

## Enhancing self-referencing to health messages.

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A mediation model in which internal and external request tactics enhances the perceived effectiveness of a public health messages by increasing self-referencing, but only for persons concerned about the targeted health issue. For those concerned about hepatitis B (but not for those who are not concerned), using second-person pronouns rather than third-person terms (an internal request tactic) and using rhetorical questions rather than declarative statements in the ad headings (an external request tactic) enhance perceived message effectiveness. As expected, both processes are mediated by increased self-referencing.

In an environment in which people are constantly bombarded with information, it is important for health campaigners to draw the attention of their target audience to the health messages they are trying to convey. It is even more crucial to engage the audience in elaborative processing (which involves conscious cognitive activities) once their attention has been attracted, because elaborative processing can lead to greater message persuasion (Keller and Block 1996). Self-referencing, or relating a message to one's personal experiences, is a type of elaborative processing (Klein and Loftus 1988; Rogers, Kuiper, and Kirker 1977). Moreover, product advertising literature shows that self-referencing enhances message persuasion (e.g., Burnkrant and Unnava 1989, 1995; Debevec and Iyer 1988). Because it is important for health messages to encourage self-referencing, this study proposes a model in which self-referencing mediates the effects of message tactics on health message processing.

This article explores the use of internal and external requests, two linguistic message tactics (Parrott 1995), as ways to promote elaborative message processing (Louis and Sutton 1991). Internal requests increase audience attention by shortening the psychological distance between the message and the audience. Because the use of second-person pronouns reduces psychological distance, it represents a type of internal request tactic. External requests instead are statements that explicitly or implicitly ask the message receivers to increase their attention, which might include questions that direct the audience's attention to the message (Parrott 1995). On the basis of this reasoning, it seems reasonable to assert that the use of rhetorical questions represents an external request tactic.

People vary in their motivation to elaborate on ad materials and thus their susceptibility to ad influence (Meyers-Levy and Maheswaran 1991). Some people are more motivated by internal and external requests to elaborate on ad messages than are others. Furthermore, self-referencing prompts are implicit and more subtle than are other message tactics, which may explain why they appear effective only when participants have high product involvement (Meyers-Levy and Peracchio 1996). In the same way, internal and external request tactics

should motivate persons to engage in self-referencing only when they are highly concerned about the target health issue.

The theoretical framework proposed to explore these issues (Figure 1) attempts to achieve four research objectives. First, it uses the internal and external request tactic typology to explore the effectiveness of two such message tactics, namely, the use of second-person pronouns and the use of rhetorical questions. Second, this study tests a self-referencing-mediated psychological process by which these message tactics may enhance perceived message effectiveness. Third, it explores interest in the issue as a potential moderator. Fourth, this study attempts to provide useful guidelines for developing effective health promotion messages.

## SELF-REFERENCING

Self-referencing refers to "the processing of information by relating it to the self-structure or aspects of it" (Burnkrant and Unnava 1995, p. 17). Psychology literature explores various effects of self-referencing and shows, for example, that message recall improves when participants relate the message to themselves rather than just processing its semantic meaning (Rogers, Kuiper, and Kirker 1977). Enhanced message recall has been attributed to self-referencing as a form of elaborative processing (Klein and Loftus 1988).

[FIGURE 1 OMITTED]

Significant advertising research on self-referencing also reveals that when ad perceivers are encouraged to relate the advertising messages to themselves, the persuasive effects of the ad increase (Debevec and Iyer 1988). Chang (2001, 2005) and Debevec and Iyer (1988) use the self-referencing mechanism to explain why advertising messages that are congruent with ad perceivers' self-concepts are more effective than incongruent messages. Burnkrant and Unnava (1989) further demonstrate that the strong persuasive effects of self-referencing messages can be explained by the enhanced message elaboration they trigger. In line with the elaboration likelihood model (ELM; Petty and Cacioppo 1981), when they instructed participants to relate ad messages to their own experiences, strong arguments generated more favorable product attitudes than weak arguments, indicating a greater level of message elaboration. However, when they did not instruct participants to relate the messages, argument strength did not influence attitudes. That is, in self-referencing conditions, participants may engage in greater message elaboration and distinguish the quality of the arguments, similar to central route processing in ELM.

In accordance with the ELM, message tactics increase message elaboration (Petty and Cacioppo 1984, 1986). Similarly, they should be able to encourage self-referencing. Unfortunately, in the health communication field, message tactics that evoke self-referencing and their potential effects on ad persuasion have not drawn much research attention. Bull et al. (2001) indicate that health information is more persuasive when message recipients apply it to their lives, but their study involves self-relevancy as a message factor, not as a response, as it appears in this study. Health-related public service announcements (PSAs) that feature strong and reliable arguments should be more persuasive when they encourage self-referencing.

## INTERNAL AND EXTERNAL REQUESTS

The idea of internal and external requests was first introduced by Louis and Sutton (1991, p. 56), who argued that in "business as usual" conditions, people engage in "habits of the mind" or automatic processing. However, they also proposed three situational factors that might encourage active thinking (i.e., more conscious cognitive activities than automatic processing): unusual or novel situations, discrepancies between expectations and experiences, and responding to internal or external requests. This study focuses on the third factor (Louis and Sutton 1991), which is under the direct control of ad campaigners.

Health messages may fail because they draw mindless responses from the audience, which highlights the importance of motivating people to devote mental effort to processing messages. Using Louis and Sutton's (1991) framework, Parrott (1995) notes that some message content may enable people to switch from "habits of mind" to active processing; both internal and external requests involve linguistic or word choice tactics that may increase active processing.

Specifically, Parrott (1995, p. 15) defines internal requests as "a message receiver's psychological or physiological response to message stimuli, which produces a self command to attend," such that some linguistic forms and word choices can prompt internal requests to attend, because they increase verbal immediacy and thus reduce the psychological distance between the message and perceiver. Verbal immediacy is "the degree of directness between a communicator and the objects or events about which he or she is communicating" (Parrott 1995, p. 16), which can be determined by pronoun choice (Wiener and Mehrabian 1968). According to both Parrott (1995) and Wiener and Mehrabian (1968), the use of pronouns such as "you" explicitly suggest that the readers or listeners are the agents in a message, which should increase verbal immediacy, generate relevance and encourage active processing. This study accordingly explores the use of second-person pronouns as internal request prompts.

In contrast, Parrott (1995, p. 15) defines external requests as "overt statements ... that explicitly or implicitly tell an audience to increase their attention to the message," such as direct commands (e.g., "Now hear this" and "Pay attention to what's coming next"). These external requests also might take the form of a question, because messages in question form delivered to an audience that is socialized to be attentive to questions will enhance their attention. That is, both direct commands and questions can enhance active processing, whether explicitly by commands or implicitly in the case of questions. This study focuses on the latter and examines rhetorical questions as important forms of external request prompts.

No studies empirically test the effects of internal and external request message tactics. Following Parrott's (1995) reasoning, this study proposes that the use of second-person pronouns offers one type of internal request tactic, whereas the use of rhetorical questions is an external request tactic. In turn, this study considers how these two tactics might enhance perceived PSA effectiveness through their influence on self-referencing.

#### Internal Request Tactics: Second-Person Pronouns

The effects of second-person pronouns (i.e., "you") vs. third-person terms (i.e., "most people") on ad viewers have been well documented. Debevec and Romeo (1992) reveal that compared with third-person ad copy, the use of second-person ad copy results in perceptions that the ad messages are more personally relevant and the product more personally useful. Meyers-Levy and Peracchio (1996) find that participants engage in more self-referencing in response to auto insurance ad copy and report feeling more like active participants when the copy uses the second person rather than the third person. Similarly, Chang (2006) demonstrates that magazine articles written in the second-person pronouns, as opposed to the third person, direct attention to the self and enhance self-consciousness. These and similar findings in product advertising literature indicate that health messages should encourage more self-referencing when they feature second-person rather than third-person terminology.

However, Meyers-Levy and Peracchio (1996) also found that when the motivation to process messages is low, participants do not respond to self-referent priming. They reason that when participants are not strongly motivated, they are not likely to elaborate on messages; instead, their thoughts focus on general concepts, such as the product category of the advertised product or their affective reactions to the ads. Internal and external requests represent subtle cues, such that they may increase attention only among those who are already highly involved with the product. Messages written in the second person cause individuals who are concerned about the target health issue to elaborate on the messages, more so than unconcerned individuals.

In addition, persuasion effects only emerge when message cues attract sufficient attention to exceed elaboration thresholds (Meyers-Levy and Sternthal 1991), past which people start to elaborate on the message. Messages that do not produce enough drive will not be effective (e.g., Leventhal 1970). Health messages with third-person terms focus on the ailments of others and thus may not be sufficiently self-relevant to exceed elaboration thresholds, regardless of concern about the issue. According to this reasoning, a significant two-way interaction between the use of second-person language and issue concern should affect levels of self-referencing.

H1a: Messages written in the second person result in greater self-referencing among persons who are more concerned about the issue. For messages written in the third person, issue concern does not influence self-referencing.

The more message perceivers elaborate on health messages, the more effective the messages are (Keller and Block 1996). Therefore, the more participants engage in self-referencing (a form of elaboration), the more likely they are to perceive the health message as effective. Again, ads using second-person terms appear more effective to persons who are concerned about the health issue than to those who are unconcerned. In contrast, messages written in the third person may not generate enough drive to be effective, regardless of the issue concerned.

H1b: Messages written in the second person result in greater perceived ad effectiveness among those who are more concerned about the issue. For messages written in the third person, level of concern does not influence perceived ad effectiveness.

In line with prior literature, this study proposes that self-referencing should mediate the relation between the interaction of pronoun type and involvement with regard to perceived ad effectiveness. To the degree second-person pronouns enhance self-referencing among highly involved people, it should improve perceived ad effectiveness.

H2: Self-referencing mediates the effects of the interaction between pronoun type and issue concern on perceived ad effectiveness.

External Request Tactics: Rhetorical Questions

A question is rhetorical "if the answer is implicit within the question and this is understood by both speaker and perceiver" (Swasy and Munch 1985, pp. 877-878). Rhetorical questions

result in greater message persuasion effects, due to enhanced message elaboration (Petty, Cacioppo, and Heesacker 1981), a mechanism similar to that triggered by second-person pronouns. The message elaboration view suggests that rhetorical questions direct the perceiver's attention to the message and encourage message-related processing. In the ELM framework, rhetorical questions increase acceptance of messages with strong rather than weak arguments that introduce (Burnkrant and Howard 1984) or summarize (Swasy and Munch 1985) an argument.

However, rhetorical questions also can distract attention and reduce message persuasion. Petty, Cacioppo, and Heesacker (1981) show that with messages of high personal relevance, rhetorical questions distract participants from argument elaboration, resulting in no argument strength effects. Rhetorical questions might redirect attention from the messages to the sources as well; Swasy and Munch (1985) found that rhetorical questions result in more source-related cognitive responses than do declarative statements across high and low involvement conditions. In these two studies though, the rhetorical questions appeared frequently, throughout the stimuli presentation, which may have increased distraction and boomerang effects (Munch and Swasy 1988).

In response to these findings, Ahluwalia and Burnkrant (2004) proposed two effects of rhetorical questions: to encourage people to respond to the question and to motivate people to ponder why the messages are framed as they are. The former influence directs attention to the message, whereas the latter directs it toward the source. They reason that the degree to which the presentation of the rhetorical question deviates from expectations influences where message perceivers direct their attention. Message-focused elaboration occurs when the rhetorical heading does not deviate significantly from expectations, whereas source-focused elaboration occurs when the rhetorical formats repeat throughout the message and thus deviate from normal expectations. Ahluwalia and Burnkrant (2004) show that messages using repeated rhetorical questions lead participants to pay more attention to the source.

Ads appear to employ rhetorical question headlines more commonly than they use rhetorical questions repeatedly in the ad copy. Moreover, the focus of this study is on how to improve health message persuasion through the use of effective self-referencing tactics, not comparing the relative effects of different rhetorical forms. Therefore, the investigation considers the effects of the use of rhetorical questions in headlines, a common practice in product advertising (Munch and Swasy 1983). According to the cited research, rhetorical headings should encourage message elaboration and self-referencing. By responding to the rhetorical question about their health behaviors or lifestyles, ad viewers must retrieve from memory their personal experiences with the health issue. For example, a rhetorical question by Howard

(1990, p. 231) reads, "Are you sure that your diet is providing the vitamins and nutrients you expect?" If participants respond covertly to the question, they should be motivated to ponder their past experiences. When they read information in the ad copy regarding the health issue, they also may use their personal experience as a reference frame and thus engage in self-referencing thoughts.

Following the reasoning for Hypothesis 1, the use of rhetorical headings should lead to greater ad effectiveness among viewers who are concerned about a health issue than among those who are not. The effects of declarative statements in ads should not differ, because declarative statements are less likely to pass the elaboration threshold, regardless of issue concern.

H3: Messages using a rhetorical question heading result in greater (a)self- referencing and (b) perceived ad effectiveness among those who are more concerned about the issue. For messages that employ a declarative statement heading, issue concern does not affect perceived ad effectiveness.

Similar to the effect summarized in Hypothesis 2, self-referencing should mediate the relation between the interaction of the heading and involvement with regard to perceived ad effectiveness. To the degree rhetorical questions enhance self-referencing among involved people, it should improve perceived ad effectiveness.

H4: Self-referencing mediates the effects of the interaction between heading type and issue concern on perceived ad effectiveness.

## METHOD

The first experiment tests Hypotheses 1a, 1b and 2, whereas the second experiment focuses on Hypotheses 1a, 1b, 3a, 3b and 4. Because rhetorical question headlines usually employ second-person pronouns, such as "did you know ...?" or "are you aware ...?," the first experiment rules out the influence of the potential confound when testing the relative effects of second- and third-person pronouns by testing the effects of pronoun type alone.

### Experiment 1

#### Design

This experiment employed a 2 x 2 between-subjects design. Pronoun type (second vs. third person) was manipulated, and participants were categorized as either concerned or not

concerned about the health issue.

## Participants

One hundred and three university students (40% male) in Taiwan were recruited and paid for their participation. Their ages ranged from 19 to 23 years, with an average of 20.98 years. Informed consent was sought from each participant. Participants also were informed that the responses

they gave to the questionnaire would remain anonymous and confidential. A debriefing was conducted after the data collection.

## Procedures

Participants were randomly assigned to one of the two manipulated conditions and told that the research would consist of two parts: a short personality and college lifestyle survey and a study of their responses to different magazine layouts. In the survey, they responded to a long list of filler questions and indicated the degree to which they were concerned about nine infectious diseases, including hepatitis B. In the second part, they read a portion of a magazine containing articles about nature and science and ads. The hepatitis B ad and two filler product ads followed the articles. Participants read the magazine pages at their own pace and then completed scales to assess their perception of the effectiveness of the PSA and their degree of self-referencing.

## Materials

Professionals employed by a leading ad agency created the ads for the featured health issue: hepatitis B, an infectious disease. The ad used either second- or third-person pronouns throughout the copy. The ad first described how the reader ("you") or the general public ("they") did not understand the severity of the ailment and how hepatitis B could threaten the reader ("you") or others ("them"). It then focused on how the reader ("you") or the general public ("they") might take effective precautions to prevent infection. The two versions of the ad did not vary in content. To reduce the potential for confounding by visual variation, the ad layout and visuals remained constant across conditions.

## Independent Variables

Pronoun type was manipulated in both the ad copy and the headlines. That is, each ad was



written in either the second or third person. Degree of issue concern was measured by a question that asked participants to indicate the degree to which they were concerned about hepatitis B on a 7-point scale. The mean of issue concern was 4.62 (SD = 1.64).

### Dependent Variables

Items from prior literature (Burnkrant and Unnava 1989) that measure self-referencing triggered by product advertisements (e.g., "the ad seems to relate to me personally," "made me think about my personal experiences with a product" and "thought about my own use of a product when reading the ad") were altered to capture participants' self-referencing as elicited by health issues. Using 7-point Likert scales, participants indicated their agreement with three items: "The ad relates to me personally," "the ad made me think about my own behaviors that may lead to the disease" and "I read the ad as if I might have the disease." The internal reliability was satisfactory (Cronbach's  $\alpha = .79$ ), and the responses to the three items were averaged.

The measure of the perceived effectiveness of the PSA used four items on 7-point scales. Participants indicated the degree to which they thought the PSA was "convincing," "believable," "reasonable" and "authentic." The Cronbach's  $\alpha$  for this scale was .89, which indicates high internal reliability. Scores for the four items were averaged.

### Experiment 1 Results

When self-referencing and ad effectiveness were regressed on gender (male = 1, female = -1), gender was not a significant predictor of self-referencing,  $[\beta] = -.12$ ,  $p = .23$  or perceived effectiveness of the PSA,  $[\beta] = .04$ ,  $p = .67$ . Further analyses thus combined men and women.

When issue concern, pronoun type (second-person = 1, third-person = -1) and the interaction term were regressed on self-referencing, the interaction between pronoun type and concern level for self-referencing only approached significance,  $[\beta] = .58$ ,  $p = .07$ , as shown Table 1. Regarding only responses in the second-person pronoun condition, issue concern significantly predicted self-referencing,  $[\beta] = .52$ ,  $p < .01$ . For only responses in the third-person pronoun condition, issue concern did not account for significant variance in self-referencing,  $[\beta] = .02$ ,  $p = .87$ .

These results were consistent with Hypothesis 1a.

In the regression of issue concern, pronoun type and the interaction term on ad effectiveness, only the interaction between pronoun type and concern for self-referencing was significant,  $[\beta] = .68, p = .04$ . In responses in the second-person pronoun condition, issue concern significantly predicted ad effectiveness,  $[\beta] = .46, p < .01$ . Among responses in the third-person pronoun condition, issue concern did not account for significant variance in self-referencing,  $[\beta] = -.12, p = .43$ . These results were consistent with Hypothesis 1b.

According to Baron and Kenny's (1986) approach, four criteria must be met to demonstrate mediation: (1) the independent variable significantly predicts the dependent variable, (2) the independent variable accounts for significant variance in the dependent variable, (3) the mediator significantly explains variance in the dependent variable and (4) when both the independent variable and the mediator are entered into the equation, the influence of the independent variable becomes insignificant, whereas the effect of the mediator remains significant. The interaction only approaches significance and thus does not meet the first criterion, so no further mediation analyses were conducted.

Although the interaction only approached a significant level, the results were consistent with expectations, especially with regard to the responses in the second- and third-person pronoun conditions: When the message contained second-person pronouns, participants concerned with the health issue engaged in greater self-referencing and rated the PSA as more persuasive than those who were less concerned. However, when the message appeared in the third person, issue concern did not influence self-referencing or perceived PSA effectiveness.

## Experiment 2 Method

### Design

This experiment employed a 2 x 2 x 2 between-subjects design. The two manipulated factors were pronoun type (second vs. third person) and heading type (rhetorical question vs. declarative statement). In addition, participants were either concerned or not concerned about the health issue.

### Participants and Procedures

One hundred and thirty-three university students (39% male) in Taiwan were recruited and paid for their participation. Their ages ranged from 19 to 23 years, with an average of 20.88 years. Participants were randomly assigned to one of the four manipulated conditions;

otherwise, the procedures from Experiment 1 applied.

### Independent Variables

In contrast with Experiment 1, pronoun type was manipulated only in the ad copy, which used either second or third person. Heading type was manipulated by altering the wording in the headlines. By definition, a question is rhetorical when it makes the answer clear to both the sender and the receiver of the message (Swasy and Munch 1985). In advertising messages, questions starting with "did you know ..." or "do you agree that ..." belong to this category; consumers recognize that it is meaningless for advertisers to ask a question in an ad, because they cannot field responses. Therefore, the purpose of such a question is not to prompt an answer but rather to emphasize a point. In this study, the rhetorical question heading reads, "Did you know that Hepatitis B leads to liver cancer?," whereas the declarative statement heading reads, "Hepatitis B will lead to liver cancer."

For the measure of the degree of issue concern, participants indicated the degree to which they were concerned about hepatitis B on a 7-point scale. The mean of issue concern was 4.56 (SD = 1.68).

### Dependent Variables

The scales for self-referencing and perceived effectiveness were the same as in Experiment 1. Reliability was satisfactory for both self-referencing (Cronbach's  $[\alpha] = .92$ ) and perceived effectiveness ( $[\alpha] = .91$ ). Responses to the individual items in each scale were averaged.

### Experiment 2 Results

In the regression of self-referencing and ad effectiveness on gender (male = 1, female = -1), gender did not emerge as a significant predictor of self-referencing,  $[\beta] = -.13$ ,  $p = .14$ , or perceived effectiveness,  $[\beta] = -.09$ ,  $p = .30$ . Further analyses were conducted across gender groups.

When self-referencing was regressed on pronoun type, heading type, issue concern, both two-way interactions and the three-way interaction, the interaction between pronoun type and concern level was significant,  $[\beta] = .66$ ,  $p < .01$ , as shown in Table 1. In an analysis with only responses in the second-person pronoun condition, issue concern significantly predicted self-referencing,  $[\beta] = .38$ ,  $p < .01$ . An analysis with only responses in the third-person pronoun condition revealed that issue concern did not account for significant variance in

self-referencing,  $[\beta] = .14$ ,  $p = .25$ . These results were consistent with Hypothesis 1a.

The regression of perceived effectiveness on pronoun type, heading type, issue concern, the three two-way interactions and the three-way interaction revealed a significant interaction between pronoun type and concern level,  $[\beta] = .81$ ,  $p < .01$ . For responses in the second-person pronoun condition, issue concern significantly predicted perceived effectiveness,  $[\beta] = .46$ ,  $p < .01$ . In the third-person pronoun condition responses, issue concern did not account for significant variance in self-referencing,  $[\beta] = -.03$ ,  $p = .81$ . These results were consistent with Hypothesis 1b.

A series of regression analyses tested the mediating role of self-referencing on the interaction between pronoun type and issue concern for perceived effectiveness (Hypothesis 2). The results showed (1) the interaction term between pronoun type and issue concern significantly predicted self-referencing,  $[\beta] = .66$ ,  $p < .01$ ; (2) the interaction term between pronoun type and issue concern accounted for significant variance in perceived effectiveness,  $[\beta] = .81$ ,  $p < .01$ ; (3) self-referencing significantly predicted perceived effectiveness,  $[\beta] = .69$ ,  $p < .01$  and (4) when both the interaction term and self-referencing appeared in the equation, the influence of the interaction between pronoun type and issue concern on perceived effectiveness became insignificant,  $[\beta] = .39$ ,  $p = .06$ , but the effect of self-referencing remained significant,  $[\beta] = .63$ ,  $p < .01$ , in support of Hypothesis 2.

The interaction between heading type and concern level on self-referencing also was significant,  $[\beta] = .61$ ,  $p = .02$ . When only responses in the rhetorical heading condition were analyzed, issue concern significantly predicted self-referencing,  $[\beta] = .40$ ,  $p < .01$ . When only responses in the declarative statement heading condition were analyzed, issue concern did not account for significant variance in self-referencing,  $[\beta] = .11$ ,  $p = .37$ . These results supported Hypothesis 3a.

The interaction between heading type and concern level on perceived effectiveness also was significant,  $[\beta] = .58$ ,  $p = .03$ . Considering only responses in the rhetorical heading condition, issue concern significantly predicted self-referencing,  $[\beta] = .40$ ,  $p < .01$ . For only responses in the declarative statement heading condition, issue concern did not account for significant variance in self-referencing,  $[\beta] = .01$ ,  $p = .99$ . These results were consistent with Hypothesis 3b.

Finally, the regression analyses that tested the mediating role of self-referencing on the heading type by issue concern interaction and perceived effectiveness (Hypothesis 4) revealed (1) the interaction term between heading type and issue concern was a significant

predictor of self-referencing,  $[\beta] = .61, p = .02$ ; (2) the interaction term between pronoun type and issue concern accounted for significant variance in perceived effectiveness,  $[\beta] = .58, p = .03$ ; (3) self-referencing significantly predicted perceived effectiveness,  $[\beta] = .69, p < .01$  and (4) when both the interaction term and self-referencing appeared in the equation, the influence of the interaction between pronoun type and issue concern on perceived effectiveness became insignificant,  $[\beta] = .21, p = .30$ , but the effect of self-referencing remained significant,  $[\beta] = .63, p < .01$ . These results supported Hypothesis 4.

The findings generally were consistent with expectations. When the message contained second-person pronouns or rhetorical headings, participants concerned with the particular health issue addressed in the message found the message more persuasive than those not concerned. However, for messages written in the third person or using declarative headings, issue concern did not influence perceived message persuasion. In addition, self-referencing mediated these effects.

According to Parrott (1995), internal request prompts increase the psychological distance between the message and the audience by enhancing verbal immediacy, as determined by the choices of pronoun types or verb tense. External request prompts include commands and questions, which cannot exist without verbs or pronouns. To confirm the results herein, further research should manipulate the rhetorical questions and declarative statements by varying their verb tense and pronouns. That is, if rhetorical question headlines are more effective than declarative statement headlines across all different tense and pronoun conditions, the results would be well supported.

## DISCUSSION

It is common for people exposed to health promotion messages to ignore them, in the belief that they themselves are not susceptible (Leventhal 1970), or to engage in low levels of processing (Parrott 1995). Therefore, an important task for health campaigners is to design health promotion messages that involve message receivers and encourage self-referencing, which represents one form of elaborative message processing (Klein and Loftus 1988; Rogers, Kuiper, and Kirker 1977). This study shows that second-person pronouns and rhetorical questions involve viewers and promote self-referencing more when those viewers are involved with the health issues.

Although the effects of self-referencing on persuasion have been widely documented in advertising research, these studies have drawn less attention in the health communication literature.

These two message tactics are both linguistic, which means they do not require significant financial expenditures. Some effective message tactics can be employed only when campaign funding is abundant (e.g., shooting a public health television commercial in MTV's music video style), but this resource limitation does not apply to the second-person pronoun and rhetorical question tactics examined herein. These two tactics can be incorporated into most ads promoting health behaviors, or even ads promoting consumer products, to increase both self-referencing and perceived message effectiveness.

Nevertheless, second-person pronouns and rhetorical questions should be employed with some caution. When the message quality is low, increasing self-referencing may backfire. Therefore, when designing promotion messages, care should be taken to induce only self-referencing thoughts, not counterarguments. People are constantly bombarded with information about the prevention of AIDS, heart disease and drunk driving as well as information about products. Prior research has shown that message perceivers balance personal investments (e.g., time and cognitive effort) with personal benefits when they process persuasive messages (Campbell 1995). When message tactics evoke undue attention but do not provide new information, message perceivers likely respond negatively. However, when messages contain new and important information, self-referencing tactics may be perceived as more justified. It is thus important for practitioners to develop informative and high-quality messages before they employ internal or external request tactics.

This study only tests one type of internal and external request tactic, i.e., second-person pronouns and rhetorical questions. The literature review suggests that other types of internal requests can reduce psychological distance between the message and the audience or increase verbal immediacy; these tactics offer potential candidates for further investigations. Moreover, the two self-referencing tactics explored herein both entail verbal tactics, which may be less effective than some visual tactics, such as presenting a photo from the perspective of an active participant (Meyers-Levy and Peracchio 1996). This limitation may explain why the verbal message tactics encouraged self-referencing only for participants highly concerned about the health issue. In contrast with verbal tactics, visual tactics may involve even those with low issue concern levels. Another possibility is that self-referencing tactics in general are effective only when participants initially are concerned about the particular issue. Therefore, it would be valuable to replicate this study using both verbal and visual self-referencing tactics. Moreover, research should compare the effectiveness of verbal and visual tactics in enhancing self-referencing in a variety of other contexts.

In contrast with Petty, Cacioppo, and Heesacker (1981), who find enhanced effects of

rhetorical question tactics only for those with low issue involvement, the rhetorical questions in this study are more persuasive for participants with high issue concern levels. Petty, Cacioppo, and Heesacker used rhetorical questions to summarize each argument in the message; this study features rhetorical questions only in the ad headings. The former method may alienate those already highly concerned about the issue. With the different forms of rhetorical questioning already identified (Howard 1990), researchers could explore in greater depth the responses that these various forms may provoke.

Health issues vary in terms of many important characteristics, such as whether they result from addictive behaviors. Generalizing the findings of this study to addictive health behaviors should be done only with caution. Hepatitis B is not caused by or related to any addictive behavior, such as smoking or drinking. In health messages about addictive behaviors, self-referencing tactics may trigger message avoidance or other defensive processing among high-relevance persons. For example, prior research has shown that heavy coffee drinkers process threatening information in a biased and self-serving manner when messages are linked to their current lifestyle habits (Liberman and Chaiken 1992).

Finally, further research should address individual differences. For example, existing attitudes moderate the effects of rhetorical questions, such that rhetorical questions facilitate persuasion when participants have favorable attitudes toward the issue but inhibit persuasion when their attitudes are unfavorable (Zillman and Cantor 1974). Although people may avoid elaborating on health issues, their opinion about disease prevention should be less divided than their opinions about other policy issues. Therefore, care should be exercised before generalizing the findings of this study to other issues that involve divided audiences.

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TABLE 1  
Regression Results for Experiments 1 and 2

Predictors	Self-Referencing			PSA Effectiveness		
	B	SE B	[beta]	B	SE B	[beta]
Experiment 1						
Pronoun type (P)	.16	.06	.25 **	.11	.06	.17
Concern level (C)	-.44	.32	-.44	-.58	.34	-.55

P x C (H1a and H1b)	.36	.19	.58	.44	.21	.68 *
Experiment 2						
Concern level (C)	.15	.05	.26 **	.14	.05	.21 **
Pronoun type (P)	-.62	.26	-.63 *	-.94	.28	-.85 **
Heading type (H)	-.51	.26	-.52 *	-.55	.28	-.50 *
P x H	.05	.26	.05	-.20	.28	-.18
C x P (H1a and H1b)	.41	.16	.66 **	.57	.18	.81 **
C x H (H3a and H3b)	.38	.16	.61 *	.41	.18	.58 *
P x H x C	-.08	.16	-.13	.09	.18	.13

\*  $p < .05$ , \*\*  $p < .01$ .

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