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This article presents three studies on how the negative emotions of guilt and shame differentially influence the effectiveness of health messages framed as gains or losses. Guilt appeals are more effective when paired with gain frames, whereas shame appeals are more effective when paired with loss frames. These framing effects occur because gain frames facilitate the use of problem-focused coping strategies favored by guilt, whereas loss frames facilitate the use of emotion-focused coping strategies favored by shame. Frames that fit with the emotion facilitate the activation of coping strategies consistent with that emotion and consequently lead to greater fluency and message effectiveness. These effects manifest on intentions to binge drink and time spent viewing alcohol advertising.

Keywords: guilt, shame, emotions, framing, coping, alcohol

Guilt Versus Shame: Coping, Fluency, and Framing in the Effectiveness of Responsible Drinking Messages

Negative emotional appeals are among the most frequently used means of persuading consumers to comply with health-related public service advertisements (Agrawal and Duhachek 2010; Keller and Lehmann 2008; Keller, Lipkus, and Rimer 2003). In addition, such advertising often references either the positive benefits of complying with a particular advocacy or the negative consequences of failing to comply as a means of communicating risks to consumers (Raghunathan and Trope 2002). Despite their prevalent use, recent research examining guilt and shame appeals shows that such appeals may be ineffective because they induce defensive processing that inhibits persuasion (Agrawal and Duhachek 2010). In contrast, the current research shows increased persuasion when guilt appeals are combined with gain frames detailing the positive benefits of complying with an advocacy and when shame appeals

are combined with loss frames detailing the negative consequences of failing to comply. We show that these effects operate through unique coping consequences for guilt and shame. The findings also contribute to both the affect and framing literature, by demonstrating boundary conditions for previously reported findings that show enhanced persuasion when negative emotional appeals are matched with gain frames (Keller, Lipkus, and Rimer 2003), and the regulatory fit literature, by showing fluency results from emotion-based coping processes.

Consider two public service print advertisements developed with the goal of convincing underage alcohol consumers to drink responsibly. Both advertisements show college-aged men and women playing pool, and both have the statement "Don't overdo it" in the bottom-left corner and the words "The Other Hangover" in the bottom-right corner of the advertisement. The guilt advertisement pictures a women holding a drink and attempting to strike another women under the headline "'But I was drunk,' doesn't repair the friendship." In this advertisement, the word "guilt" is written just above "The Other Hangover." In the shame advertisement, a woman is shown taking off her jersey and bra under the headline "Reputations aren't drunk-proof." Here, the word "shame" is written just above "The Other Hangover" (see Appendix A). At issue is whether these two negatively framed messages are effective in promoting responsible alcohol consumption.

This question is addressed in research on negative emotions (Keller, Lipkus, and Rimer 2003; Raghunathan and

Trope 2002). The findings suggest that negative emotional appeals, such as those evoking guilt and shame, are most persuasive when combined with a gain rather than a loss frame because people in a negative emotional state are motivated to process positive information to repair their negative affect. The current research identifies boundary conditions to this prescription by identifying coping differences in negative emotions that render gain or loss frames more effective depending on the fit between the appraisals produced by the emotion and those produced by the frame.

Guilt is associated with feelings of high self-efficacy, which induces a problem-focused coping orientation aimed at "taking action to alter the (stress) environment" (Lazarus and Folkman 1984, p. 44), whereas shame is associated with low self-efficacy, which induces an emotion-focused coping orientation aimed at "regulating one's emotional state" (Lazarus and Folkman 1984, p. 44). For guilt, this coping orientation fits with a gain-driven means of goal pursuit because gain frames activate challenge appraisals that yield "a focus on success, reward and opportunities for personal growth" (Skinner and Brewer 2002, p. 679), which closely correspond to problem-focused coping's emphasis on action and benefits. For shame, the coping orientation fits with a loss-driven means of goal pursuit because loss frames activate threat appraisals that yield a focus on "potential danger and loss of self-esteem" (Skinner and Brewer 2002, p. 679), which correspond to emotion-focused coping's emphasis on consequences and regulation. For both emotions, this correspondence between coping orientation and goal pursuit results in fluency, defined as the ease with which a message is processed, which is hypothesized to intensify the coping strategy, and thus leads to compliance with the message advocacy.

Support for these predictions requires the documentation of three premises. First, guilt appeals induce problem-focused coping, and shame activates a tendency to rely on emotion-focused coping strategies. Second, gain-framed messages activate challenge appraisals associated with problem-focused coping, and loss frames activate threat appraisals associated with emotion-focused coping. We review research on emotions, coping, and framing for this purpose (Lazarus and Folkman 1984; Tangney and Dearing 2002). The third premise is that correspondence between the coping strategy favored by the emotion elicited in a message and the coping strategy facilitated by the message frame enhances the persuasive impact of the message. Here, investigations that document that a fit between regulatory goal orientation and the means of achieving that goal creates a subjective experience of fluency that enhances message effectiveness are relevant (Lee and Aaker 2004). We review these literature streams in the following sections and then present three studies that test our predictions.

These studies make several contributions to the literature. In contrast with previous research examining guilt and shame that shows that both emotions are associated with defensive processing and decreased persuasion in response to health messaging designed to amplify these emotions (Agrawal and Duhachek 2010), we identify unique coping processes that differentiate guilt and shame appeals and increase persuasion. We further add to this area by establishing unique relationships between these emotions and

gain and loss frames. In addition, we consider emotion generated solely by the message rather than ambient or incidental sources of emotion, a focus of previous research (Agrawal and Duhachek 2010). This approach merges appraisal theories of discrete emotions with coping theory and message framing, two connections previously not established in this literature. Finally, we extend the fit-fluency framework into the domain of emotions and coping by identifying coping as a source of fluency from fit.

COPING DIFFERENTIATES GUILT AND SHAME AND LINKS THEM TO FRAMING

Both guilt and shame are negative emotions; both share internal (vs. external) attributions of blame and thus activate a need for coping (Tangney and Dearing 2002). Although initial investigations do not identify unique processes related to guilt and shame (Smith and Ellsworth 1985), recent research suggests that these emotions can have different effects on judgments and behaviors (Agrawal and Duhachek 2010; Dearing, Stuewig, and Tangney 2005).

Guilt Relies on Problem-Focused Coping

Guilt arises when one realizes that past behaviors have caused a violation of the moral order for which people take responsibility. Feelings of guilt often create a desire to uphold one's moral order and atone for past transgressions (Lindsay-Hartz, De Rivera, and Mascolo 1995). Guilt-laden people view one aspect of the self as having behaved unfavorably and are eager to fix this negative aspect (Tangney, Stuewig, and Mashek 2007). Previous research has shown that guilty people are motivated by a goal toward "reparative action, such as apologizing, undoing or in some way repairing the harm that was done" (Tangney et al. 1996, p. 798). Guilt leads people to be action oriented and desirous of bringing positive change (Ketelaar and Au 2003). These behaviors suggest that guilt-laden people pursue problem-focused coping goals (Sujan et al. 1999). From these findings, we theorize that guilt-laden people tend to pursue problem-focused coping as a means of alleviating guilt.

Shame Relies on Emotion-Focused Coping

In contrast, research has shown that shame is a negative emotion with particularly strong negative implications for one's self-esteem (Tangney et al. 1996). Shame-laden people are likely to think of the entire self in a negative light and thus are likely to withdraw or engage in maladaptive responses (Tangney et al. 1998; Tangney, Stuewig, and Mashek 2007). Previous research has shown that "feelings of shame are typically accompanied by a sense of shrinking or of 'being small' and by a sense of worthlessness and powerlessness" (Tangney, Stuewig, and Mashek 2007, p. 349). People experiencing shame are more likely to generate global negative attributions such that they perceive themselves as undeserving and unable to atone for past actions (Tangney 1998). These findings suggest that shame-laden people pursue the goal of alleviating their shame by adopting emotion-focused strategies because they lack the efficacy to change their environment (DeHooge, Zeelenberg, and Breugelmans 2007).

Gain and Loss Frames Enact Distinct Coping Strategies

The coping literature provides a framework to interpret how message frames affect coping through the cognitive appraisal styles of challenge and threat. When confronted with a potential stressor, such as an emotional antidrinking message, people appraise the event in terms of either challenge or threat (Lazarus and Folkman 1984). We posit that the message frames differentially activate challenge and threat appraisals as a means of goal pursuit. When these appraisals fit with the coping tendency enacted by the message, the message is easier to process and more persuasive.

Gain frames represent problem-focused coping. Challenge appraisals emphasize perceptions of opportunity and growth in the face of stress and promote high confidence in one's ability to cope (Lazarus and Folkman 1984; Skinner and Brewer 2002). Challenge appraisals focus on the positive benefits associated with successfully adapting to a stressful situation (Lazarus 1991). Thus, gain ad frames emphasizing positive benefits associated with a healthful behavior (e.g., "Drink responsibly and remember a great time with friends") should generate challenge appraisals. Challenge appraisals lead to an increased reliance on problem-focused coping because they foster high levels of efficacy (Smith et al. 1993; Sujan et al. 1999). Gain (vs. loss) message frames speak more to these problem-solving tendencies because they link a desired action to a benefit. Prior research showing that gain (vs. loss) frames are more persuasive for high-efficacy messages supports this prediction (Block and Keller 1995).

Loss frames represent emotion-focused coping. In contrast, threat appraisals reflect a perception of potential danger, low confidence in one's ability to cope, and an emphasis on the negative consequences associated with failure to successfully adapt to a stressful situation (Lazarus 1991; Skinner and Brewer 2002). Thus, loss ad frames emphasizing the negative consequences associated with an unhealthful behavior (e.g., "Drink irresponsibly and risk doing something you'll regret") should foster threat appraisals. Threat appraisals lead to an increased reliance on emotion-focused coping because of relatively low levels of efficacy (Skinner and Brewer 2002; Sujan et al. 1999). These findings suggest that people enacting emotion-focused coping are likely to dwell on the negative implications of the situation represented by loss frames. Support for this view comes from previous research showing that loss frames are more persuasive for low-efficacy messages (Block and Keller 1995).

EMOTIONS, FRAMING, AND PERSUASION: THE ROLE OF FIT IN COPING

Regulatory fit theory suggests that when a message employs the same means of goal pursuit as that favored by a person's orientation, it intensifies and sustains his or her orientation and chosen set of means (Higgins 2000). In this context, we posit that fit results from a correspondence between an emotional orientation and a message frame. This fit makes a message more fluent and, consequently, more persuasive (Lee and Aaker 2004). We extend this framework from the motivation literature and bring it into the domain of emotions to make the case that gain frames fit with guilt and loss frames fit with shame. We conceptualize this fluency process as cognitive in nature, thus

distinguishing it from meta-cognitive manifestations of fluency arising from enhanced confidence due to accessibility (Schwarz 2004). Previously, we developed the proposition that guilt favors problem-focused means of coping that are enacted by gain frames. Thus, gain frames fit with guilt. Similarly, shame favors emotion-focused means of coping that are represented in loss frames. That is, loss frames fit with shame.

Viewing the relationship between emotions and framing through the lens of regulatory fit enables us to employ the processes documented in the fit literature to enhance our understanding of how emotions may influence message processing. Prior research in the domain of motivation has shown that fit makes messages more persuasive because it increases processing fluency. If fit is operational within our context of emotions, we should find that gain (vs. loss) frames are more persuasive and fluent in guilt appeals whereas loss (vs. gain) frames are more effective and fluent in shame appeals. Thus:

H$_1$: Guilt appeals using gain versus loss frames are more (a) effective and (b) fluent.

H$_2$: Shame appeals using loss versus gain frames are more (a) effective and (b) fluent.

As we discussed previously, coping strategies serve as the mechanism linking emotions and framing. We argue that guilt activates problem-focused coping that fits with a challenge appraisal provided by a gain frame and thus enhances persuasion in relation to a loss frame, whereas shame stimulates emotion-focused coping that fits with a threat appraisal offered by a loss frame. Although research demonstrates that fit increases fluency and persuasion, little evidence shows why fit messages are more fluent and persuasive (Lee, Keller, and Sternthal 2010). Higgins (2000) suggests that fit increases effectiveness because it intensifies and sustains an underlying orientation. In our context of emotions, guilt relies on problem-focused coping strategies enacted in gain frames, and shame relies on emotion-focused coping enacted in loss frames. A frame that fits the emotion follows the coping strategy that is favored by the emotion, whereas a nonfit frame follows a different coping strategy. When the message frame (e.g., a fit frame) requires the same coping strategy favored by the emotion, it activates or intensifies that coping strategy and makes it easier for people to understand the message and be persuaded by it. When a frame requires a different coping strategy than one favored by the emotion, it dilutes the activation of relevant coping strategies, making it difficult for people to process the message or be persuaded by it. This theorizing predicts that when guilt appeals feature gain rather than loss frames, problem-focused coping is activated to a greater degree, which in turn results in fluency and persuasion. Similarly, when a shame appeal features a loss rather than gain frame, emotion-focused coping is activated to a greater extent, which in turn results in fluency and persuasion. This insight not only provides a process explanation for our effects but also enriches the literature on regulatory fit by suggesting a mechanism by which fit may accentuate fluency. Thus:

H$_{3a}$: Guilt appeals using gain rather than loss frames lead to greater activation of problem-focused coping that, in turn, drives the effects of fit on fluency and persuasion.

H$_{3b}$: Shame appeals using loss rather than gain frames lead to greater activation of emotion-focused coping that, in turn, drives the effects of fit on fluency and persuasion.

Table 1 summarizes our theorizing and predictions.

OVERVIEW OF STUDIES

In three studies in a responsible drinking context, we show that guilt versus shame emotional appeals are more effective when they feature gain and loss frames, respectively. Study 1 documents the interactive effect of emotions and framing on persuasion by examining the effects of guilt versus shame antidrinking appeals cast in a gain or a loss frame on intentions to binge drink and on the behavioral measure of time spent viewing subsequent alcohol advertisements. Study 2 examines the underlying process by showing that these effects of emotion and frame on persuasion are mediated by processing fluency and that this fluency is the result of heightened activation of emotion-consistent coping strategies (i.e., problem-focused coping for guilt and emotion-focused coping for shame). Finally, in Study 3, we employ a moderation approach to test the role of coping strategies in how emotions affect framing by manipulating problem- and emotion-focused coping. We next describe the methods and findings of the three studies.

STUDY 1: PERSUASION AND IMPACT ON FUTURE WILLINGNESS TO CONSUME

The purpose of Study 1 is to test H$_{1a}$ and H$_{2a}$. The goal was to assess the extent to which an antidrinking message persuades participants by subsequently measuring their reported likelihood to binge drink and the time spent viewing subsequent alcohol advertising as a function of the emotion and frame featured in the antidrinking message. Desire to view alcohol-related advertising after exposure to an antidrinking message captures the behavioral consequences of the persuasion effects induced by the antidrinking health message. Viewing time of subsequent advertising is an important measure in the antidrinking context, as multiple studies in the public policy literature have shown a link between exposure to alcohol-related advertising and risky drinking behaviors, such that more exposure to alcohol-related advertising is associated with higher levels of binge drinking (Ellickson et al. 2005; Federal Trade Commission 1999). Thus, viewing time is a good estimate of subsequent susceptibility for risky drinking behaviors. After exposure to the antidrinking message, determining how consumers will respond to subsequent messages that run counter to that message (e.g., alcohol advertising) will add further credence to the persuasive effects predicted. If consumers are persuaded by an antidrinking message, they should be less interested in viewing subsequent alcohol advertisements. Thus, examining subsequent viewing times for advertisements that promote alcohol enables us to provide evidence convergent with the likelihood of drinking measure using a less obtrusive measure to document persuasion. Furthermore, we assessed participants' future intention to drink the alcoholic beverages shown in the advertisements to provide convergent evidence for the persuasive effects. We expect that participants will be less interested in subsequently trying the beverages shown in the advertisements if they are persuaded by an antidrinking message.

Table 1
HYPOTHESIZED INTERACTION AMONG EMOTION, MESSAGE FRAME, COPING PROCESS, FLUENCY, AND PERSUASION

Emotion	Message Frame	Coping Process Enacted During Message Exposure	Effectiveness of Health Message
Guilt	Gain frame	Fit and problem-focused coping	Increased fluency, increased effectiveness
Guilt	Loss frame	Lack of coping fit	Decreased fluency, decreased effectiveness
Shame	Gain frame	Lack of coping fit	Decreased fluency, decreased effectiveness
Shame	Loss frame	Fit and emotion-focused coping	Increased fluency, increased effectiveness

Procedure

Study 1 is a 2 (guilt vs. shame) × 2 (gain frame vs. loss frame) between-subjects design. Ninety-five undergraduate students were recruited in exchange for partial course credit. The study was conducted in a behavioral technology lab on the computer-based interface of MediaLab software. Each participant completed the experiment via computer in his or her own cubicle. Participants were first seated in front of a computer terminal and instructed that they would be asked several questions in conjunction with a decision-making study. Participants were randomly assigned to one of four experimental conditions that differed in terms of the emotion activated by the public service advertisement (i.e., guilt vs. shame) and the message frame contained therein (i.e., gain vs. loss). Participants were asked to evaluate several advertisements including the focal consumer antidrinking message. To design the focal message, we modified a frequently used public service advertisement (for a description of the ad copy and images, see Appendix B).

After exposure to one of four antidrinking advertisements, participants were administered a series of behavioral measures asking about their study and social habits. Embedded in this series of measures was the focal binge drinking measure. This item was a seven-point Likert-scale item that asked, "How likely are you to engage in binge drinking this year?" (1 = "not at all likely," and 7 = "very likely"). Participants were then given an unrelated experimental task that took approximately ten minutes. After completing the unrelated task, participants were told that they would be shown a series of actual beverage advertisements. Participants saw five advertisements for alcoholic and three advertisements for nonalcoholic beverages. For the purposes of our study, we focused on consumers' viewing of the alcohol advertisements interspersed randomly throughout the sequence of beverage advertisements. Participants were instructed to examine each advertisement for as long as they wanted. Viewing time for each advertisement was recorded. After viewing all ads, they also answered a series of questions measuring the degree to which they would be interested in each of the five alcoholic and three nonalcoholic beverages shown in the advertisements, with a range from "not interested" (1) to "very interested" (7). Finally, they were debriefed and thanked.

Pretest

We conducted a pretest with 46 participants before the main experiment to provide more robust evidence as to whether the emotion and message frame manipulations in the antidrinking advertisements worked effectively. After participants were shown the advertisements, manipulation check measures were administered to assess the degree to which they currently felt the focal emotions. Three items comprising seven-point scales measured guilt (1 = "not guilt ridden/not culpable/not remorseful," and 7 = "guilt ridden/culpable/remorseful"; $\alpha = .70$), and two items assessed shame (1 = "not ashamed/not humiliated," and 7 = "ashamed/humiliated"; r = .68). As we predicted, the guilt messages resulted in significantly more guilt ($M_{guilt} = 4.12$, $M_{shame} = 3.29$; $F(1, 44) = 8.69$, $p < .05$), and the shame manipulations resulted in significantly more shame ($M_{guilt} = 3.44$, $M_{shame} = 4.13$; $F(1, 44) = 4.58$, $p < .05$). Furthermore, participants were asked to answer a single item measuring the degree to which they thought the advertisement stressed the positive benefits of drinking responsibly and a single item measuring the degree to which they thought the advertisement stressed the negative consequences of drinking irresponsibly, with a range from "completely disagree" (1) to "completely agree" (9). An analysis of variance (ANOVA) revealed that participants exposed to the gain rather than loss frame reported that the advertisement emphasized the positive benefits of drinking responsibly to a greater extent ($M_{gain} = 5.10$, $M_{loss} = 2.96$; $F(1, 44) = 18.96$, $p < .05$). In contrast, participants shown the loss rather than gain frame thought the advertisement stressed the negative consequences of drinking irresponsibly to a greater extent ($M_{gain} = 3.86$, $M_{loss} = 5.96$; $F(1, 44) = 39.99$, $p < .05$). Thus, the emotion and framing manipulations were effective.

Results and Discussion

Binge intentions. The 2×2 ANOVA on the binge drinking measure revealed that only the predicted two-way interaction was significant ($F(1, 91) = 71.88$, $p < .05$; see Figure 1, Panel A). Furthermore, in support of H_{1a}, there was a significant effect of message frame in the guilt condition, such that participants exposed to gain frames reported lower intentions to binge drink than those in the loss frame ($M_{guilt-gain} = 2.36$, $M_{guilt-gain} = 4.78$; $F(1, 91) = 34.98$, $p < .05$). In support of H_{2a}, a significant effect of message frame in the shame condition emerged, such that loss rather than gain frames led to significantly lower intentions to binge drink ($M_{shame-loss} = 2.44$, $M_{shame-gain} = 4.80$; $F(1, 91) = 37.01$, $p < .05$).

Viewing time for alcohol advertisements. The first step in the analysis was to compute the average viewing time for alcohol and nonalcohol advertisements. Using the average viewing time for alcohol advertisements as the dependent measure, we observed a significant emotion × message frame interaction ($F(1, 91) = 22.72$, $p < .05$; see Figure 1, Panel B). Furthermore, the effect of message frame in the guilt conditions was significant, such that participants spent less time viewing alcohol advertisements when the antidrinking message featured a gain rather than a loss frame ($M_{guilt-gain} = 30.49$ seconds, $M_{guilt-gain} = 41.50$ seconds; $F(1, 91) = 9.73$, $p < .05$). Similarly, the effect of frame in the shame conditions was significant, such that those exposed to a shame advertisement cast in a loss rather

Figure 1
STUDY 1 RESULTS

A: Intention to Binge Drink

B: Viewing Time in Seconds

C: Future Drinking Intentions
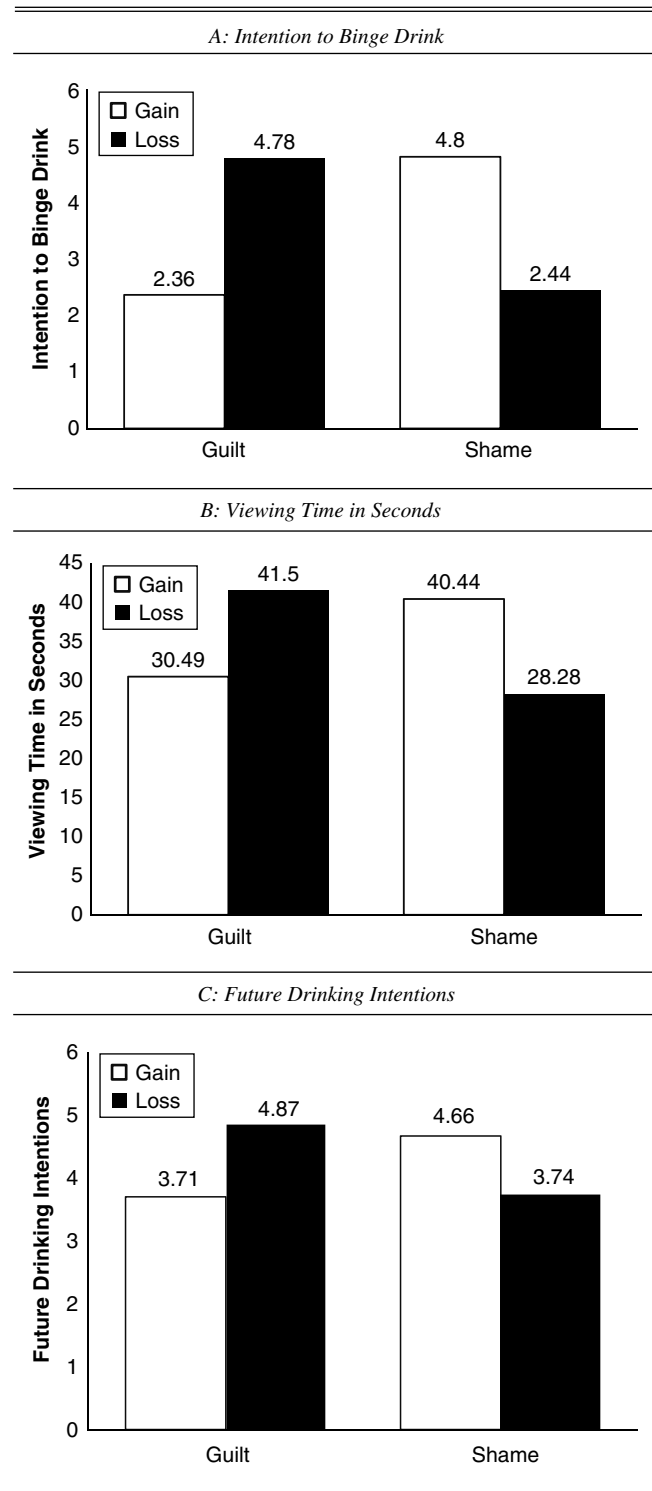
than gain frame spent less time viewing alcohol advertisements ($M_{shame-loss} = 28.28$ seconds, $M_{shame-gain} = 40.44$ seconds; $F(1, 91) = 13.23$, $p < .05$). Thus, in support of H_{1a} and H_{2a}, fit messages were more effective than nonfit messages on interest in alcohol advertisements. In addition, there was no significant emotion × message frame interaction for nonalcohol advertisements ($F(1, 91) = 2.02$, $p > .16$).

Future drinking intentions. First, we computed the average future intention of trying the alcoholic beverages and nonalcoholic beverages shown in the advertisements. Using the average future drinking intention as the dependent measure, we observed a significant emotion × message frame interaction ($F(1, 91) = 15.56$, $p < .05$; see Figure 1, Panel C). Furthermore, the effect of message frame in the guilt conditions was significant, such that participants were less interested in trying the beverages shown in the advertisements when the antidrinking message featured a gain rather than a loss frame ($M_{guilt-gain} = 3.71$, $M_{guilt-gain} = 4.87$; $F(1, 91) = 9.19$, $p < .05$). Similarly, the effect of frame in the shame conditions was significant, such that those exposed to a loss frame were less interested in trying the beverages featured in the advertisements than those exposed to a gain frame ($M_{shame-loss} = 3.74$, $M_{shame-gain} = 4.66$; $F(1, 91) = 6.42$, $p < .05$). Thus, in support of H_{1a} and H_{2a}, fit messages were more effective than nonfit messages in reducing future drinking intentions. There was no significant emotion × message frame interaction for nonalcoholic beverages ($F(1, 91) = .08$, $p > .78$).

The results of Study 1 reveal the predicted pattern regarding the interaction between guilt and shame and message frame. Three separate dependent variables together provide convergent evidence in support of the proposed theorizing that frames that fit the emotion are more effective, resulting in lower intentions to drink, lower interest in advertisements promoting alcohol, and lower interest in trying alcoholic beverages featured in the advertisements. In Study 2, we seek evidence of the process at work through measures of coping strategy and processing fluency.

STUDY 2: COPING AND FLUENCY AS MEDIATORS OF FIT EFFECTS ON PERSUASION

We posit that a fit between the coping strategy favored by the emotion elicited in the advertisement and the coping strategy facilitated by the message frame enhances fluency and the persuasiveness of the advertisement (H_{1b} and H_{2b}). We also suggest that specific coping strategies drive the effects of fit on fluency and persuasion (H_{3a} and H_{3b}). Thus, the purpose of this study is to examine process measures within the same design as Study 1. First, we aimed to test whether fit-driven fluency was responsible for the interactive effects of emotions and frame on persuasion. Thus, we administered measures of processing fluency to test H_{1b} and H_{2b}. Second, we tested whether this fit resulted from unique coping strategies associated with the two emotions, thereby facilitating fluency and persuasion to test H_{3a} and H_{3b}.

An additional goal of Study 2 was to verify empirically the key conceptual links underlying our hypotheses: whether emotions and message frames were associated with particular patterns of efficacy and appraisal. Our theorizing draws a link between emotion and efficacy and between framing and appraisal. Thus, this study served as a context to test the conceptual relationships between the two emotions (guilt vs. shame) and efficacy (high vs. low), and between framing (gain vs. loss) and situation appraisals (challenge vs. threat).

Procedure

Study 2 manipulated the emotion type (guilt vs. shame) and message frame (gain vs. loss) of the antidrinking

message in a 2×2 between-subjects design. Ninety-two undergraduate students participated in this study for partial course credit. The procedure for Study 2 closely followed that of Study 1 except for the addition of measures of fluency, appraisal, and coping (for item descriptions, see Appendix C). After exposure to one of four advertisements (as a function of condition), participants completed several behavioral measures, including the focal binge drinking measure and the measures of efficacy, challenge, and threat appraisals and fluency. Then, we assessed the coping strategies activated by the advertisements as part of a survey designed to measure general coping strategies. These measures, adopted from Duhachek (2005), assessed both problem-focused and emotion-focused coping strategies (1 = "not at all like me," and 9 = "very much like me"). The problem-focused items were "Concentrate on ways the problem could be solved," "Try to make a plan of action," "Generate potential solutions," "Concentrate my efforts on doing something about it," and "Think about the best way to handle things" ($\alpha = .90$). Thus, this scale captured participants' beliefs about their own ability to apply problem-focused coping strategies posited to relate to guilt and gain frames. The emotion-focused coping items were "Let my feelings out somehow," "Delve into my feelings to understand them," "Would acknowledge my emotions," "Would realize that my feelings are valid and justified," and "Try to control my emotions" ($\alpha = .88$). Thus, this scale captured participants' beliefs about their ability to cope using emotion-focused strategies posited to relate to shame and loss frames.

Results and Discussion

Emotion, framing, and appraisal. First, we investigated our assertion regarding the activation of efficacy appraisals associated with guilt and shame by having participants rate several items to measure the extent of perceived efficacy in the context of binge drinking. As we predicted, participants in the guilt condition had significantly higher efficacy appraisals ($M_{guilt} = 5.21$, $M_{shame} = 3.58$; $F(1, 88) = 62.60$, $p < .05$), and those in the shame condition ($r = .74$) had significantly lower efficacy appraisals ($M_{guilt} = 2.45$, $M_{shame} = 5.02$; $F(1, 88) = 173.42$, $p < .05$). Thus, the emotion manipulations activated significantly higher efficacy appraisals in the case of guilt and significantly lower efficacy appraisals in the case of shame, as we predicted.

Second, to examine our predictions regarding the activation of unique appraisals associated with gain- and loss-framed message, we asked participants to answer a series of questions after exposure to the advertisement. We measured challenge and threat appraisals using three items, each adopted from established scales (O'Connor, Arnold, and Maurizio 2010; Skinner and Brewer 2002; see Appendix C). A 2×2 ANOVA revealed that participants who saw the gain (vs. loss) frame had significantly more challenge appraisals ($M_{gain} = 4.61$, $M_{loss} = 3.09$; $F(1, 88) = 63.05$, $p < .05$) and fewer threat appraisals ($M_{gain} = 2.97$, $M_{loss} = 4.81$; $F(1, 88) = 60.13$, $p < .05$). Thus, the message frame manipulations activated significantly more challenge appraisals in the case of gain frames and significantly more threat appraisals in the case of loss frames, as we predicted.

Binge intentions. We examined the likelihood to binge drink, using a 2×2 ANOVA. Only the predicted two-way interaction was significant ($F(1, 88) = 26.03$, $p < .05$;

see Table 2). A significant effect of message frame in the guilt condition emerged. Participants exposed to gain rather than loss frames reported lower intentions to binge drink ($M_{guilt-gain} = 2.79$, $M_{guilt-loss} = 4.75$; $F(1, 88) = 15.13$, $p < .05$). Similarly, the effect of message frame in the shame condition was significant, such that those exposed to the loss rather than gain frame reported significantly lower intentions to binge drink ($M_{shame-loss} = 2.96$, $M_{shame-gain} = 4.71$; $F(1, 88) = 11.15$, $p < .05$). These findings replicate the effects from Study 1.

Problem-focused and emotion-focused coping differences. To test H_{3a} and H_{3b}, we also examined the effect of the emotion and message frame on activation of coping strategies. The main effects of emotions on problem-focused coping activation and on emotion-focused coping activation were significant (problem-focused coping measures: $M_{guilt} = 7.13$ vs. $M_{shame} = 6.01$; $F(1, 88) = 28.46$, $p < .05$; emotion-focused coping measures: $M_{guilt} = 5.69$ vs. $M_{shame} = 7.15$; $F(1, 88) = 29.02$, $p < .05$). Moreover, the main effects of message frame on both types of coping intentions were significant (problem-focused coping measures: $M_{gain} = 6.88$ vs. $M_{loss} = 6.26$; $F(1, 88) = 8.76$, $p < .05$; emotion-focused coping measures: $M_{gain} = 6.13$ vs. $M_{loss} = 6.70$; $F(1, 88) = 4.59$, $p < .05$). These main effects support our theorizing that both emotions and framing are associated with different types of coping strategies.

Our theory suggests that exposure to a gain frame accompanied by guilt results in a significant increase in problem-focused coping strategies. Consistent with our prediction, a significant two-way interaction emerged on problem-focused coping measures ($F(1, 88) = 7.97$, $p < .05$; see Table 2). Furthermore, the effect of message frame was significant in the guilt condition, such that those exposed to the gain rather than loss frame reported significantly higher problem-focused coping activation, in support of H_{3a} ($M_{guilt-gain} = 7.73$, $M_{guilt-loss} = 6.53$; $F(1, 88) = 17.49$, $p < .05$). In addition, consistent with our theorizing, the effect of message frame on shame was not significant for problem-focused coping ($F(1, 88) = .01$, $p > .93$).

Our theory suggests that loss frames accompanied by shame result in a significant increase in the activation of emotion-focused coping strategies. Indeed, a significant two-way interaction emerged for emotion-focused coping

($F(1, 88) = 7.96$, $p < .05$; see Table 2). Furthermore, this interaction reveals a significant effect of message frame in the shame condition, such that participants exposed to the loss rather than gain frame reported significantly greater activation of emotion-focused coping strategies, in support of H_{3b} ($M_{shame-loss} = 7.82$, $M_{shame-gain} = 6.48$; $F(1, 88) = 11.80$, $p < .05$). For guilt, framing did not influence the activation of emotion-focused coping ($F(1, 88) = .24$, $p > .63$).

Fluency. We also examined the effect of the emotion and message frame on fluency. Only the predicted significant two-way interaction emerged ($F(1, 88) = 39.30$, $p < .05$). Further analyses showed that in the guilt condition, participants exposed to the gain rather than loss frames reported significantly greater fluency ($M_{guilt-gain} = 4.85$, $M_{guilt-loss} = 2.77$; $F(1, 88) = 22.75$, $p < .05$). In contrast, in the shame condition, loss rather than gain frames led to significantly greater fluency ($M_{shame-loss} = 4.78$, $M_{shame-gain} = 2.91$; $F(1, 88) = 16.91$, $p < .05$).
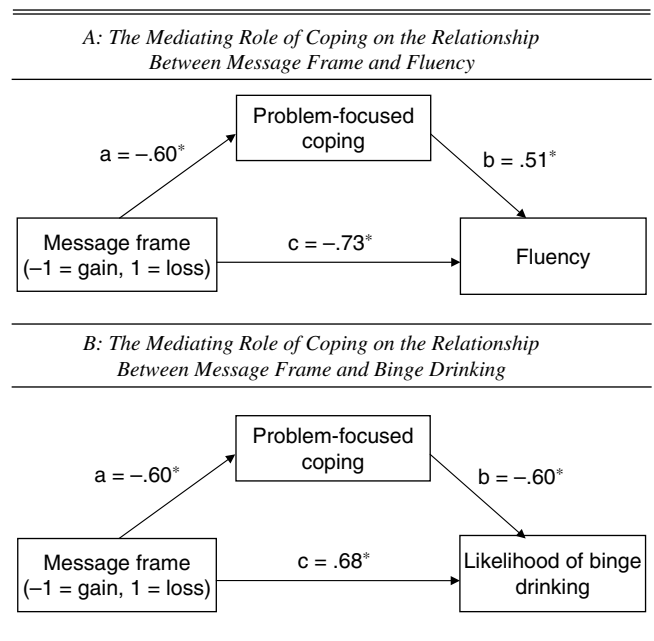
Mediation

To corroborate this theoretical account based on coping, we conducted a multigroup LISREL analysis of participants' coping responses as a function of emotions for the data reported in Study 2 (see Figures 2 and 3). Previous research suggests that the structural equation modeling approach dominates Baron and Kenny's (1986) approach (Iacobucci 2008; Zhao, Lynch, and Chen 2010) because it estimates every construct simultaneously. We expected to find that the relevant problem-focused/emotion-focused coping mediated the relationship between message frame (gain frame = −1, loss frame = 1) and fluency in each emotion condition (problem-focused coping for guilt vs. emotion-focused coping for shame). In support of this prediction, the overall indirect path from message frame to

Table 2
STUDY 2 RESULTS OF BINGE INTENTIONS AND COPING

	Primed Emotions			
	Guilt		Shame	
	Message Frame			
Dependent Measures	Gain	Loss	Gain	Loss
Binge drinking intentions	2.79	4.75	4.71	2.96
Problem-focused coping strategy activation	7.73	6.53	6.03	6.00
Emotion-focused coping strategy activation	5.94	5.44	6.48	7.82
Processing fluency	4.85	2.77	2.91	4.78

Notes: For binge drinking intentions, lower numbers indicate greater persuasion. For problem-focused and emotion-focused coping strategy activation, higher numbers indicate greater activation.
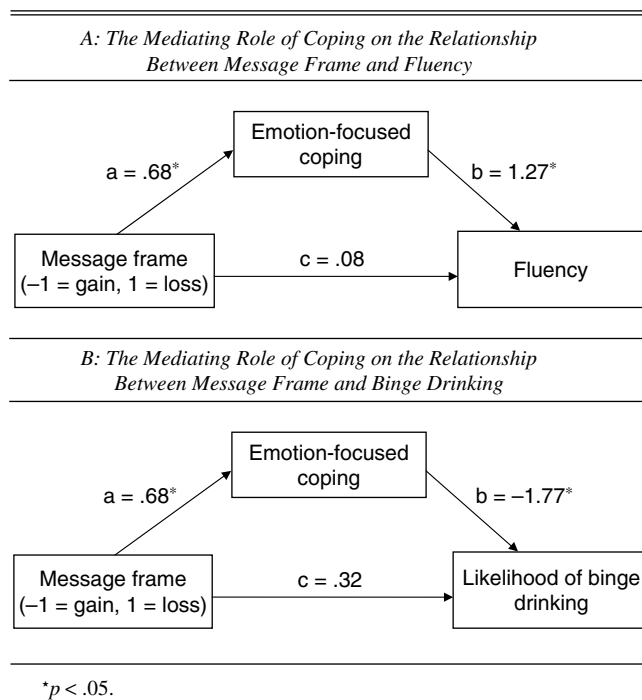
Figure 2
STRUCTURAL EQUATION MODELING ANALYSES FOR MEDIATION IN GUILT CONDITION (STUDY 2)

A: The Mediating Role of Coping on the Relationship Between Message Frame and Fluency

B: The Mediating Role of Coping on the Relationship Between Message Frame and Binge Drinking

*p < .05.

Figure 3
STRUCTURAL EQUATION MODELING ANALYSES FOR
MEDIATION IN SHAME CONDITION (STUDY 2)

*A: The Mediating Role of Coping on the Relationship
Between Message Frame and Fluency*

*B: The Mediating Role of Coping on the Relationship
Between Message Frame and Binge Drinking*

*$p < .05$.

Figure 4
STRUCTURAL EQUATION MODELING ANALYSES FOR
MEDIATION (STUDY 2): THE MEDIATING ROLE OF FLUENCY
ON THE RELATIONSHIP BETWEEN EMOTION × MESSAGE
FRAME AND BINGE DRINKING

*$p < .05$.

Notes: Main effects were controlled for in the mediation but were not represented for visual clarity.

fluency through problem-focused coping was significant for the guilt group ($\beta - .31$, t $= -2.12$, $p < .05$) but not for the shame group ($\beta = -.01$, t $= -.12$, $p > .50$). In addition, the overall indirect path from message frame to fluency through emotion-focused coping was significant for the shame group ($\beta = .86$, t $= 2.86$, $p < .05$) but not for the guilt group ($\beta = -.04$, t $= -.84$, $p > .35$). These results indicate that under exposure to the guilt appeal, problem-focused coping mediates the relationship between message frame and fluency whereas under exposure to the shame appeal, emotion-focused coping mediates the relationship between message frame and fluency. Figures 2 and 3 detail the parameter estimates for these models.

Turning to the measure of intentions to binge drink, we expected coping strategies to mediate the relationship between message frame and intentions. In support of this prediction, the overall indirect path from message frame to binge drink intentions through problem-focused coping was significant for the guilt group ($\beta = .36$, t $= 2.10$, $p < .05$) but not for the shame group ($\beta = .01$, t $= .11$, $p > .50$). In addition, the overall indirect path from message frame to binge drinking intentions through emotion-focused coping was significant for the shame group ($\beta = -1.20$, t $= -2.90$, $p < .05$) but not for the guilt group ($\beta = .09$, t $= 1.01$, $p > .35$).

To corroborate this theoretical account based on fluency in the relationship between persuasion and the interaction of emotions and message frame, we conducted an additional LISREL analysis to test mediation (for parameter estimates of this model, see Figure 4). We expected to find that fluency mediated the relationship between the likelihood of binge drinking and the interaction between emotions and message frame. In support of this prediction, the
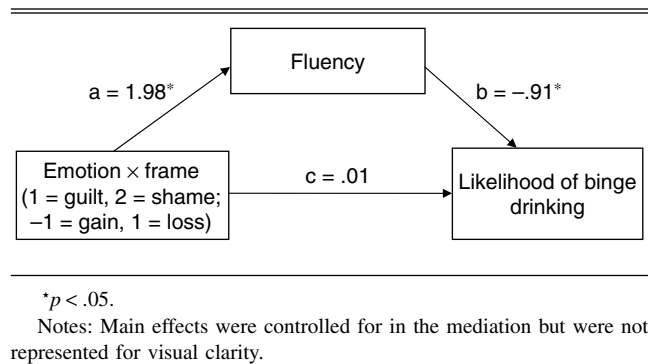
indirect path from the interaction between emotions and message frame to persuasion through fluency was significant ($\beta = -1.81$, t $= -5.69$, $p < .05$). Thus, H$_{3a}$ and H$_{3b}$ are supported.

The results in Study 2 provide strong support for the proposed theorizing. First, the results provide evidence in support of the key linkages between guilt (and shame) and efficacy and between message frame and challenge and threat appraisals. Second, the results replicate the patterns of persuasion found in Study 1. Finally, we provide evidence linking the use of coping strategies to persuasion and fluency to corroborate the theorizing. In Study 3, we seek further evidence linking coping and framing by employing manipulations that activate coping strategies.

STUDY 3: PRIMING PROBLEM-FOCUSED AND EMOTION-FOCUSED COPING

The purpose of Study 3 is to provide further process evidence in support of our coping-based view of framing effects on persuasion. The crux of our theorizing relies on the assertion that the emotions of guilt and shame differentially trigger problem-focused and emotion-focused coping strategies, respectively, and that these coping strategies mediate the effect of emotions on framing. If coping strategies constitute the underlying process, by manipulating this process directly, we should be able to wipe out the effects of emotions and have only the effects of coping strategy. Thus, in this study, we strive to manipulate these coping strategies directly to test the role of coping in these fit effects using a moderation approach to complement the mediation approach used in Study 2. When specific coping strategies are made accessible, regardless of the emotion, we should find that the fit between coping and framing predicts persuasion. That is, a problem-focused coping prime should result in greater persuasion and fluency from gain frames. Conversely, an emotion-focused coping prime should result in greater persuasion and fluency from loss frames.

Procedure

Study 3 is a 3 (problem-focused coping prime vs. emotion-focused coping prime vs. no coping prime control) × 2 (guilt vs. shame) × 2 (gain frame vs. loss frame)

between-subjects design. If coping strategies are the real drivers of emotional effects on framing in persuasion, this design should reveal the following: (1) In the control condition with no coping prime, we should replicate our effects from previous studies; (2) in the problem-focused prime condition, we should observe the pattern for guilt observed in the previous studies, such that gain frames are more effective than loss frames regardless of the emotion; and (3) in the emotion-focused prime condition, we should observe the shame pattern, such that loss frames are more effective than gain frames regardless of the emotion.

One hundred sixty-five undergraduate students were recruited for participation. The design for Study 3 was identical to that used previously, with the addition of four new conditions based on the problem-focused coping prime and four conditions based on the emotion-focused coping prime. The procedure for participants in the conditions with no coping prime was identical to Study 2. We designed the coping strategy conditions on the basis of the premise that high efficacy leads to problem-focused coping and low efficacy leads to emotion-focused coping (Sujan et al. 1999). Accordingly, we primed participants to feel high or low efficacy and employed that efficacy prime as a means to activate coping. Participants in the problem-focused coping or high-efficacy prime condition read the following instructions before viewing the health message: "This part of the study is interested in your past experiences where you felt confident. Please recall a single event in your life that caused you to feel intense confidence in yourself. Please tell us in detail how you became confident or empowered in those situations." Participants in the emotion-focused coping or low-efficacy prime condition read the following instructions before viewing the health message: "This part of the study is interested in your past experiences where you felt a lack of confidence. Please recall a single event in your life that caused you to feel an intense lack of confidence in yourself. Please tell us in detail how you lost your confidence or empowerment in those situations." To ensure that our efficacy primes indeed activated distinct coping strategies, we conducted a pretest, described next.

Pretest

We conducted a pretest with 38 participants before the main experiment to provide more robust evidence about whether the problem-focused coping prime produced higher efficacy beliefs and more problem-focused coping and whether the emotion-focused coping prime produced lower efficacy beliefs and more emotion-focused coping. After participants were exposed to one of three conditions involving the coping prime manipulation, we administered manipulation check measures to assess the extent of perceived self-efficacy using seven-point scales (see Appendix C). To assess both problem-focused coping strategies ($\alpha = .92$) and emotion-focused coping strategies ($\alpha = .95$), we employed the same measures used in Study 2. Next, participants saw one of the four ads manipulating emotion and frame and completed measures of guilt and shame described in Study 1.

A three-level, one-way ANOVA on the self-efficacy measures revealed a significant effect of prime ($F(2, 35) = 19.18$, $p < .05$), indicating that participants exposed to the problem-focused coping prime manipulation reported greater self-efficacy than those exposed to the emotion-focused coping prime manipulation and no coping prime ($M_{\text{prob-focus prime}} = 6.05$ vs. $M_{\text{emo-focus prime}} = 2.11$; $p < .05$; $M_{\text{prob-focus prime}} = 6.05$ vs. $M_{\text{control}} = 4.35$; $p < .05$). In addition, those in the emotion-focused coping prime condition reported less self-efficacy than those in the control condition ($M_{\text{control}} = 4.35$ vs. $M_{\text{emo-focus prime}} = 2.11$; $p < .05$).

Regarding coping, a one-way ANOVA with repeated measures showed a significant effect of the coping prime manipulation on coping ($F(2, 35) = 24.84$, $p < .05$). Specifically, the problem-focused coping prime manipulation generated more problem-focused coping than emotion-focused coping ($M_{\text{problem-focused}} = 7.72$ vs. $M_{\text{emotion-focused}} = 4.29$; $p < .05$), whereas the emotion-focused coping prime manipulation generated more emotion-focused coping than problem-focused coping ($M_{\text{problem-focused}} = 5.51$ vs. $M_{\text{emotion-focused}} = 6.95$; $p < .05$). There was no significant difference in the control condition ($M_{\text{problem-focused}} = 6.56$ vs. $M_{\text{emotion-focused}} = 6.09$; $p > .26$).
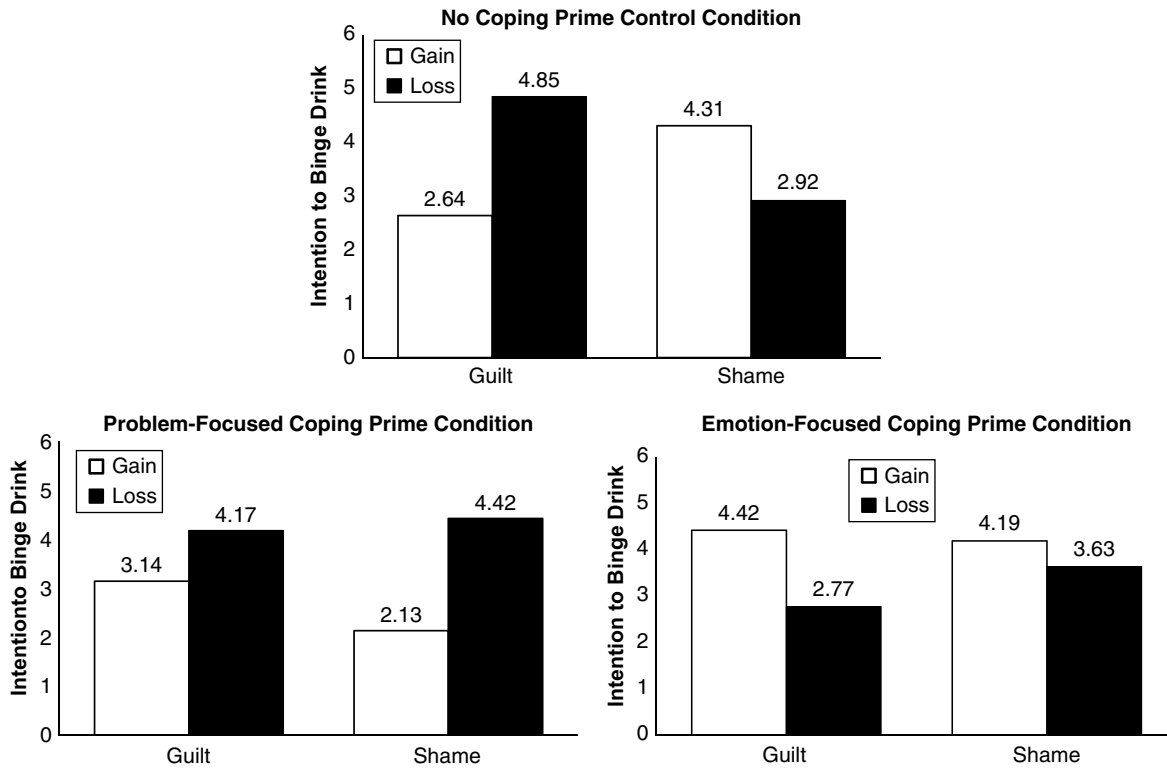
Regarding the levels of guilt and shame experienced after exposure to the coping prime and the advertisement, we examined the measures for guilt and shame using a $3 \times 2 \times 2$ between-subjects ANOVA. We observed only a significant main effect of emotion on measures of guilt and shame. Exposure to the guilt rather than the shame advertisement resulted in significantly more guilt ($M_{\text{guilt}} = 4.12$, $M_{\text{shame}} = 3.06$; $F(1, 36) = 4.98$, $p < .03$), and exposure to the shame rather than the guilt advertisement resulted in significantly more shame ($M_{\text{guilt}} = 2.22$, $M_{\text{shame}} = 4.91$; $F(1, 36) = 130.41$, $p < .05$). These results indicate that the coping primes did not alter the emotions resulting from the advertisements.
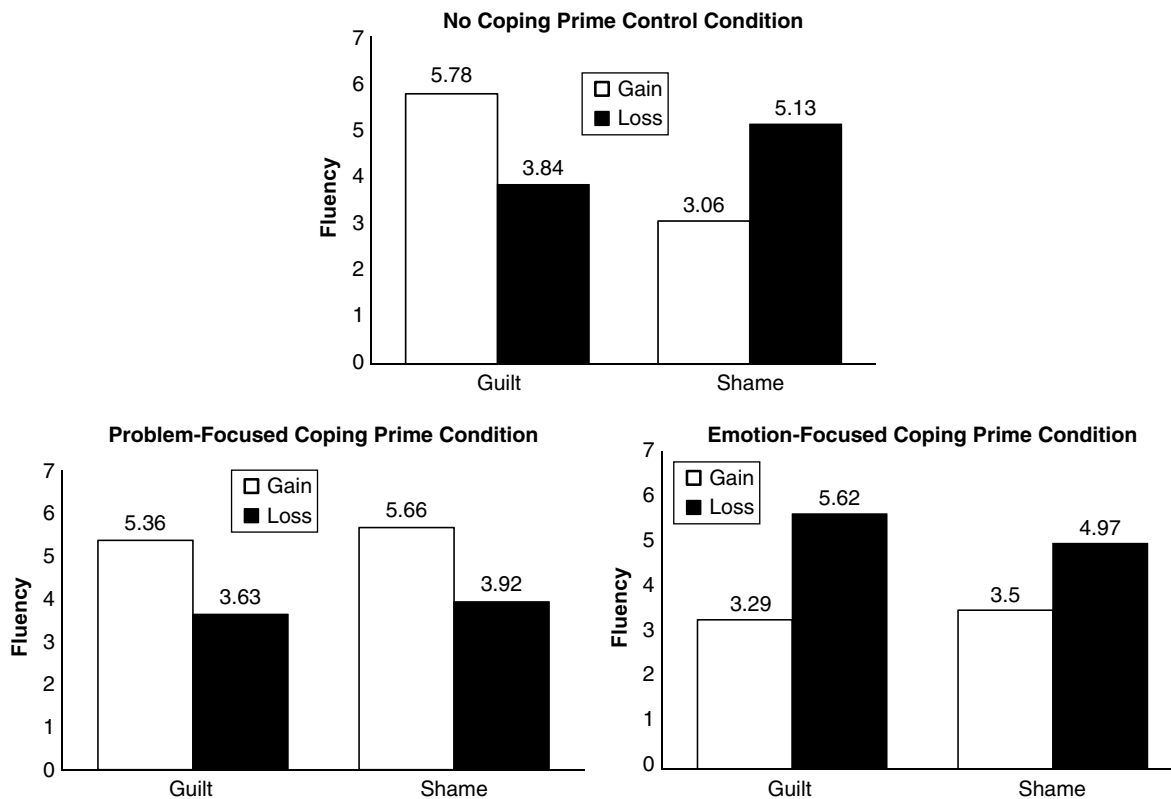
Results and Discussion

Binge intentions. In accordance with our theory, we find evidence in support of the proposed three-way interaction among emotion, message frame, and coping prime on the likelihood to binge drink ($F(2, 153) = 7.94$, $p < .05$; see Figure 5, Panel A). For the control condition, we found a simple interaction of emotion and frame ($F(1, 153) = 13.56$, $p < .05$). Follow-up contrasts reveal a pattern that replicates findings from the previous two studies. For guilt, gain rather than loss frames resulted in significantly lower intentions to binge drink ($M_{\text{guilt–gain–control}} = 2.64$, $M_{\text{guilt–loss–control}} = 4.85$; $F(1, 153) = 10.08$, $p < .05$). For shame, loss rather than gain frames resulted in significantly lower intentions to binge drink ($M_{\text{shame–loss–control}} = 2.92$, $M_{\text{shame–gain–control}} = 4.31$; $F(1, 153) = 4.12$, $p < .05$). We propose that because problem-focused coping drives the effects of guilt, if this coping strategy were activated, regardless of the type of emotion, participants would rely on the activated coping strategy, making gain frames more effective and fluent than loss frames. Consistent with this reasoning, in the problem-focused coping prime condition, we found only a simple main effect of frame, such that intentions to binge drink were lower after exposure to gain rather than loss frames, mimicking the guilt condition from the control condition and previous studies ($M_{\text{gain–prob-focus prime}} = 2.63$, $M_{\text{loss–prob-focus prime}} = 4.29$; $F(1, 153) = 11.06$, $p < .05$). We propose that emotion-focused coping drives the effects of shame. If this is the case, when emotion-focused coping is activated, regardless of the type of emotion,

Figure 5
STUDY 3 RESULTS

A: Intention to Binge Drink

No Coping Prime Control Condition

(Chart: Intention to Binge Drink)
Legend: □ Gain, ■ Loss
Guilt: Gain 2.64, Loss 4.85
Shame: Gain 4.31, Loss 2.92

Problem-Focused Coping Prime Condition

(Chart: Intention to Binge Drink)
Legend: □ Gain, ■ Loss
Guilt: Gain 3.14, Loss 4.17
Shame: Gain 2.13, Loss 4.42

Emotion-Focused Coping Prime Condition

(Chart: Intention to Binge Drink)
Legend: □ Gain, ■ Loss
Guilt: Gain 4.42, Loss 2.77
Shame: Gain 4.19, Loss 3.63

B: Fluency

No Coping Prime Control Condition

(Chart: Fluency)
Legend: □ Gain, ■ Loss
Guilt: Gain 5.78, Loss 3.84
Shame: Gain 3.06, Loss 5.13

Problem-Focused Coping Prime Condition

(Chart: Fluency)
Legend: □ Gain, ■ Loss
Guilt: Gain 5.36, Loss 3.63
Shame: Gain 5.66, Loss 3.92

Emotion-Focused Coping Prime Condition

(Chart: Fluency)
Legend: □ Gain, ■ Loss
Guilt: Gain 3.29, Loss 5.62
Shame: Gain 3.5, Loss 4.97

participants will rely on the activated coping strategy, making loss frames more effective and fluent than gain frames. Indeed, we find that in the emotion-focused coping prime condition, only a significant simple main effect of frame emerged, such that intentions to binge drink were lower after exposure to the loss rather than the gain frame ($M_{loss–emo-focus prime} = 3.19$, $M_{gain–emo-focus prime} = 4.30$; $F(1, 153) = 5.27$, $p < .05$).

Fluency. In accordance with our theory, we find evidence in support of the proposed three-way interaction among emotion, message frame, and coping prime ($F(2, 153) = 14.53$, $p < .05$; see Figure 5, Panel B) on fluency. For the control condition, there was a significant simple interaction effect ($F(1, 153) = 34.49$, $p < .05$) of emotion and frame. For guilt, gain rather than loss frames resulted in significantly greater fluency ($M_{guilt–gain–control} = 5.78$, $M_{guilt–loss–control} = 3.84$; $F(1, 153) = 16.06$, $p < .05$). For shame, loss rather than gain frames resulted in significantly greater fluency ($M_{shame–loss–control} = 5.13$, $M_{shame–gain–control} = 3.06$; $F(1, 153) = 18.50$, $p < .05$). Furthermore, in the problem-focused coping condition, only a simple main effect of frame emerged, such that gain- rather than loss-framed messages were more fluent ($M_{gain–prob-focus prime} = 5.50$, $M_{loss–prob-focus prime} = 3.77$; $F(1, 153) = 9.65$, $p < .05$). Conversely, in the emotion-focused coping prime condition, only a significant main effect of frame emerged, such that loss rather than gain frames were more fluent ($M_{loss–emo-focus prime} = 5.29$, $M_{gain–emo-focus prime} = 3.40$; $F(1, 153) = 19.68$, $p < .05$).

The findings from Study 3 indicate that activation of coping strategies drives the effects of emotion on framing in persuasion. When no specific type of coping was made accessible, findings based on emotions from Studies 1 and 2 were replicated. When alternative coping strategies were activated, emotions had no effects. The interaction between coping and framing determined persuasion. These results, together with the results of Study 2, suggest that coping strategies drove our effects.

GENERAL DISCUSSION

This article investigates the relationship between the emotions of guilt and shame and the framing of health messages. We provided evidence for differential message effectiveness as a function of the coping strategies associated with the emotion and a gain- or loss-framed message. We find that a gain frame increased the persuasiveness of a guilt appeal and a loss frame increased the persuasiveness of a shame appeal. Study 2 illuminated the processes underlying these effects by finding mediation support for our theorizing that the persuasiveness of guilt (shame) appeals featuring gain (loss) frames was driven by fluency and the activation of emotion-consistent coping strategies. Finally, Study 3 sought additional evidence for the role of coping in this process by priming either problem-focused or emotion-focused coping strategies directly and showing that the priming of coping overrides the effects of emotions.

Theoretical Contributions

This article contributes to theory related to message framing and emotions and to the substantive domain of consumer health messaging. We extend previous research on message frames and emotions by articulating a fit-based

account that implicates coping processes as a determinant of persuasion. We demonstrate that unique coping processes associated with guilt and shame result in greater fluency in processing gain- and loss-framed messages, thereby facilitating persuasion. Our research contributes to the existing literature on regulatory fit by showing that fit can be triggered through emotions and by identifying coping processes as a mechanism linking fluency and persuasion.

Emotions and framing: coping fit. Prior research has shown that people experiencing negative affect are more persuaded by gain frames (Keller, Lipkus, and Rimer 2003). We build on this work to show that the specific coping tendencies of negative emotions determine whether gain or loss frames are more effective, as opposed to valence. We provide evidence for a nexus between the negative emotion of shame and loss frames based on the activation of emotion-focused coping implicated by this interaction, thereby facilitating persuasion. Thus, these findings suggest that negative emotional appeals can differ in the degree to which they encourage processing of positive and negative information due to coping goals. Further research should examine other negative emotional appeals that vary with respect to coping. For example, anger is frequently associated with problem-focused coping, whereas fear is typically associated with emotion-focused coping. These emotions might have framing effects similar to guilt and shame.

Building on prior guilt and shame health research. In contrast with previous research examining guilt and shame that shows that both emotions are associated with a defensive mode of processing in response to health messaging designed to amplify these emotions (Agrawal and Duhachek 2010), the current research identifies unique coping processes that differentiate guilt and shame. Whereas Agrawal and Duhachek (2010) examine how guilt and shame appeals lead to decreased persuasion for people already experiencing guilt and shame, we examine the role of gain and loss frames as message factors that facilitate coping. The current emphasis on emotions generated solely by the message rather than by ambient or incidental sources of emotion also differs from approaches used in prior research (Agrawal and Duhachek 2010; Keller, Lipkus, and Rimer 2003). The current research articulates a framework that links appraisal theories of discrete emotions with coping theory and message framing, resulting in greater processing fluency and persuasion, two connections previously not established in the health literature.

The findings also suggest that further research is necessary to determine the nature of differences between appeals that facilitate coping and appeals designed to exacerbate negative emotions. At a broader level, the current findings provide evidence for persuasive processing, as compared with Agrawal and Duhachek's (2010) results, which show defensive processing resulting from fit. Taken together, the findings suggest that when emotional appeals and frames exacerbate negative emotions and inhibit coping, these

messages are less effective than appeals that facilitate coping. Further research should continue to explore boundary conditions in which coping may not lead to persuasion or in which exacerbating negative emotions may result in enhanced persuasion. On a more general note related to the emotions of guilt and shame, future studies should also examine when these two emotions, given their similarities, affect responses in similar ways and when they lead to divergent responses as documented in our studies. It should be noted that the studies reported herein rely on integral emotions; we replicated the same pattern when emotions were manipulated incidentally, as has been the focus of recent emotions research (Labroo and Rucker 2010). This raises the broader questions of whether and when incidental and integral emotions affect consumer responses similarly or differentially, which further research should address.

Emotions and framing: efficacy. Our research builds on prior work examining the effect of efficacy on the persuasiveness of message frames (Block and Keller 1995). The message efficacy literature shows that high-efficacy messages paired with gain frames and low-efficacy messages paired with loss frames are more effective (Block and Keller 1995). The current findings add to this efficacy literature because they implicate emotions as sources of efficacy and reveal the links between efficacy and coping processes and fluency in message effectiveness.

Emotions and coping: what does altering appraisals do? As we discussed previously, guilt and shame share many similarities. In Study 3, we showed that by priming shame-laden consumers with a coping prime similar to guilt, they mimicked the responses of guilt-laden participants, and vice versa. In this study, this manipulation served as a way of testing coping strategies as the process underlying our effects. However, further research could examine the deeper implications of this manipulation.

Extending regulatory fit theory to emotions and understanding coping as a source of fluency. Our research contributes to fit research at multiple levels. First, we show that the effects of fit that have previously been shown in the domain of motivation or cognitive mind-sets hold for emotions. Second, we show that fluency mediates the effects of emotions on persuasion. Fluency has not previously been shown to be a driver of emotional influences on persuasion. Third, and most important, we provide a new understanding of why fit leads to fluency. We show that in the domain of emotions, a fit message facilitates coping processes that are more consistent with the emotion. The effects documented in our studies are more cognitive in nature, but it is possible that the fluency arising from emotion fit has metacognitive effects as well. Thus, we add to the literature by identifying coping as a process through which fit creates fluency.

Practical Implications

Guilt and shame are particularly useful emotions to examine because they are frequently evoked in antidrinking messages, and these emotions are frequently experienced as a consequence of risky drinking behaviors (Agrawal and Duhachek 2010). Our research provides insight into how health messages may employ emotion and framing to communicate more effectively about health and social causes. When employing emotional appeals, marketers should use message frames and tactics that help alleviate the negative

emotional repercussions of the message. For example, our research suggests that the guilt appeal we described in the beginning of this article (see also Appendix A) would be more effective when cast in a gain rather than loss frame.

An additional practical implication of our research lies in the findings that document that unique coping processes facilitate fluency and persuasion. Marketers could enhance the persuasiveness of their messages further by suggesting a particular way of coping to audiences. For example, marketers could include a statement such as "Let your feelings out!" which is an example of emotion-focused coping, in a shame/loss frame appeal. This statement could make the proper coping strategy salient, thereby facilitating persuasion. All in all, marketers need to understand the coping processes of the target audience and design appeals that aid those processes to maximize the effectiveness of their messages.

Finally, the current research highlights the role of fluency as an antecedent of persuasion in health messaging. In contrast with fear and other negative emotional appeals designed to maximize discomfort among consumers, we find that the ease of processing a message is a key driver of persuasion. Given these findings, research is necessary to specify additional conditions under which fluency results from negative emotional appeals and coping. Perhaps coping-based fluency results from other widely used persuasive tropes in health messaging, such as normative appeals emphasizing the extent to which a risky behavior is enacted in a population (e.g., "Only 20% of college students reported binge drinking last year").

Appendix A
ACTUAL PUBLIC SERVICE HEALTH MESSAGE FEATURING GUILT, SHAME, AND LOSS FRAME

Notes: Guilt/loss frame message reads, "'But I was drunk,' doesn't repair the friendship/Guilt—The Other Hangover/Don't over do it." Shame/loss frame message reads, "Reputations aren't drunk-proof/Shame—The Other Hangover/Don't over do it."

Appendix B
STUDIES 1–3: GUILT/GAIN FRAME AND SHAME/LOSS FRAME ADVERTISEMENTS

Appendix C
SUMMARY OF MEASURES USED

Constructs	Measures
Problem-focused coping[a] (α = .90 in Study 2; α = .92 in Study 3)	• Concentrate on ways the problem could be solved. • Try to make a plan of action. • Generate potential solutions. • Concentrate my efforts on doing something about it. • Think about the best way to handle things.
Emotion-focused coping[a] (α = .88 in Study 2; α = .95 in Study 3)	• Let my feelings out somehow. • Delve into my feelings to understand them. • Would acknowledge my emotions. • Would realize that my feelings are valid and justified. • Try to control my emotions.
High efficacy (in Study 2)[b] (α = .84)	• I am capable of fixing the negative situation due to binge drinking. • If I tried to do something, I will be able to prevent such situations due to binge drinking. • If I tried to do something, I will be able to repair the damage I caused due to binge drinking.
Low efficacy (in Study 2)[b] (α = .91)	• I am incapable of fixing the negative situation due to binge drinking. • Even if I tried to do something, I will not be able to prevent such situations due to binge drinking. • Even if I tried to do something, I will not be able to repair the damage I caused due to binge drinking.
Perceived efficacy[b] (α = .98)	• I am capable of fixing the negative situation. • If I tried to do something, I will be able to prevent such situations. • If I tried to do something, I will be able to repair the damage I caused.
Challenge appraisals[c] (α = .71)	• This ad makes me believe that stressful situations due to drinking contain the potential for positive beliefs such as "I can drink responsibly." • Overall, after seeing this ad, I expect that I will drink responsibly rather than irresponsibly. • This ad makes me think that I look forward to drinking responsibly when I go to the bar.
Threat appraisals[c] (α = .76)	• This ad makes me worry that I will say or do the wrong things if I drink irresponsibly. • This ad makes me worry about the kind of impression I make when I drink irresponsibly. • This ad makes me think that I will feel like a failure if I drink irresponsibly.
Fluency[d] (r = .89)	• How difficult was the antidrinking ad to read?[e] • How fluent did the antidrinking ad feel?[f]

[a] Adopted from Duhachek (2005); 1 = "not at all like me," and 9 = "very much like me."
[b] Adopted from Block and Keller (1995) and revised; 1 = "not at all," and 7 = "a great deal."
[c] Adopted from Skinner and Brewer (2002); 1 = "not at all likely," and 7 = "very likely."
[d] Adopted from Lee and Aaker (2004).
[e] 1 = "very difficult to read," and 7 = "not at all difficult to read."
[f] 1 = "not at all fluent," and 7 = "very fluent."

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