messages (Maheswaran & Meyers-Levy 1990; Rothman *et al.* 1993). Similarly, responsiveness to self-concept congruent message framing should be moderated by involvement with the product. Specifically, congruent ad framing should be more effective when participants are involved and thus more motivated to elaborate on the ad message. In other words, when message framing is congruent with self-regulatory goals, highly involved participants should respond more favorably than less involved participants. Conversely, when message framing is incongruent with self-regulatory goals, the level of involvement should not affect responses.

This study therefore hypothesises that independent persons with high product involvement will find promotion ads more diagnostic and evaluate the associated product more favorably than will less involved independent persons, who do not engage in message elaboration and thus do not have a chance to view the messages cues as diagnostic. However, involvement level should not affect the responses of persons with independent self-construals to prevention messages, which are incongruent with their promotion-focused goals. Conversely, interdependent persons with high product involvement should perceive prevention messages as more diagnostic and respond more favorably to the advertised brand than their low-involved counterparts. In contrast, product involvement should not affect the responses of interdependent persons to promotion messages, because those messages are incongruent with prevention-oriented goals.

H1: When ad messages use prevention frames, highly involved, interdependent persons will find the ads more diagnostic for their product evaluations (a) and view the product brand more

favorably (b) than will less involved persons. However, independent participants will not respond to the messages differently, regardless of their involvement.

H2:   When ad messages use promotion frames, highly involved, independent persons will find the ads more diagnostic for their product evaluations (a) and view the product brand more favorably (b) than will less involved persons. However, interdependent participants will not respond to the messages differently, regardless of their involvement.

In addition, this study proposes that the influence of the three-way interaction of culture × ad framing × involvement on ad and brand responses is mediated by the degree to which the recipient regards the ad messages as diagnostic in the process of evaluating the product.

H3:   Ad diagnosticity mediates the effect of the culture × ad framing × involvement interaction on brand evaluations.

Experiment 1

Participants

Participants (n = 256) were recruited from the campus of a Midwestern state university in the United States (n = 96; 31% male) and from the campus of a university in Taiwan (n = 160; 50% male). For their participation, the US participants received extra credit, and the Taiwanese participants received small monetary payments.

Design

The experiment manipulated one factor: ad framing (promotion versus prevention). Participants were recruited from two cultures (Taiwan – collectivistic versus the US – individualistic) and categorised into high and low product involvement groups according to a median split of their product involvement scores.

Materials

Sneakers were chosen as the target product, based on a pre-test in which college students indicated products they had owned and purchased in the past year. To eliminate the influence of existing brand attitudes, the target product used a fictitious brand name. Professional copywriters and artists at an advertising agency in Taiwan created the Chinese versions of the magazine-style ad stimuli, and then a professional in Taiwan, in charge of writing English copy for international advertisements, and who was born and raised in the United States, developed English-language versions. To reduce confounding, the ads with both positively and negatively framed messages used similar visuals. The ads were pre-tested to ensure successful message manipulations. To improve external validity, the target ads appeared between two filler ads.

Protocols

The scales and response items came from English-language publications; Chinese-language versions for use in Taiwan were created using the translation and back-translation procedures suggested by Brislin (1987). The analysis of variance approach suggested by Craig and Douglas (2000) was adopted to identify differential item functioning for all scales. The results showed neither uniform nor non-uniform biases of the scales when they were used across the two cultures.

Procedures

After being randomly assigned to one of the ad framing conditions, the participants were told that the study was designed to examine the effects of magazine ad layout on information processing. This story discouraged participants from guessing the actual purpose of the study, which possibly skewed the results. Participants also were instructed not to turn back to pages that they already had read for the duration of the study. They viewed a filler ad, followed by the target ad and another filler ad. After reading all three ads, the participants responded to questions about the framing of each ad and rated the importance of the items on Yamaguchi's (1994) collectivism scale as a manipulation check. Next, they indicated

their product involvement and completed scales assessing ad diagnosticity, brand evaluations and degree of message elaboration. A short debriefing followed the completion of the items.

Independent variables

Ad framing

Promotion ads contained messages suggesting that owning the sneakers would provide the owner with psychological benefits. Prevention ads suggested that owning the sneakers would prevent the owner from experiencing negative psychological consequences. For the manipulation check, participants indicated on seven-point Likert scales the degree to which they agreed with four statements: 'The ad addresses what you will gain if you purchase the product', 'The ad provides reasons for you to purchase the product in a positive way', 'The ad addresses what you will lose if you don't have the product', and 'The ad addresses reasons you should buy the product in a negative way'. Factor analysis with Varimax rotation revealed two factors with eigenvalues greater than 1, labeled *promotion framing* and *prevention framing*. Each factor consisted of two items. Their correlation was significant for both promotion framing (Pearson's r (254) = 0.45, $p < 0.01$) and prevention framing (Pearson's r (254) = 0.40, $p < 0.01$). As expected, participants rated messages with promotion frames higher on the promotion framing scale than they did messages with prevention frames ($F(1, 253) = 18.28$, $p < 0.01$, $\eta_p^2 = 0.08$; $M_{\text{promotion}}$ = 4.77, SD = 1.30; $M_{\text{prevention}}$ = 4.01, SD = 1.53) and rated messages with prevention frames higher on the prevention framing scale than they did messages with promotion frames ($F(1, 253) = 69.80$, $p < 0.01$, $\eta_p^2 = 0.22$; $M_{\text{promotion}}$ = 2.86, SD = 1.21; $M_{\text{prevention}}$ = 4.26, SD = 1.44). The manipulation was satisfactory.

Culture

In Hofstede's (1991) study, Taiwan ranked 44th and the United States 1st in terms of individualism among the 50 countries examined; therefore, Taiwan represented the collectivist culture and the United States the individualist culture for this study. As expected, participants from Taiwan attached significantly greater importance to the items on Yamaguchi's (1994) collectivism scale than did participants from the United States ($F(1, 253) = 36.91$, $p = 0.01$, $\eta_p^2 = 0.13$; M_{Taiwan} = 5.18, SD = 0.83; M_{US} =

4.44, $SD = 1.12$). The Cronbach's alpha was 0.83 (0.87 for US and 0.78 for Taiwanese participants), indicating satisfactory reliability.

Product involvement

On seven-point Likert scales, participants indicated the degree to which they agreed with 10 items, borrowed from Laurent and Kapferer (1985): 'When you choose sneakers, it is not a big deal if you make a mistake', 'It is really annoying to purchase sneakers that are not suitable', 'When I face a shelf of sneakers, I always feel a bit at a loss to make my choice', 'Choosing sneakers is rather complicated', 'You can tell a lot about a person by the sneakers he or she chooses', 'The sneakers I buy give a glimpse of the type of man/woman I am', 'It gives me pleasure to purchase sneakers', 'Buying sneakers is like buying a gift for myself', 'I attach great importance to sneakers', and 'One can say sneakers interest me a lot'. The Cronbach's alpha was 0.82 (0.81 for US and 0.75 for Taiwanese participants), indicating satisfactory reliability. A median split created high- and low-involved groups ($n = 126$ and 130, respectively), and the ANOVA showed that the groups differed significantly in their product involvement ($F(1, 252) = 197.26$, $p < 0.01$; $M_{high} = 5.33$, $SD = 1.26$; $M_{low} = 2.86$, $SD = 1.28$). Taiwanese and US participants did not differ significantly on the product involvement scale though ($F(1, 252) = 1.64$, $p = 0.20$; $M_{Taiwan} = 4.55$, $SD = 1.60$; $M_{US} = 3.40$, $SD = 1.81$).

Dependent variables

Ad diagnosticity

On a seven-point Likert scale, participants rated their agreement with the following question, which assessed the perceived diagnosticity of the ad: 'The ad provides me with enough information to judge the quality of the product'.

Brand evaluations

On seven-point Likert scales, participants indicated the degree to which they felt the sneaker brand was 'good', 'likable', 'pleasant', 'positive' and 'high quality'. These items come from Chang (2002). The reliability for this scale was satisfactory (Cronbach's alpha = 0.94, 0.95 for US and 0.92 for Taiwanese participants).

Message elaboration

Laczniak and Muehling's (1993) brand evaluation strategy scale provided the measure of message elaboration, to test the assumption that product involvement leads to greater elaboration. Participants indicated their level of agreement with the following six items on seven-point Likert scales: 'I paid attention to what was stated in the ad, so I could evaluate the advertised brand', 'I paid attention to what was stated in the ad to help me evaluate the brand featured in it', 'I paid attention to what was stated in the ad, so that I could determine the benefits of the brand featured in it', 'I paid attention to what was stated in the ad, so that I could determine the attributes of the brand featured in it', 'I paid attention to what was stated in the ad, so that I could rate the quality of the brand featured in it', and 'I paid attention to what was stated in the ad, so that I could determine what the brand featured in it had to offer'. The reliability of the scale was satisfactory (Cronbach's alpha = 0.91, 0.90 for US and 0.93 for Taiwanese participants).

Results

First, it was necessary to test a crucial assumption underlying the study, namely, that participants who are more involved with the product in question process ad messages differently, elaborating more on messages than do those who are less involved. The ANOVA revealed that as expected, participants with high product involvement elaborated on messages to a greater degree than did those scoring lower on product involvement ($F(1, 254) = 4.62$, $p = 0.03$, $\eta_p^2 = 0.02$; $M_{\text{high-involved}} = 4.55$, $SD = 1.26$; $M_{\text{low-involved}} = 4.20$, $SD = 1.37$).

Hypotheses 1a, 1b, 2a and 2b were tested using ANOVA as well as simple effects tests. Hypothesis 3 was tested using regression models. With regard to Hypotheses 1a and 2a, as expected, the culture × ad framing × involvement interaction for ad diagnosticity is significant ($F(1, 248) = 5.67$, $p = 0.02$, $\eta_p^2 = 0.02$). In the prevention frame condition, the interaction between involvement and culture is not significant though ($F(1, 125) = 2.20$, $p = 0.14$, $\eta_p^2 = 0.02$). Because some researchers argue that further analytical tests of theory-based hypotheses are justified, even when the interaction in question is not significant (e.g. Winer *et al.* 1991), simple effects tests followed. As expected, highly involved Taiwanese participants find

Table 2: Summary of ANOVA results for Experiment 1

	Ad diagnosticity		Brand evaluations	
	F	*p*	*F*	*p*
Ad framing (F)	13.42	0.01	5.29	0.02
Culture (C)	0.75	0.39	0.01	0.96
Product involvement (I)	4.62	0.03	1.09	0.30
F × C	0.75	0.39	0.04	0.83
F × I	0.57	0.45	0.03	0.95
C × I	0.16	0.69	0.73	0.39
F × C × I	**5.67**	**0.02**	**5.21**	**0.02**

the ads more diagnostic than do less-involved Taiwanese participants ($F(1, 78) = 4.41$, $p = 0.04$, $\eta_p^2 = 0.05$; $M_{\text{high-involved}} = 2.38$, $SD = 1.13$; $M_{\text{low-involved}} = 1.80$, $SD = 1.19$). Also as expected, involvement does not predict ad diagnosticity for US participants ($F(1, 47) = 0.08$, $p = 0.78$, $\eta_p^2 = 0.01$; $M_{\text{high-involved}} = 2.04$, $SD = 1.05$; $M_{\text{low-involved}} = 2.14$, $SD = 1.15$). Therefore, Hypothesis 1a is supported, but only with the results of the simple effects tests.

In the promotion frame condition, the interaction between involvement and culture is only marginally significant ($F(1, 123) = 3.51$, $p = 0.06$, $\eta_p^2 = 0.03$). For Taiwanese participants, involvement does not predict ad diagnosticity ($F(1, 78) = 0.01$, $p = 0.94$, $\eta_p^2 < 0.01$; $M_{\text{high-involved}} = 2.58$, $SD = 1.33$; $M_{\text{low-involved}} = 2.56$, $SD = 1.22$), whereas highly involved US participants rate the ads as more diagnostic than do less-involved US participants ($F(1, 45) = 5.34$, $p = 0.03$, $\eta_p^2 = 0.10$; $M_{\text{high-involved}} = 3.36$, $SD = 1.41$; $M_{\text{low-involved}} = 2.38$, $SD = 1.29$). Therefore, Hypothesis 2a receives support from the results of the simple effects tests.

With regard to Hypotheses 1b and 2b, the culture × ad framing × involvement interaction for brand evaluations also is significant ($F(1, 248) = 5.21$, $p = 0.02$, $\eta_p^2 = 0.02$). In the prevention frame condition, the interaction between involvement and culture is significant ($F(1, 125) = 4.93$, $p = 0.03$, $\eta_p^2 = 0.04$). As expected, among Taiwanese participants, those exhibiting high involvement evaluate the brand more favorably than do those with low involvement ($F(1, 78) = 6.52$, $p = 0.01$, $\eta_p^2 = 0.08$; $M_{\text{high-involved}} = 4.20$, $SD = 1.18$; $M_{\text{low-involved}} = 3.48$, $SD = 1.13$). Among the US participants, involvement does not predict brand evaluations ($F(1, 47) = 0.79$, $p = 0.38$, $\eta_p^2 = 0.02$; $M_{\text{high-involved}} = 3.69$, $SD = 1.25$; $M_{\text{low-involved}} = 4.06$, $SD = 1.32$). Thus,

the support for Hypothesis 1b comes from both the interaction and the simple effects tests.

In the promotion frame condition, the interaction between involvement and culture is not significant ($F(1, 123) = 1.02$, $p = 0.32$, $\eta_p^2 = 0.01$), and simple effects tests indicate that involvement cannot predict brand evaluations for Taiwanese participants ($F(1, 78) = 0.05$, $p = 0.82$, $\eta_p^2 < 0.01$; $M_{\text{high-involved}} = 4.25$, $SD = 1.09$; $M_{\text{low-involved}} = 4.31$, $SD = 1.05$), as expected. However, involvement also does not predict brand evaluations for the US participants ($F(1, 45) = 0.83$, $p = 0.37$, $\eta_p^2 = 0.02$), though the means are in the expected direction ($M_{\text{high-involved}} = 4.46$, $SD = 1.73$; $M_{\text{low-involved}} = 4.02$, $SD = 1.42$). Overall, these results do not support Hypothesis 2b.

With regard to Hypothesis 3, in line with Baron and Kenny's (1986) approach, regression analyses were conducted using dummy coding for culture, ad framing and product involvement. The models include all pertinent main effects and interactions. The resulting analyses show that (1) the three-way interaction term significantly predicts ad diagnosticity ($\beta = 0.16$, $p = 0.02$; see Table 3); (2) the three-way interaction term significantly predicts brand evaluations ($\beta = 0.16$, $p = 0.02$); (3) ad diagnosticity significantly predicts brand evaluations ($\beta = 0.43$, $p < 0.01$); and (4) when both the three-way interaction term and ad diagnosticity are included in the model, the impact of the three-way interaction disappears ($\beta = 0.10$, $p = 0.11$), but the impact of ad diagnosticity remains significant ($\beta = 0.55$, $p < 0.01$). A Sobel test shows that the effect of the three-way interaction

Table 3: Summary of regression analyses testing Hypothesis 3

	Ad diagnosticity			Brand evaluations			Brand evaluations			Brand evaluations		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Culture (C)	−0.07	0.09	−0.06	0.01	0.09	0.01				0.01	0.07	0.01
Ad framing (F)	−0.32	0.09	−0.25**	−0.20	0.09	−0.16*				0.05	0.07	−0.05
Product involvement (I)	0.19	0.09	0.15*	0.09	0.09	0.07				0.09	0.07	0.08
F × C	0.07	0.09	0.06	−0.02	0.09	−0.02				−0.05	0.07	−0.04
C × I	−0.06	0.09	−0.05	−0.01	0.09	−0.01				−0.07	0.07	−0.06
F × I	−0.03	0.09	−0.03	0.07	0.09	0.06				−0.01	0.07	−0.01
F × C × I	0.21	0.09	0.16*	0.20	0.09	0.16*				0.11	0.07	0.10
Ad diagnosticity							0.42	0.06	0.43**	0.52	0.05	0.55**
R squared	0.07**			0.04			0.18**			0.35**		

*$p < 0.05$; **$p < 0.01$.

decreases significantly when ad diagnosticity also is included in the analysis (Z = 2.21, p = 0.01). These results therefore suggest that the effect of the culture × ad framing × involvement interaction influences brand evaluations both directly and indirectly through its effects on ad diagnosticity.

Finally, though all three-way interactions tested are significant, the two-way interactions between ad framing and culture are not significant for either of the dependent measures, namely, ad diagnosticity (F(1, 248) = 0.75, p = 0.39, η_p^2 < 0.01) or brand evaluations (F(1, 248) = 0.04, p = 0.83, η_p^2 < 0.01). This result suggests that product involvement functions as an important moderator.

Discussion

As expected, product involvement increases the effectiveness of culturally congruent ad framing, especially for Taiwanese participants. For Taiwanese participants, when the ad is negatively framed, the simple effect of involvement is significant for both ad diagnosticity and brand evaluations. For US participants, when the ad is positively framed, the simple effect of involvement is significant only for ad diagnosticity, not brand evaluations, though the means are in the expected direction. The small size of the US sample may have contributed to the insignificance of the brand evaluations result though. Finally, ad diagnosticity mediates the relationship between the three-way interaction and brand evaluations, which indicates that Taiwanese/US participants who are highly involved with the products perceive negative/positive ads as diagnostic, resulting in their more favorable brand evaluations.

Compliance as a dimension of ad framing

Experiment 1 focuses on the consequences of owning a product, but compliance and noncompliance offer other important framing dimensions (O'Keefe & Jensen 2006). Messages can emphasise the consequences of adopting or not adopting a behaviour. In a similar vein, product advertising can address the consequences of owning or not owning a product. What remains unclear is whether consumers with different self-concepts respond to messages that address the positive and negative consequences of not owning a product in the same way that they do to messages that

address the positive and negative consequences of owning a product. This question motivates Experiment 2.

Existing literature suggests that prevention/promotion self-regulation relates to sensitivity to negative/positive information (Higgins & Tykocinski 1992). People with interdependent self-concepts, and thus prevention regulatory self-foci, should be more sensitive to negative outcomes, whereas those with independent self-concepts, and thus promotion regulatory self-foci, should be more sensitive to positive outcomes. This tendency should hold, regardless of whether the message emphasises compliance or noncompliance. Specifically, when messages emphasise the consequences of owning a product or the consequences of not owning a product, the valence of consequences should determine ad diagnosticity and thus brand attitudes.

Kim *et al.* (1994) argue that cultures may model values for people, but they do not absolutely determine them; people may accept or reject cultural influences according to their own personal characteristics. Therefore, within the same cultures, some people may be collectivists, whereas others may be individualists (Triandis *et al.* 1985). Most of Higgins's studies on self-regulatory focus, for example, use the same cultures (e.g. Higgins & Tykocinski 1992), with the assumption that members of a culture vary significantly in their promotion versus prevention self-regulatory foci. This study similarly attempts to identify those with interdependent or independent self-concepts at the individual level.

H4:   Regardless of the compliance differences, when ad messages address negative outcomes, highly involved, interdependent persons will find the ads more diagnostic for their product evaluations (a) and view the product brand more favorably (b) than will less involved persons. However, independent participants will not respond to the messages differently, regardless of their involvement.

H5:   Regardless of the compliance differences, when ad messages address positive outcomes, highly involved independent persons will find the ads more diagnostic for their product evaluations (a) and view the product brand more favourably (b) than will less involved persons. However, interdependent participants will not

respond to the messages differently, regardless of their involvement.

Experiment 2

Participants

Participants (n = 203, 47.8% male) were recruited from the campus of a university in Taiwan and paid for their participation.

Design

The two manipulated message factors are consequence valence (positive versus negative) and compliance (compliance versus noncompliance). Moreover, participants' self-concept (independent versus interdependent) and product involvement (high versus low) were measured. Participants therefore could be categorised into different self-concept × product involvement groups on the basis of median splits of their responses to the two scales.

Materials and procedures

Shoes again served as the target product. Professional copywriters and artists at an advertising agency in Taiwan created ad stimuli, which highlighted the consequences of owning or not owning the product in terms of comfort or discomfort (soreness). To reduce confounding, similar visuals appeared in all four versions of the target ad. Pre-tests of the ads ensured successful message manipulations. Similar to Experiment 1, to improve external validity, the target ads appeared between filler ads. The rest of the procedures were the same as those reported for Experiment 1.

Independent variables

Compliance
Promotion ads contained messages that suggested the consequences of owning or not owning the advertised product.

Consequence valence

Positive promotion ads contained messages suggesting that owning/not owning the sneakers would or would not provide the owner comfort. Negative prevention ads suggested that owning or not owning the sneakers would or would not prevent the owner from experiencing discomfort. For the manipulation check, participants indicated on seven-point Likert scales the degree to which they agreed with a semantic-differential statement: 'The ad concerns positive consequences' as opposed to 'The ad concerns negative consequences'. As expected, promotion messages were rated higher on this scale than were prevention messages ($F(1, 201) = 70.64$, $p < 0.01$, $\eta_p^2 = 0.28$; $M_{promotion} = 5.63$, $SD = 1.54$; $M_{prevention} = 3.49$, $SD = 2.01$), indicating the success of the manipulation.

Self-concept

The categorisation of participants into interdependent or independent self-concept groups relies on Singelis's (1994) scale (Cronbach's alpha = 0.86), on which higher ratings indicate greater levels of interdependent self-concepts. The two groups differed significantly ($F(1, 201) = 414.60$, $p < 0.01$, $\eta_p^2 = 0.67$; $M_{interdependent} = 6.21$, $SD = 0.42$; $M_{independent} = 4.72$, $SD = 0.61$).

Participants also rated themselves on Higgins *et al.*'s (2001) promotion and prevention self-regulatory scale. The results indicated that the two groups differed significantly in their prevention self-regulatory focus ($F(1, 201) = 5.30$, $p = 0.02$, $\eta_p^2 = 0.03$; $M_{interdependent} = 5.41$, $SD = 0.95$; $M_{independent} = 5.12$, $SD = 0.90$) but not in their promotion self-regulatory focus ($F(1, 201) = 0.01$, $p = 0.99$, $\eta_p^2 < 0.01$; $M_{interdependent} = 3.56$, $SD = 0.70$; $M_{independent} = 3.56$, $SD = 0.73$).

Product involvement

Laurent and Kapferer's (1985) scale led to Cronbach's alpha values of 0.82, indicating satisfactory reliability. A median split created the highly involved ($n = 95$) and less involved ($n = 108$) groups, and an ANOVA showed that these groups differed significantly in their product involvement ($F(1, 201) = 197.26$, $p < 0.01$, $\eta_p^2 = 0.63$; $M_{high} = 4.68$, $SD = 0.88$; $M_{low} = 2.34$, $SD = 0.96$).

Dependent variables

Ad diagnosticity

The ad diagnosticity measure used three items: 'The ad provides me with enough information to judge the quality of the product', 'The ad helps me tell the quality of the product', and 'The ad makes me feel confident in terms of discriminating the quality of the product from others' (Cronbach's alpha = 0.74). By using three items, this scale addresses the potential for bias associated with the one-item scale in Experiment 1.

Brand attitudes

Experiment 2 used the same brand evaluation scale as in Experiment 1 (Cronbach's alpha = 0.88).

Message elaborations

Laczniak and Muehling's (1993) brand evaluation strategy scale (Cronbach's alpha = 0.88) measured the extent of message elaboration, to test the assumption that product involvement would lead to greater elaboration.

Results

For the test of the assumption that participants who are more involved with the product in question process ad messages with greater elaboration, an ANOVA revealed that as expected, participants with higher product involvement elaborated on messages to a greater degree than did those scoring lower on the product involvement scale ($F(1, 201) = 36.89$, $p < 0.01$, $\eta_p^2 = 0.16$; $M_{\text{high-involved}} = 4.96$, $SD = 0.86$; $M_{\text{low-involved}} = 4.13$, $SD = 1.06$).

Hypotheses 4a, 4b, 5a and 5b were tested using ANOVA as well as simple effects tests. With regard to Hypotheses 4a and 5a, as expected, the self-concept × consequence valence × involvement interaction for ad diagnosticity is significant ($F(1, 187) = 7.91$, $p < 0.01$, $\eta_p^2 = 0.04$), as Table 4 shows. In the negative outcome condition, the interaction between involvement and self-concept also is significant ($F(1, 95) = 8.44$, $p < 0.01$, $\eta_p^2 = 0.08$), and simple effects tests reveal that more involved interdependent participants find the ads more diagnostic than do less involved, interdependent participants ($F(1, 47) = 33.54$, $p < 0.01$, $\eta_p^2 = 0.42$; $M_{\text{high-involved}} = 5.17$, $SD = 1.10$; $M_{\text{low-involved}} = 3.41$, $SD = 1.04$). As expected, involvement

Table 4: Summary of ANOVA results for Experiment 2

	Ad diagnosticity		Brand evaluations	
	F	p	F	p
Compliance (C)	0.01	0.96	0.02	0.89
Consequence valence (V)	0.74	0.39	0.08	0.77
Involvement (I)	24.39	0.01	35.46	0.01
Self-concept (S)	2.86	0.09	3.65	0.06
C × V	0.42	0.52	2.87	0.09
C × I	0.50	0.48	0.07	0.80
V × I	1.39	0.24	0.05	0.83
C × S	0.39	0.53	0.01	0.97
V × C	0.35	0.55	0.03	0.85
I × S	0.64	0.43	0.21	0.65
C × V × I	2.79	0.10	0.15	0.70
C × V × S	0.87	0.35	0.17	0.68
C × I × S	0.71	0.40	0.35	0.58
V × I × S	**7.91**	**0.01**	**6.29**	**0.01**
C × V × I × S	0.09	0.76	0.90	0.34

cannot predict ad diagnosticity for independent participants ($F(1, 48)$ = 1.87, $p = 0.18$, $\eta_p^2 = 0.04$; $M_{\text{high-involved}} = 4.15$, $SD = 1.30$; $M_{\text{low-involved}} = 3.69$, $SD = 1.04$). The results thus support Hypothesis 4a. In the positive outcome condition, the interaction between involvement and self-concept is not significant though ($F(1, 92) = 1.63$, $p = 0.21$, $\eta_p^2 = 0.02$), so Hypothesis 5a does not receive support.

With regard to Hypotheses 4b and 5b, the culture × consequence valence × involvement interaction for brand evaluations is significant ($F(1, 187) = 6.29$, $p = 0.01$, $\eta_p^2 = 0.03$). In the negative outcome condition, the interaction between involvement and culture is significant ($F(1, 95) = 5.54$, $p = 0.02$, $\eta_p^2 = 0.06$). As expected, among interdependent participants, those expressing higher involvement evaluate the brand more favorably than do those exhibiting lower involvement ($F(1, 47) = 31.99$, $p < 0.01$, $\eta_p^2 = 0.41$; $M_{\text{high-involved}} = 4.98$, $SD = 0.86$; $M_{\text{low-involved}} = 3.71$, $SD = 0.76$). For independent participants, involvement does not predict brand evalu-

ations ($F(1, 48) = 2.75$, $p = 0.10$, $\eta_p^2 = 0.05$; $M_{\text{high-involved}} = 4.33$, $SD = 0.95$; $M_{\text{low-involved}} = 3.86$, $SD = 0.96$), in support of Hypothesis 4b. In the positive outcome condition, the interaction between involvement and self-concept is not significant ($F(1, 92) = 1.72$, $p = 0.19$, $\eta_p^2 = 0.04$), so Hypothesis 5b does not receive support.

Finally, it is important to note that the four-way interactions tested are not significant for either of the dependent measures (ad diagnosticity $F(1, 187) = 0.09$, $p = 0.76$; brand evaluations $F(1, 187) = 0.90$, $p = 0.34$). That is, the three-way interactions among self-concept, consequence valence and self-concept do not appear to vary as a function of compliance.

Similar to the findings from Experiment 1, the three-way interactions are significant, but the two-way interactions between consequence valence and self-concepts are not for either dependent measure (ad diagnosticity $F(1, 187) = 0.35$, $p = 0.55$; brand evaluations $F(1, 187) = 0.03$, $p = 0.85$). This result suggests that product involvement functions as an important moderator.

Discussion

The valence of outcomes, but not compliance type, moderates the interaction between people's self-concepts and their product involvement. The findings pertaining to the negative outcome messages are consistent with expectations, such that interdependent participants' responses to negative outcome messages become significantly enhanced when they are highly involved with the product category. In contrast, the findings for the positive outcome messages do not fit with prior expectations, perhaps because the participants all come from Taiwan, a collectivistic culture. Despite categorising participants as interdependent and independent, the independent participants revealed ratings higher than the midpoint of the scale, which means they can better be described as collectivists than as individualists. In turn, it makes sense that they did not respond to the positive frames as predicted. In addition, the two groups differ only in their prevention, not their promotion, focus. These participants might not ever have been socialised to be sensitive to promotion information.

General discussion

Findings and theoretical ramifications

The effectiveness of message strategies appears culture-specific and moderated by individual involvement. Prior studies explore this issue by examining the impact of persuasive message factors related to the individualist/collectivist cultural distinction, such as consensus cues (Aaker & Maheswaran 1997), brand personalities (Aaker 2000), or pride versus empathy emotional appeals (Aaker & Williams 1998). Experiment 1 adds to the growing body of evidence by demonstrating that the effectiveness of message frames varies as a function of cultural socialisation. The results also confirm the idea that persuasion effects that work well in one culture may not generalise to others. Thus, message effects should be interpreted only within their cultural context.

The findings of the two experiments also suggest that not only is the influence of culture or self-concept complex, but individual differences in terms of product involvement within cultures also require consideration. When people have little motivation to elaborate on a persuasive message, even congruent message cues will not influence them. Involvement, or interest in or concern about a product or issue, actually can determine the extent of message elaboration and alter the influence of culturally congruent messages. This finding echoes past research that suggests active processing can alter ad effectiveness (Kwak *et al.* 2009).

This study also extends existing literature by noting that involvement is an important moderator in congruent message cue processing. The two-way interaction between ad framing and culture in Experiment 1 or consequence valence and self-concepts in Experiment 2 is not significant for any of the dependent measures, which suggests that framing effects differ by culture or individuals only when product involvement is taken into account. In general, when participants are highly involved, an interesting and consistent pattern of effects emerges, exhibiting the enhanced effectiveness of congruent framing. This effect appears to reflect greater message elaboration by highly involved participants, which enables them to distinguish the diagnosticity of culturally congruent message framing. Specifically, among Taiwanese participants, those with higher involvement rate the messages in prevention frames (culturally congruent) as

more diagnostic and the product more favorably than do those with low involvement, yet product involvement cannot influence ad diagnosticity or brand evaluations when the messages are in promotion frames (culturally incongruent). For US participants as well, involvement affects diagnosticity ratings when the framing is culturally congruent but not when it is incongruent.

Experiment 1 further establishes the mechanism through which message framing influences brand attitudes. Culturally congruent message framing is more persuasive for highly involved people because it is more diagnostic – that is, it provides salient information with which to judge product quality. Therefore, only when ad messages are perceived as highly diagnostic are they likely to influence attitudes towards the advertised product.

Experiment 2 then extends Experiment 1 by demonstrating that the enhanced effects of culturally congruent frames for highly involved participants emerge in situations in which the messages emphasise noncompliance. In other words, participants respond to self-congruent message frames when they are motivated to elaborate on the messages, regardless of whether the messages focus on compliance or noncompliance. This finding is consistent with self-regulatory literature, which suggests that self-regulatory focus determines sensitivity to positive and negative information (Higgins & Tykocinski 1992).

Implications for practitioners

The finding that culturally congruent message framing is more effective than incongruent message framing when participants are highly involved has important implications. Highly involved consumers are usually the primary target of persuasion campaigns. To persuade them effectively, practitioners should tailor their messages using frames that match their cultural orientations. Promotion and prevention framing are commonly employed in persuasion campaigns, and the findings have great significance for planning product, health, or political campaigns.

Past framing research focuses on the effectiveness of health messages framed in positive and negative terms and the implications for planning health issues. This study demonstrates that framing can alter consumers' responses to product advertisements when they are highly involved

with the product category. Global advertisers should take this point into account when developing advertising campaigns in cultures in which people hold different self-concepts.

Further research directions

The argument in support of culturally distinct effects of promotion and prevention frames is advanced within a theoretical framework that pertains to cultural differences in self-regulatory goals. Other studies exploring framing effects draw upon dual-mode processing models. For example, Meyers-Levy and Maheswaran (2004) use heuristic-systematic models to understand the relative effects of positive and negative frames. Zhu and Meyers-Levy (2007) explore processing strategies for people with different self-regulatory focuses to show that promotion-focused persons engage in relational elaboration, whereas prevention-focus people engage in item-specific elaboration. Further studies should explore whether the enhanced effects of culturally congruent message frames for highly involved participants might be explained by processing differences.

In addition to their effect on message framing, self-regulatory goals might help clarify consumer responses to product information and decision making (e.g. Pham & Higgins 2005). If people with promotion- and prevention-oriented self-regulatory goals respond differently to message framing, they may respond differently to other message cues as well. For example, self-regulatory goals influence preferences for different brand extension strategies (Yeo & Park 2006). Because self-regulatory goals are higher-order principles, the way in which they influence the effectiveness of other persuasion tactics deserves more research attention.

Differences in self-construals and self-regulatory goals provide a theoretical framework for understanding how ad messages that address positive and negative outcomes might get evaluated differently by people from different cultures. New advancements in cross-cultural psychology pertaining to self-construals reveal new ways to understand the different effects of persuasive messages across cultures. For example, research that employs an individualist/collectivist framework of differences in self-construal has yielded a rich array of findings (Aaker 2000; Aaker & Maheswaran 1997; Aaker & Sengupta 2000; Aaker & Williams 1998).

This study adds to this line of research. Additional research could extend this literature by exploring how cultural differences in self-construals or self-concepts influence other kinds of persuasive message appeals across different cultural settings.

Limitations

The findings of this paper should be interpreted with certain limitations in mind. First, the focus is on responses to product advertising, though prior work suggests that framing can influence the effectiveness of health-related messages as well (e.g. Rothman *et al*. 1993). Second, the studies examine only one specific consumer product. Further research should test the applicability of the findings to messages that promote health behaviours, political candidates, or other products. Third, the participants are all college students, so caution should be exercised when generalising the results to other age groups. Fourth, Experiment 1 uses only one item to measure ad diagnosticity; Experiment 2 addresses this concern though with a three-item ad diagnosticity scale. Fifth, in Experiment 1, even though participants in different cultures hold different levels of collectivism values, the relationship between cultures and independent/interdependent self-concepts were not tested. Despite these limitations, the findings of this study consistently highlight the importance of considering message effects within cultural contexts.

References

Aaker, J.L. (2000) Accessibility or diagnosticity? Disentangling the influence of culture on persuasion processes and attitudes. *Journal of Consumer Research*, **26**, pp. 340–357.

Aaker, J. & Lee, A.Y. (2001) 'I' seek pleasure and 'we' avoid pains: the role of self-regulatory goals in information processing and persuasion. *Journal of Consumer Research*, **28**, pp. 33–49.

Aaker, J.L. & Maheswaran, D. (1997) The effect of cultural orientation on persuasion. *Journal of Consumer Research*, **24**, pp. 315–328.

Aaker, J.L. & Sengupta, J. (2000) Additivity versus attenuation: the role of culture in the resolution of information incongruity. *Journal of Consumer Psychology*, **9**, pp. 67–82.

Aaker, J.L. & Williams, P. (1998) Empathy versus pride: the influence of emotional appeals across cultures. *Journal of Consumer Research*, **25**, pp. 241–261.

Baron, R.M. & Kenny, D.A. (1986) The moderator–mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, **51**, pp. 1173–1182.

Bloch, P.H. (1981) An exploration into the scaling of consumers' involvement with a product class, in K.B. Monroe (ed.), *Advances in Consumer Research* (Vol. 8, pp. 61–65). Ann Arbor, MI: Association for Consumer Research.

Brislin, R.W. (1987) The wording of translation of research instruments, in W.J. Lonner & J.W. Berry (eds.), *Field Methods in Cross-Cultural Research* (pp. 137–164). Beverly Hills, CA: Sage.

Chang, C. (2002) Self-congruency as a cue in different advertising processing contexts. *Communication Research*, **29**, pp. 503–536.

Chang, C. (2004) Country-of-origin as a heuristic cue: the effects of message ambiguity and product involvement. *Media Psychology*, **6**, pp. 169–193.

Chang, C. (2008) Ad framing effects for consumption products: an affect priming process. *Psychology & Marketing*, **25**(1), pp. 25–47.

Craig, C.S. & Douglas, S. (2000) *International Marketing Research* (2nd edn). Chichester: John Wiley & Sons.

Gardner, W.L., Gabriel, S. & Lee, A.Y. (1999) 'I' value freedom, but 'we' value relationships: self-construal priming mirrors cultural differences in judgment. *Psychological Science*, **10**, pp. 321–326.

Herr, P.M., Kardes, F.R. & Kim, J. (1991) Effects of word-of-mouth and product-attribute information on persuasion: an accessibility-diagnosticity perspective. *Journal of Consumer Research*, **17**, pp. 454–462.

Higgins, E.T. (1987) Self-discrepancy: a theory relating self and affect. *Psychological Review*, **94**, pp. 319–340.

Higgins, E.T. (1989) Self-discrepancy theory: what patterns of self-beliefs cause people to suffer? *Advances in Experimental Social Psychology*, **22**, pp. 93–136.

Higgins, E.T. (1996a) Emotional experiences: the pains and pleasures of distinct regulatory systems, in R.D. Kavanaugh, B. Zimmerberg & S. Fein (eds.), *Emotion: Interdisciplinary Perspectives* (pp. 203–241). Mahwah, NJ: Erlbaum.

Higgins, E.T. (1996b) Knowledge activation: accessibility, applicability, and salience, in E.T. Higgins & A.W. Kruglanski (eds.), *Social Psychology: Handbook of Basic Principles* (pp. 133–168). New York: Guilford Press.

Higgins, E.T. & Tykocinski, O. (1992) Self-discrepancies and bio-graphical memory: personality and cognition at the level of psychological situation. *Personality and Social Psychology Bulletin*, **18**, pp. 527–535.

Higgins, E.T., Klein, R. & Strauman, T. (1985) Self-concept discrepancy theory: a psychological model for distinguishing among different aspects of depression and anxiety. *Social Cognition*, **3**, pp. 51–76.

Higgins, E.T., Bond, R.N., Klein, R. & Strauman, T. (1986) Self-discrepancies and emotional vulnerability: how magnitude, accessibility, and type of discrepancy influence affect. *Journal of Personality and Social Psychology*, **51**(1), pp. 5–15.

Higgins, E.T., Shah, J. & Friedman, R. (1997) Emotional responses to goal attainment: strength of regulatory focus as moderator. *Journal of Personality and Social Psychology*, **72**, pp. 515–525.

Higgins, E.T., Friedman, R.S., Harlow, R.E., Idson, L.C., Ayduk, O.N. & Taylor, A. (2001) Achievement of orientations from subjective histories of success: promotion pride versus prevention pride. *European Journal of Social Psychology*, **31**, pp. 3–23.

Hofstede, G. (1980) *Culture's Consequences: International Differences in Work-Related Values*. Beverly Hills, CA: Sage.

Hofstede, G. (1991) *Culture and Organizations: Software of the Mind*. London: McGraw-Hill.

Kagitcibasi, C. (1994) A critical appraisal of individualism and collectivism: toward a new formulation, in U. Kim, H.C. Triandis, C. Kagitcibasi, S. Choi & G. Yoon (eds), *Individualism and Collectivism* (pp. 52–65). London: Sage.

Kim, U., Triandis, H.C., Kagitcibasi, C., Choi, S., Yoon, G. (eds) (1994) *Individualism and Collectivism: Theory, Method, and Applications*. Thousand Oaks, CA: Sage.

Kwak, H., Andras, T.L. & Zinkhan, G.M. (2009) Advertising to 'active' viewers: consumer attitudes in the US and South Korea. *International Journal of Advertising*, **28**(1), pp. 49–75

Laczniak, R.N. & Muehling, D.D. (1993) The relationship between experimental manipulations and tests of theory in an advertising message involvement context. *Journal of Advertising*, **22**(3), pp. 59–74.

Laurent, G. & Kapferer, J. (1985) Measuring consumer involvement profile. *Journal of Marketing Research*, **22**, pp. 41–53.

Lee, A.Y., Aaker, J.L. & Gardner, W. L. (2000) The pleasures and pains of distinct self-construals: the role of interdependence in regulatory focus. *Journal of Personality and Social Psychology*, **78**, pp. 1122–1134.

Maheswaran, D. & Meyers-Levy, J. (1990) The influence of message framing and issue involvement. *Journal of Marketing Research*, **27**, pp. 361–367.

Markus, H. & Kitayama, S. (1991) Culture and the self: implications for cognition, emotion, and motivation. *Psychological Review*, **98**, pp. 224–253.

Markus, H. & Nurius, P. (1986) Possible selves. *American Psychologist*, **41**, pp. 954–969.

Markus, H. & Wurf, E. (1987) The dynamic self-concept: a social psychological perspective. *Annual Review of Psychology*, **38**, pp. 299–337.

Meyers-Levy, J. & Maheswaran, D. (1990) Message framing effects on product judgments, in M. Goldberg, G. Gorn & R. Pollay (eds.), *Advances in Consumer Research* (Vol. 17, pp. 531). Provo, UT: Association for Consumer Research.

O'Keefe, D. & Jensen, J.D. (2006) The advantages of compliance or the disadvantages of noncompliance? A meta-analytic review of the relative persuasive effectiveness of gain-framed and loss-framed messages. *Communication Yearbook*, **30**, pp. 1–43.

Pham, M.T. & Higgins, E.T. (2005) Promotion and prevention in consumer decision-making, in S. Ratneshwar & D.G. Mick (eds.), *Inside Consumption: Frontiers of Research on Consumer Motives, Goals, and Desires* (pp. 8–43). London: Routledge.

Richins, M.L. & Bloch, P.H. (1986) After the new wears off: the temporal context of product involvement. *Journal of Consumer Research*, **13**, pp. 280–285.

Rothman, A.J., Salovey, P., Antone, C., Keough, K. & Martin, C.D. (1993) The influence of message framing on intentions to perform health behaviours. *Journal of Experimental Social Psychology*, **29**, pp. 408–433.

Salmon, C. (1986) Perspectives on involvement in consumer and communication research, in B. Dervin & M. Voigt (eds.), *Progress in Communication Sciences* (pp. 243–269). Norwood, NJ: Albex.

Shah, J.Y., Higgins, E.T. & Friedman, R. (1998) Performance incentives and means: how regulatory focus influences goal attainment. *Journal of Personality and Social Psychology*, **74**, pp. 285–293.

Singelis, T.M. (1994) The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin*, **20**, pp. 580–591.

Smith, G.E. (1996) Framing in advertising and the moderating impact of consumer education. *Journal of Advertising Research*, **36**(5), pp. 49–64.

Te'eni-Harari, T., Lehman-Wilzig, S.N. & Lampert, S.I. (2009) The importance of product involvement for predicting advertising effectiveness among young people. *International Journal of Advertising*, **28**, pp. 203–229.

Triandis, H.C., Leung, K., Villareal, M. & Clack, F.L. (1985) Allocentric vs. idiocentric tendencies: convergent and discriminant validation. *Journal of Research in Personality*, **19**, pp. 395–415.

Triandis, H.C., Bontempo, R., Villareal, M.J., Asai, M. & Lucca, N. (1988) Individualism and collectivism: cross-cultural perspectives on self-ingroup relationships. *Journal of Personality and Social Psychology*, **54**, pp. 323–338.

Tversky, A. & Kahneman, D. (1981) The framing of decision and the psychology of choice. *Science*, **211**, pp. 453–458.

Winer, B.J., Brown, D.R. & Michels, K.M. (1991) *Statistical Principles in Experimental Design* (3rd edn). New York: McGraw-Hill.

Yamaguchi, S. (1994) Collectivism among the Japanese: a perspective from the self, in U. Kim, H.C. Triandis, C. Kagitcibasi, S. Choi & G. Yoon (eds.), *Individualism and Collectivism: Theory, Method, and Application* (pp. 175–188). London: Sage.

Yeo, J.J. & Park, J. (2006) Effects of parent-extension similarity and self-regulatory focus on evaluations of brand extensions. *Journal of Consumer Psychology*, **16**(3), pp. 272–282.

Zhu, R. & Meyers-Levy, J. (2007) Exploring the cognitive mechanism that underlies regulatory focus effects. *Journal of Consumer Research*, **27**, pp. 89–96.

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