JONATHAN HASFORD, DAVID M. HARDESTY, and BLAIR KIDWELL*

The authors develop an affect-as-information model to explain how targeted emotions used in persuasion can influence unrelated products and brands that are presented nearby. In Study 1, the presence of an emotion-eliciting image affected consumer spending on unrelated products in a simulated retail environment. In Study 2, emotional processing ability and whether consumers monitored their feelings moderated emotional transfers between unrelated advertisements, providing support for an affect-as-information model. In Studies 3 and 4, the authors use the context of evaluative conditioning to generalize the incidence of emotional contagion in persuasive communication. They manipulate salience of affect and whether brand attitudes were measured or primed to provide additional evidence for and extend affect-as-information theory.

Keywords: emotional contagion, affect as information, persuasion, affect transfer, emotion

Online Supplement: http://dx.doi.org/10.1509/jmr.13.0081

More Than a Feeling: Emotional Contagion Effects in Persuasive Communication

A common approach to changing consumer attitudes involves the use of emotion-evoking stimuli in persuasive communication. For example, a marketer may pair pleasant music (Gorn 1982; Kellaris and Kent 1993), credible spokespeople (Garretson and Burton 2005; Priester and Petty 2003), or visually appealing imagery (Hagtvedt and Patrick 2008) with a target product or brand. A contagion effect subsequently occurs (Hatfield and Cacioppo 1994), in which the properties and valence of the source of emotion transfer to the targeted object. Consumers then form attitudes in line with the nature of the emotion linked to the brand (Howard and Gengler 2001).

Despite these important relationships, research has yet to consider how the use of emotions in persuasive communications might affect other products and brands that are presented nearby. Given that many communication channels feature multiple persuasive communications in close proximity and that the emotions one feels toward a target of persuasion often persist after the conclusion of a marketing message (Han, Lerner, and Keltner 2007), can emotions used in persuasion elicit a contagion effect on nearby unrelated products and brands? Importantly, marketers do not typically consider this possibility, instead focusing on factors such as price, reach, and prominence of their advertisements (Olson and Thjømøe 2009; Schweidel and Kent 2010). Thus, marketers overlook a potentially important source of influence that could affect consumer evaluations of their products and brands.

In the current research, we offer a substantive shift in thinking regarding the influence of emotion in persuasion. We provide evidence across multiple forms of persuasive communication—including point-of-purchase displays, advertising, and evaluative conditioning—that emotional contagion effects are not limited to the target of persuasion. Instead, contagion effects can emerge on subsequent unrelated evaluations on the basis of the emotion elicited in a nearby persuasion attempt. We demonstrate that affect-as-information (Schwarz and Clore 2003) processes underlie these affective transfers and develop an important extension of affect-as-information theory. Whereas prior studies have shown that generalized feeling states (such as mood) influence subsequent decisions in line with their perceived representativeness and relevance in the domain (Pham

*Jonathan Hasford is Assistant Professor of Marketing, Florida International University (e-mail: jhasford@fiu.edu). David M. Hardesty is the Carol Martin Gatton Endowed Chair of Marketing, University of Kentucky (e-mail: david.hardesty@uky.edu). Blair Kidwell is Assistant Professor of Marketing, Florida International University (e-mail: bkidwell@fiu.edu). The authors thank the *JMR* review team for their excellent guidance during the review process. James Bettman served as associate editor for this article.

ISSN: 0022-2437 (print)
1547-7193 (electronic)

Journal of Marketing Research
Vol. LII (December 2015), 836–847
DOI: 10.1509/jmr.13.0081

1998), we instead demonstrate that emotional contagion in subsequent unrelated judgments occurs from the mere accessibility of emotions used in a prior persuasion attempt. This provides an important extension of affect-as-information theory and enhances our understanding of how consumers utilize targeted emotions in product evaluations.

In the sections that follow, we review the literature on emotional contagion and affect as information. We then develop hypotheses that test our proposed model of affective transfers between persuasive communications. Next, we conduct four studies offering support for our predictions and conclude by discussing the theoretical and managerial implications of our research.

THEORETICAL BACKGROUND

Emotional Contagion

Emotional contagion occurs when the emotional properties or "essence" of a source object transfers to a target through either direct or indirect contact (Morales and Fitzsimons 2007; Nemeroff and Rozin 1994). For example, when an advertisement features a well-liked celebrity spokesperson, the emotions elicited by the source of affect are subsequently used to evaluate the featured product or brand. Contagion effects can be positive, such as the influence of a well-liked source on consumer attitudes (Howard and Gengler 2001), the infusion of art in the marketing of luxury items (Hagtvedt and Patrick 2008), and the impact of gift wrapping on product evaluations (Howard 1992). Negative emotions can also lead to contagion, such as when sad facial expressions in advertising affect donations (Small and Verrochi 2009) and consumers more negatively evaluate products that touch disgusting items (Lerner, Small, and Loewenstein 2004; Morales and Fitzsimons 2007).

Contagion effects are often explained by the law of contagion (Hatfield and Cacioppo 1994), which holds that the properties of two objects transfer through an actual or perceived relationship (Nemeroff and Rozin 1994). Furthermore, contagion effects can be retained even after the link between the source and target is broken (Di Muro and Noseworthy 2013; Rozin and Nemeroff 1990). For example, Morales and Fitzsimons (2007) find that contagion effects persisted over an hour after initial contact, as consumers retained more negative evaluations of a product they believed had touched a contaminated item. Thus, pairing an emotion-eliciting source with a product or brand can have a powerful impact on consumers, who face difficulty in correcting for this influence.

Affect-as-Information Perspective of Emotional Contagion

When forming an evaluation or making a consumption decision, the emotions people experience provide a prominent source of information (Clore, Gasper, and Garvin 2001; Pham 2004). Affect as information (Schwarz and Clore 2003) explains how consumers use emotional information in decision making, suggesting that people examine their feelings during an evaluation of an object and form judgments that are congruent with those feelings. A consumer will ask him- or herself "How do I feel about it?" and make a judgment on the basis of that information (Pham 1998). For example, if consumers evaluate an ad that features a spokesperson, their feelings toward the spokesperson are an input to subsequent evaluations of the brand.

Affect as information has been used to explain various responses to emotion-laden stimuli. For example, Pham, Geuens, and De Pelsmacker (2013) suggest that affect as information may influence evaluations of advertisements. The presence of favorable affective cues in ads can also increase information search about the brand (Obermiller and Sawyer 2011). Moreover, consumers may rely on their current mood when evaluating a hedonic activity (Pham 1998).

In this article, we extend affect as information to explain how emotion-laden persuasive communications elicit a contagion effect on nearby products and brands. Whereas prior theories of contagion suggest the need (real or perceived) for the source of emotion and target to be related, we examine whether the mere accessibility of an emotion from a prior persuasion attempt can influence subsequent unrelated product evaluations. Prior research has examined several factors associated with the consumer use of affect as information to further delineate the proposed contagion effect, including the impact of self-versus-other evaluations (Raghunathan and Pham 1999), differences in emotional processing ability (Kidwell, Hardesty, and Childers 2008), and how source salience (Pham 1998) influences attitudes after emotional contagion has occurred. We describe these moderators in support of affect as information in the following sections.

HYPOTHESIS DEVELOPMENT

Affective Transfers

Prior research has shown that general feeling states (such as mood) can spill over and influence subsequent consumer judgments (Lerner et al. 2004; Loewenstein and Lerner 2002; Pham 1998). Other research has shown that persuasion efforts can influence evaluations of objects related to the original target in memory (Dimofte and Yalch 2011; Walther 2002). However, it is not yet understood how emotion-laden persuasive communications affect other products and brands that are presented nearby. No existing theory of emotional contagion or persuasion would suggest such an effect. For example, the law of contagion suggests that an association must exist or contact must occur between the original source of emotion and the target for feelings to transfer (Hagtvedt and Patrick 2008; Howard and Gengler 2001; Nemeroff and Rozin 1994).

In a persuasion attempt, emotion-eliciting stimuli will be linked to a product or brand in an attempt to transfer the emotions associated with that source to the target of persuasion (Pham, Geuens, and De Pelsmacker 2013). However, affect-as-information theory suggests that emotions often persist beyond their original source. According to affect as information, people often misconstrue their current feeling states to be pertinent in an evaluation, provided that information is representative of the target under consideration (Pham 1998). Herein, we extend affect as information to suggest that emotions associated with a target of persuasion merely need to be *available* to consumers to influence unrelated nearby product evaluations.

Recall that consumers often consider their emotions when evaluating a brand (Clore et al. 2001; Pham 2004).

However, if affect associated with another unrelated product is present, those feelings may also influence product judgments. This occurs as a result of the misattribution of affect as an input to the evaluation process. Prior research has identified that affect generated from embodied cognitions during persuasion can influence whether consumers are favorable or unfavorable toward the target brand (Briñol and Petty 2003). We extend this finding and suggest that emotion generated from thoughts of one valenced product (after a persuasion attempt) can influence other products and brands that are presented nearby. Consumers will search for information about the brand under consideration, identify the available emotion from thoughts of the unrelated product, and misconstrue those feelings as a viable source of information. Those feelings should influence subsequent attitudes and spending behavior because positive affect has been linked to more favorable brand evaluations and greater spending at a retail outlet (Mangleburg, Doney, and Bristol 2004; Puccinelli et al. 2009). Therefore, we predict the following:

H_1: Positive (or negative) emotions used in a persuasion attempt elicit a contagion effect on subsequent unrelated spending behavior and product judgments.

In addition to demonstrating contagion effects between persuasive communications and unrelated products, we also provide evidence that affect-as-information processes underlie emotional contagion. To support our theoretical model, we conduct process-by-moderation tests (Spencer, Zanna, and Fong 2005) of three important moderating variables (monitoring of feelings, emotional processing ability, and salience of affect) that have been linked to affect as information in prior research. Because of the inherent difficulties in disentangling evaluative measures (e.g., like/dislike) from process measures of affect as information that are also feelings based (Cohen, Pham, and Andrade 2008), process-by-moderation tests enable us to examine whether our proposed model is operative (Spencer et al. 2005). Thus, if affect as information explains contagion, consumers should use affect from a prior persuasive appeal if they are making judgments for themselves (vs. judgments for others), if they are low (vs. high) in emotional processing ability, and if the original source of affect is not made salient. We explore these predictions in more detail in the following subsections.

Monitoring Feelings

Fundamental to affect as information is the recognition of and reliance on feelings as an input to decision making (Chang and Pham 2013). Prior research has identified that whether people rely on their feelings as a source of information depends on whether they believe the decision is personally relevant (Cohen et al. 2008). Emotional information is more heavily weighted in decision making when people are asked about their own beliefs or asked to make a choice for themselves (Hsee and Weber 1997; Loewenstein et al. 2001). Thus, if feelings from a prior persuasion attempt are present at the time of a decision, consumers will more closely monitor those feelings and incorporate them into judgments designed to capture their own beliefs.

However, if consumers are asked to consider what others would think about a particular choice, they are less likely to monitor the available emotional information. Consumers are more likely to disregard emotional information in favor of more cognitive and objective information when making a decision for other consumers (Chang and Pham 2013). For example, when making a risky choice for someone else, consumers are less likely to incorporate emotions into their choice (Raghunathan and Pham 1999). Thus, we expect that available information from a previous persuasion attempt will be discounted. Subsequent evaluations of unrelated products and brands will be more neutral as a result. Therefore, we predict the following:

H_2: Consumers who evaluate persuasion attempts drawing on their own attitudes and beliefs (the attitudes and beliefs of others) experience more (less) emotional contagion in subsequent unrelated judgments, in support of an affect-as-information model.

Emotional Processing Ability

Consumers may also choose to rely on available emotions as a cue to decision making or integrate emotional information with cognitions to make evaluations (Luce 1998). Therefore, in further testing whether affect as information can explain contagion effects, differences in how consumers process emotional information should influence judgments of unrelated products and brands. Prior research has suggested that people's ability to effectively recognize and understand how they feel affects the informational value of feelings (Gohm and Clore 2002). Thus, differences in consumer emotional ability (Kidwell et al. 2008) should influence contagion if consumers are using this affect in assessing the unrelated product.

Consumer emotional ability is the multidimensional ability to recognize, use, understand, and manage emotions to achieve desired outcomes (Mayer and Salovey 1997). Emotionally able consumers possess the ability to recognize the value of emotional information and avoid relying solely on emotional cues in attitude formation. These consumers are more likely to recognize that emotions used in a prior persuasion attempt are not relevant in a later decision. As a result, emotionally able consumers will be less influenced by contagion effects in subsequent judgments after being exposed to an emotion-laden persuasive communication. Therefore, we predict the following:

H_3: Consumers with higher emotional ability are less influenced by emotional contagion in subsequent unrelated judgments, in support of an affect-as-information model.

Salience of Affect

Furthermore, if affect as information explains consumer responses to persuasion, making the original source of emotion salient should eliminate contagion effects on nearby products and brands. Prior research has suggested that when contagion has occurred, these effects are persistent on brand attitudes (Di Muro and Noseworthy 2013; Morales and Fitzsimons 2007). This effect is attributed to the irrational beliefs that consumers hold toward targets of contagion (Morales and Fitzsimons 2007), whereby contagion effects can emerge in some instances regardless of context and are resistant to extinction over time (Hagtvedt and Patrick 2008).

However, our affect-as-information model suggests that attitude change is actually less persistent after contagion

than previously assumed. After an affective transfer, consumers will recall the emotion they previously experienced to make a judgment in the current domain. Consumers often misattribute the emotions they experience as pertinent sources of information in decision making (Pham 1998; Schwarz and Clore 1996). However, misattribution can be mitigated when people become aware that these feelings can influence their judgments, even after the affective link between evaluations has been established (Schwarz and Clore 2003). Prior research has demonstrated that when people are alerted to the original source of emotion, those feelings no longer influence their decision making (Clore et al. 2001; Fang, Singh, and Ahluwalia 2007). Therefore, even after contagion has occurred, making the original source of emotion salient should reduce contagion effects. Thus, we predict the following:

H_4: Making the original source of emotion salient after a persuasive communication mitigates contagion effects, in support of an affect-as-information model.

To assess these hypotheses, we conducted four studies. Study 1 demonstrates contagion effects in a simulated retail environment between a source of emotion and unrelated products. In Study 2, we provide evidence that affect as information can explain this effect by examining how exposure to an advertisement featuring an emotion-laden celebrity may influence evaluations of a subsequent unrelated ad more for consumers with high emotional processing ability and when consumers are monitoring their own attitudes and beliefs. In Studies 3 and 4, we provide further evidence in support of our affect-as-information model in the domain of evaluative conditioning by examining the impact of source salience and whether merely priming thoughts of a prior persuasion attempt influences subsequent unrelated product evaluations. These findings provide further evidence of affect-as-information processes and support our theoretical extension to the affect-as-information model.

STUDY 1

In Study 1, we provide a point-of-purchase demonstration of how the presence of an emotionally charged image placed next to unrelated products can elicit a contagion effect on consumer spending. We predict that consumers should spend more (less) money on items when an unrelated image featuring a positive (negative) celebrity is placed next to the unrelated items (H_1). We also expect that consumers should be less likely to purchase any item when the unrelated image is negative because negative emotions lead consumers to defer choice (Luce 1998).

Method

One hundred twenty-two undergraduate students completed this study for payment and course credit. Participants were randomly assigned to a two-factor (point-of-purchase image: positive or negative) between-subjects design (images are available in the Web Appendix). Participants entered a research lab and initially completed an unrelated study. Upon completion, participants were individually directed into a separate room that simulated a retail store environment. Nine items featuring the school's logo were displayed on store shelves. All items—which included pencils, pens, mechanical pencils, key chains, spiral notebooks, 1-inch binders, blue books (for exams), decals, and folders—were chosen to appeal to undergraduate students. Each item had a price tag below the item that displayed the item's regular price (from the local campus bookstore) and a discounted price (approximately 50% off per item) available for participants.

Prior to Study 1, 79 undergraduate students completed a pretest involving attitudes toward two celebrities (Taylor Swift and Miley Cyrus). We collected one image of each celebrity through an Internet search of photos from the MTV Video Music Awards. The results revealed that participants were favorable (unfavorable) toward the image of Taylor Swift (Miley Cyrus). We manipulated these celebrity images in the main study by randomly placing them in the upper left-hand corner of the store shelf. Laminated posters were printed to enhance realism.

After entering the simulated retail environment, all participants approached a checkout area, received instructions on buying the store items (see the Web Appendix), and were given $3. Any money that participants did not spend was kept as payment for completing the study. Participants then browsed the available products and brought their chosen items back to the checkout area. Change was provided and the specific items purchased were logged. The amount spent and whether participants purchased served as the primary dependent variables.

After making their purchases, all participants returned to the main lab to complete an exit survey consisting of the Positive and Negative Affect Schedule (PANAS; Watson, Clark, and Tellegen 1988) and five items related to the celebrity image ("not compelling/compelling," "not interesting/interesting," "not exciting/exciting," "not intriguing/intriguing," and "did not capture my attention/captured my attention"). We collected the PANAS (for the items, see the Web Appendix) to differentiate between emotional contagion effects and mood transfers. Prior research has shown that mood is capable of transferring between stimuli and individual judgments (Neumann and Strack 2000). In our studies, however, we are interested in examining the emotion directly related to a target product, brand, or item. Thus, collecting the PANAS enables us to control for mood effects and examine emotional contagion effects to unrelated judgments. We summed the positive and negative mood items from the PANAS and computed a difference score to serve as a control. Finally, participants completed a postexperimental inquiry to examine whether they were aware of the study purpose (Shimp, Hyatt, and Snyder 1991). A single open-response question asked them to describe the study's purpose.[1] After completing the exit survey, participants were dismissed.

[1]To assess any potential issues related to experimental demand, we investigated the open-ended experimental item. Of the 122 participants, 17 (5 in the positive celebrity condition, 12 in the negative celebrity condition) suggested that the purpose of the study was related to the celebrity image. However, no differences in spending were present in either the positive image condition (demand-aware participants: M = $1.85, demand-unaware participants: M = $1.89; $t(58) = -.07$, $p > .10$) or the negative image condition (demand-aware participants: M = $1.41, demand-unaware participants: M = $1.49; $t(60) = -.19$, $p > .10$). These findings suggest that even when participants noted that the celebrity image was included to influence their behavior, spending was not affected. Furthermore, the difference in spending in the positive versus negative affect conditions was larger for demand-aware participants ($.44 vs. $.40).

Results

To assess participant perceptions of the images placed next to the items, we analyzed how compelling, interesting, exciting, intriguing, and attention capturing the positive and negative celebrity images were. The results revealed no significant differences between the images for any of these measures (all *p*-values n.s.; for full results, see the Web Appendix), providing greater confidence that the images varied on favorability and not differences in the images themselves.

To compare whether differences in spending existed between the positive (M = \$1.88, SD = \$1.08) and negative (M = \$1.48, SD = \$1.21) celebrity image conditions, we conducted a Tobit regression, controlling for mood. We ran the Tobit regression with \$0 as the lower limit and \$3 as the upper limit to account for nonnormality in the data (see the Web Appendix). The results revealed that participants in the positive celebrity image condition spent more than those in the negative celebrity image condition ($\beta = .747$, $t(119) = 1.95$, $p = .054$). This finding provides marginal support for H_1.

We also examined whether the presence of an unrelated image influenced whether participants spent any money in the simulated retail store. Chi-square analysis revealed that participants were significantly more likely to defer purchase in the negative celebrity image condition (29%, 18 of 62) versus the positive celebrity image condition (10%, 6 of 60; $\chi^2(1) = 6.99$; $p < .01$). This finding provides further support for H_1.

Study 1 provides a demonstration of emotional contagion effects in persuasion. The presence of a celebrity image at the point of purchase created a contemporaneous contagion effect toward unrelated products. A negative celebrity image displayed at the point of purchase reduced consumer spending and resulted in greater nonpurchase relative to when a positive celebrity image was displayed. However, unlike previous studies examining contagion effects in persuasion, there was no actual or perceived contact between the point-of-purchase display and the items available for purchase. Next, we examine whether our affect-as-information model can explain this effect in the domain of advertising.

STUDY 2

Study 1 provides evidence that emotions used to evaluate a persuasion target can transfer to unrelated judgments. In Study 2, we manipulate monitoring of feelings and measure consumer emotional processing ability to examine an affect-as-information model of this effect and further extend the generalizability of our findings by using a different yet common domain of persuasion: advertising. Specifically, we investigate celebrities who elicit emotional responses in advertisements and whether contagion effects emerge in consumer evaluations of subsequent unrelated ads. We also test whether contagion effects can emerge sequentially (in addition to simultaneously, as in Study 1) after a single exposure to a persuasive communication.

Method

Two hundred forty-five undergraduate students completed this study for course credit. Participants were randomly assigned to a 2 (monitoring of feelings: self or other) × 2 (celebrity ad: positive or negative) between-subjects design. Prior to Study 2, 194 undergraduates completed a pretest in which they evaluated celebrity spokespeople across four attitude items ("good/bad," "positive/negative," "satisfactory/unsatisfactory," and "low/high quality"). We identified two celebrities (Will Smith and Justin Bieber) that evoked valenced responses (positive and negative, respectively), and we used an Internet search to find advertisements featuring these spokespeople. These ads are available in the Web Appendix.

Participants in this study completed an online survey. They began by completing the same attitude items used previously toward several brand names. We identified a shoe company that elicited neutral attitudes across participants and included it in the subsequently viewed ads.

After evaluating the brands, participants completed the Consumer Emotional Intelligence scale (CEIS; Kidwell et al. 2008). We included the CEIS to capture differences in emotional processing ability. After completing the CEIS, participants were instructed that they would evaluate a series of advertisements (which included the monitoring-of-feelings manipulation). Participants were told to evaluate the ads on the basis of either their own beliefs and attitudes (self condition) or what the general public would think (other condition) (Raghunathan and Pham 1999). If affect as information is operative, attitudes toward the unrelated brands should be mitigated in the other condition as well as for consumers with higher emotional ability.

After the monitoring-of-feelings manipulation, participants completed the ad viewing task. Participants viewed four ads that were displayed for 15 seconds each. They initially viewed an unrelated ad for a tire company and were asked to evaluate the brand across the four attitude items used previously. Then, the second ad served as the experimental manipulation. In the positive (negative) celebrity ad condition, participants viewed a movie poster featuring Will Smith (Justin Bieber). Importantly, we did not measure attitudes toward the celebrity ads to avoid potential anchoring effects on subsequent rating scale measures. After the manipulation, all participants viewed an unrelated ad for the shoe company. After viewing this ad, participants again completed attitude items for the shoe brand ($\alpha = .96$). We computed the change in brand attitudes after viewing the shoe ad and used this as the dependent variable. Finally, participants viewed a final ad for an unrelated product and did not complete attitude items toward the product. We included multiple ads to disguise the true purpose of the study and minimize potential demand effects.

After the ad viewing task, participants completed the PANAS to control for mood effects. Participants then completed two items adapted from Raghunathan and Pham (1999) to measure the monitoring of feelings manipulation. The items were "My evaluations of the ads were based on how I thought others would view the ads" and "My evaluations of the ads were based on how I thought the average consumer would view the ads" ($r = .74$). Finally, participants completed the same open-ended post-experimental inquiry. The results indicated that no one

discerned the relationship between the celebrity ad and evaluations of the shoe company.

Results

To ensure that the monitoring-of-feelings manipulation had its intended effect, we compared the conditions across the average of the two manipulation check items. Results revealed that people in the other condition (M = 4.02, SD = 1.57) were significantly more likely to make evaluations based on the opinion of others relative to the self condition (M = 3.33, SD = 1.55; t(243) = 3.44, $p < .01$). Thus, the monitoring of feelings manipulation was effective.

We used regression analysis to examine the effect of monitoring of feelings (self vs. other), celebrity ad (positive vs. negative), and emotional ability (continuous) on attitude change, controlling for mood (see Table 1). The nonpredicted three-way interaction of monitoring of feelings, celebrity ad, and emotional ability did not reach traditional levels of significance ($\beta_{std} = 5.70$, t = 1.90, $p > .05$), so we do not examine this further. However, the predicted interactions of monitoring of feelings and celebrity ad ($\beta_{std} = -7.08$, t = −2.36, $p < .05$) and the interaction of emotional ability and celebrity ad ($\beta_{std} = -6.38$, t = −2.13, $p < .05$) were significant. We conducted follow-up analyses to examine these interactions.

Monitoring of feelings. First, we examined the means of attitude change for the monitoring of feelings and celebrity ad interaction. For participants in the self-monitoring conditions, the means of attitude change were greater for participants in the positive celebrity ad condition (M = +.36) relative to participants in the negative celebrity ad condition (M = −.37; t = −3.86, $p < .01$). For participants in the other-monitoring conditions, the means of attitude change did not differ for participants in the positive celebrity ad condition (M = −.10) relative to participants in the negative celebrity ad condition (M = +.14; t = 1.21, $p > .05$). These results support H_2.

Emotional ability. To interpret the interaction of emotional ability and celebrity ad, we conducted a spotlight analysis (Spiller et al. 2013). For participants low in emotional ability (1 SD below the mean), attitude change was significantly different for participants who viewed the positive ad (M = +.18) relative to those who viewed the negative ad (M = −.35; t = 2.73, $p < .01$). At mean levels of emotional ability, attitude change was marginally significant for participants who viewed the positive ad (M = +.15) relative to those who viewed the negative ad (M = −.11; t = 1.87, $p < .10$). For participants high in emotional ability (1 SD above the mean), attitude change was not significantly different for participants who viewed the positive ad (M = +.11) relative to those who viewed the negative ad (M = +.13, t = −.10, $p > .05$). Furthermore, the Johnson–Neyman technique identified significant differences in attitude change at .03 SD below the emotional ability mean. These results support H_3.

Table 1
STUDY 2 RESULTS

Source	Unstandard Beta	SE	Standard Beta	t-Value	Significance
Celebrity ad (A)	8.55	3.26	7.85	2.63	<.01
Monitoring of feelings (B)	1.89	.92	.87	2.04	.04
Emotional ability (C)	.07	.03	.97	2.23	.03
A × B	−2.19	.93	−7.08	−2.36	.02
A × C	−.07	.03	−6.38	−2.13	.04
B × C	−.02	.01	−1.30	−2.07	.04
A × B × C	.02	.01	5.70	1.90	.06
Mood (control)	.02	.01	8.69	8.32	<.01

Study 2 provides evidence that affect as information processes influence contagion effects. We found that spokespeople who elicit favorable (unfavorable) emotional reactions in an advertisement cause consumers to evaluate brands viewed in subsequent ads more positively (negatively). Furthermore, these effects were moderated by whether consumers were monitoring their own feelings and differences in emotional processing ability. These moderators have been linked to affect-as-information processes and provide initial support for our affect-as-information model of contagion. In Study 3, we use evaluative conditioning to further generalize our findings and manipulate salience of affect to provide additional support for our affect-as-information model.

STUDY 3

In Study 3, we extend our examination of contagion effects to evaluative conditioning. Evaluative conditioning is a fundamental persuasion tactic in which attitudes toward a particular object or stimulus are changed by pairing that object with one or more additional stimuli that elicit automatic, emotional responses (De Houwer, Thomas, and Baeyens 2001). The emotional properties of an unconditioned stimulus (e.g., favorable image) transfer through a contagion effect to a conditioned stimulus (e.g., brand name) (Baeyens et al. 1992; Van Gucht et al. 2010; Walther 2002). Examining contagion in evaluative conditioning provides a controlled experimental setting in which we can create the initial association between stimuli while examining whether the emotion used to evaluate the conditioned brand elicits a contagion effect on a subsequent unrelated judgment. Furthermore, evaluative conditioning enables us to triangulate the effects of Studies 1 and 2. Moreover, we further test our affect-as-information model of contagion effects by manipulating the salience of affect. We predict that when the source of affect is made salient, the contagion effect does not occur.

Method

One hundred ninety-four undergraduate students participated in this study for course credit. Participants were assigned to a 2 (salience of affect: yes or no) × 3 (evaluation condition: positive, negative, or neutral) between-subjects design. We used a standard evaluative conditioning procedure (Dempsey and Mitchell 2010; Olson and Fazio 2001) in which participants completed a video surveillance task. The task contained a cover story in which participants were told that the research was focused on consumer responsiveness to brand names. During the task, participants were instructed to press the space bar as quickly as possible

when a filler brand (Oxa Bananas) appeared on screen. This brand was fictitious and pretested to be neutral. However, during this procedure, other brands were conditioned that were the focus of the study.

During the task, 86 images and words (including the filler brand) randomly appeared on screen for 1.5 seconds each with no time interval between stimuli. All stimuli are available in the Web Appendix. We included three affect-neutral fictitious brand names (identified from pretesting) as the conditioned brands. A neutral brand (Breve Desserts) was paired with four unique images and words identified as positive from pretests. The brand was paired with each image and word twice to positively condition the brand. Another neutral brand (Corretto Desserts) was paired with four unique images and words identified as negative from pretests. This brand was also paired with each image and word twice to negatively condition the brand. During these trials, stimuli were counterbalanced on each side of the screen. A third brand (Perry Desserts) was presented independently of images and words eight times. This neutral brand served as a control and was included to further disguise the true nature of the study. The filler brand (Oxa Bananas) was also displayed eight times. Fifty-two additional trials that included 13 distinct neutral images and words (based on pretesting) were presented independently of a brand name and randomly displayed four times each. The final two trials consisted of a blank box followed by the word "end." All brand names and neutral stimuli presented independently during the conditioning procedure were centered on the screen.

After the conditioning trials, we manipulated salience of affect following Pham (1998). Participants were shown the positive and negative images that were paired with conditioned brands and rated these images on either evaluative or nonevaluative dimensions. Images rated on nonevaluative dimensions ("common/uncommon," "simple/complex," "traditional/modern," and "vague/clear") are unrelated to their affective properties and should not draw participants' attention to their feelings (Saucier, Ostendorf, and Peabody 2001), whereas images rated on evaluative dimensions ("sad/happy," "depressed/cheerful," "annoyed/happy," and "unpleasant/pleasant") should draw attention to the source of one's feelings (Pham 1998). If affect as information is operative, attitudes toward conditioned brands should be mitigated when the source of affect is made salient.

After the salience-of-affect manipulation, participants evaluated one of the three conditioned brands (positive, negative, or control). Attitudes were measured with the four items used in Study 2. The attitude measures were reliable for the positively conditioned brand ($\alpha = .96$), the negatively conditioned brand ($\alpha = .94$), and the neutral brand ($\alpha = .95$). Attitudes were measured for a single brand to examine contagion effects toward an unrelated judgment.

After completing the conditioning trials and evaluating the positive, neutral, or negative brand, participants completed an anagram-solving task. We included this filler task to add temporal distance between the brand evaluation and the evaluation of the unrelated object, thus reducing the likelihood of an alternative explanation of emotional transfers related to proximity in judgments. After the anagram-solving task, participants evaluated a picture of a flat-screen television. The television was evaluated across the four attitude items ($\alpha = .93$).

We also measured the time that participants spent evaluating the television. Prior research has identified that experiencing positive emotion can facilitate processing, and experiencing negative emotion can inhibit processing, and that these emotional influences on processing speed typically occur outside of conscious awareness (Bagozzi, Gopinath, and Nyer 1999; Isen 2008; Mitchell and Phillips 2007). In applying these findings to contagion, positive emotion tied to a positively conditioned brand should lead to faster evaluations in subsequent judgments, whereas negative emotion tied to a negatively conditioned brand should lead to slower evaluations in subsequent judgments. This change in response latency would provide additional evidence that emotion used to evaluate a conditioned brand is indeed transferring to unrelated evaluations.

To conclude, participants completed the same open-ended postexperimental inquiry used in the first two studies. The results indicated that no one discerned the relationship between the conditioned brand and the evaluation of the television.

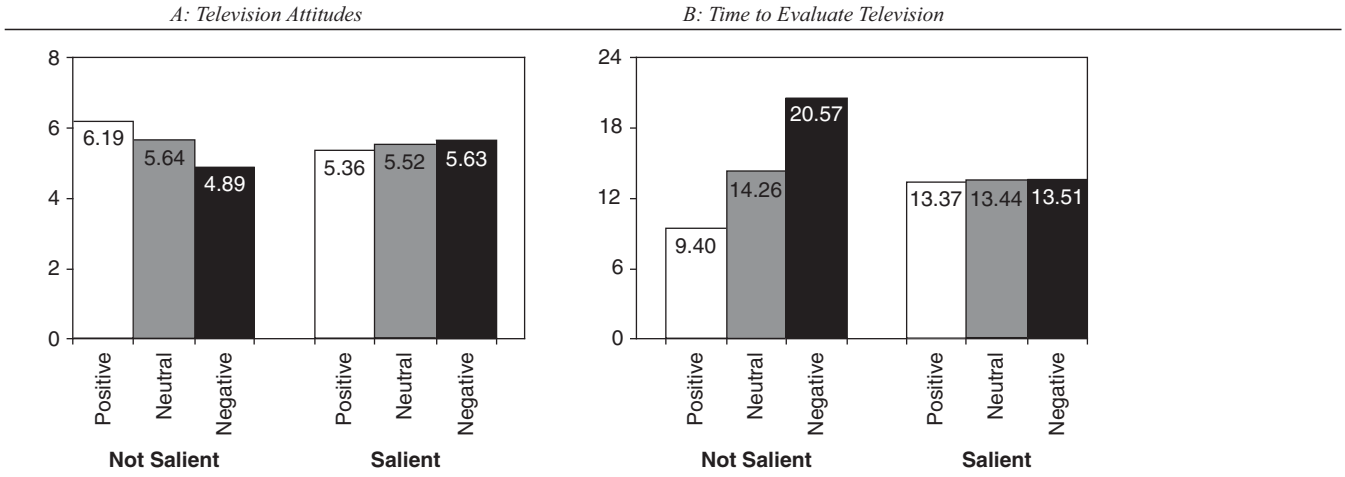
Results

As we expected, the conditioning procedure influenced attitudes toward the conditioned brand, provided that the source of affect was not made salient (see the Web Appendix). However, these results are supplementary to this study, so we omit further discussion.

Affective transfers to an unrelated domain. We conducted an analysis of covariance (ANCOVA) with evaluation condition and salience of affect predicting television attitudes, controlling for mood (see the Web Appendix). The results appear in Figure 1, Panel A. The interaction of evaluation condition and salience of affect was significant ($F(2, 187) = 9.31$, $p < .01$). Mood was significant as a covariate ($F(1, 187) = 8.82$, $p < .01$). When affect was not made salient, television attitudes followed the expected pattern. Follow-up analyses revealed that the estimated marginal means of television attitudes (controlling for mood) were significantly greater for those in the positive evaluation condition ($M = 6.19$, $SD = 1.06$) relative to those in the neutral evaluation condition ($M = 5.64$, $SD = 1.06$; $t(63) = 2.09$, $p < .05$), and attitudes were significantly lower for those in the negative evaluation condition ($M = 4.89$, $SD = 1.06$) relative to the neutral evaluation condition ($t(67) = 2.95$, $p < .01$). When affect was made salient, the effect was eliminated ($M_{positive} = 5.36$, $M_{neutral} = 5.52$, $M_{negative} = 5.63$; all comparisons n.s.). These findings support H_1 and H_4. The emotion used to evaluate the conditioned brand transferred to unrelated domains, provided that the source of affect was not made salient.

Time to evaluate unrelated object. We conducted an ANCOVA with evaluation condition and salience of affect predicting the time spent evaluating the television, controlling for mood (see the Web Appendix). The results appear in Figure 1, Panel B. The interaction of condition and salience of affect was significant ($F(2, 187) = 6.84$, $p < .01$). Mood was not significant as a covariate ($F(1, 187) = .15$, $p > .05$). When affect was not made salient, time spent evaluating the television followed the expected pattern. Follow-up analyses revealed the estimated marginal means

Figure 1
STUDY 3 RESULTS



for time (controlling for mood) were significantly faster for those in the positive evaluation condition (M = 9.40 sec, SD = 8.65 sec) relative to the neutral evaluation condition (M = 14.26 sec, SD = 8.70 sec; $t(63) = 2.25$, $p < .05$), and time was significantly slower for those in the negative evaluation condition (M = 20.57 sec, SD = 8.63 sec) relative to the neutral evaluation condition ($t(67) = 3.02$, $p < .01$). When affect was made salient, the effect was eliminated ($M_{positive} = 13.37$ sec, $M_{neutral} = 13.44$ sec, $M_{negative} = 13.51$ sec; all comparisons n.s.). These findings also support H_1 and H_4. Consumers were faster (slower) in evaluating the television after evaluating a positively (negatively) conditioned brand, providing further evidence that emotion transferred to a nearby unrelated judgment.

Study 3 further generalizes the emotional contagion effect. Emotion used during the evaluation of a conditioned brand transferred to an unrelated domain, even when temporal distance was present. Furthermore, the time spent evaluating the unrelated object was affected by the valence of the original target brand, providing additional evidence that emotions used in persuasion exhibit a contagion effect to subsequent unrelated judgments. In addition, this study provided further support for our affect-as-information model because making the source of affect salient mitigated the contagion effect, suggesting that those in the nonsalient condition relied on affect as a source of information to evaluate the television. Next, we extend the affect-as-information model by investigating how merely evoking thoughts of a valenced product can influence unrelated judgments.

STUDY 4

In Study 3, we demonstrated that emotion from conditioning can influence unrelated decision making, and evoking thoughts of the source of affect after conditioning can eliminate this effect. However, explicit ratings of prior targets of persuasion attempts typically do not precede consumer judgments in natural settings. Thus, to provide further support for our model, we investigate whether merely priming thoughts of the conditioned brand can influence unrelated judgments. If priming the target of contagion is capable of influencing unrelated attitudes, this supports our contention that emotions merely need to be accessible in memory to elicit a contagion effect, providing further support for our theoretical extension to the affect-as-information model.

Method

One hundred sixty-eight undergraduate students participated in this study for course credit. Participants were assigned to a 3 (evaluation condition: positive, negative, or neutral) × 2 (brand attitudes: measured or primed) between-subjects design. Participants completed the same conditioning procedure and filler task used in Study 3. Then, participants were randomly assigned to evaluate the positive, negative, or neutral brand. Those in the measured attitudes condition completed the same four attitude items toward the brand ($\alpha = .96$) used in prior studies. Those in the primed attitudes condition completed a sentence construction task (adapted from Srull and Wyer 1979). For this task, participants were given ten sets of randomly arranged words and told to form sentences using all the words. Seven sets of words created filler sentences (e.g., "She loves her silky shoes"). The remaining three sets, however, primed one of the brands (e.g., "Breve is a brand of desserts"). All seven filler sets were identical across conditions, and only the brand name changed in the three primes on the basis of condition. The sentence construction task has been used to activate concepts in memory outside of explicit awareness (Briley and Aaker 2006).

Next, all participants evaluated a picture of a pair of sandals. We chose a distinct evaluation object to generalize the incidence of unintended affective transfers beyond the primarily hedonic product (televisions) used in Study 3. Participants completed the same attitude items to evaluate the sandals ($\alpha = 97$) and then completed the PANAS to control for mood. Finally, participants completed the same open-ended postexperimental inquiry, with no one

discerning the relationship between the conditioned brand and the evaluation of the sandals.

Results

The conditioning procedure influenced attitudes toward the conditioned brand as expected in the measured attitude conditions (see the Web Appendix). However, these results are supplementary to this study, so we omit further discussion.

We conducted an ANCOVA with evaluation condition (positive, negative, or neutral) and brand attitudes (measured or primed) predicting unrelated product attitudes, controlling for mood. The two-way interaction of evaluation condition and brand attitudes was nonsignificant ($F(2, 161) = .04$, $p > .05$). We expected this result because the measured and primed brand attitude conditions should behave in parallel. Furthermore, as we predicted, the main effect of evaluation condition was significant ($F(2, 161) = 346.93$, $p < .01$). Mood was not significant as a covariate ($F(1, 161) = 1.72$, $p > .05$). We conducted follow-up analyses to examine evaluation condition effects on unrelated attitudes in both brand attitude conditions.

Unrelated attitudes in measured attitude conditions. First, we examined the means of unrelated attitudes in the measured attitudes conditions. The estimated marginal means of attitudes toward the sandals (controlling for mood) were greater in the positive evaluation condition ($M = 4.95$, $SD = 1.64$) relative to the neutral ($M = 4.01$, $SD = 1.63$; $t(55) = 2.17$, $p < .05$) and negative ($M = 3.25$, $SD = 1.64$; $t(52) = 3.82$, $p < .01$) evaluation conditions. Furthermore, attitudes toward the sandals were marginally greater in the neutral evaluation condition relative to the negative evaluation condition ($t(55) = 1.76$, $p < .10$). These findings support H_1.

Unrelated attitudes in primed attitude conditions. We also examined the means of unrelated attitudes in the primed attitudes conditions. The estimated marginal means of attitudes toward the sandals (controlling for mood) were greater when the positively conditioned brand was primed ($M = 4.56$, $SD = 1.58$) relative to when the neutral ($M = 3.72$, $SD = 1.57$; $t(53) = 1.96$, $p = .05$) and negatively conditioned ($M = 2.78$, $SD = 1.59$; $t(53) = 4.14$, $p < .01$) brands were primed. Furthermore, attitudes toward the sandals were significantly greater when the neutral brand was primed relative to when the negatively conditioned brand was primed ($t(56) = 2.25$, $p < .05$). These results further support H_1.

This study highlights our theoretical extension to the affect-as-information model of contagion. When attitudes toward a conditioned brand were primed (as well as explicitly measured), those attitudes transferred to an unrelated product evaluation. This finding suggests that merely considering a brand can lead to contagion effects toward unrelated judgments. Furthermore, our findings also extend prior research on affective transfers by demonstrating that emotions used in persuasion may not need to be representative or related to a particular evaluation object, because emotions linked to a dessert brand here were used to subsequently evaluate a pair of sandals. Instead, emotions need to be merely accessible in memory from thoughts of another product to influence unrelated judgments.

DISCUSSION

Despite a rich stream of literature investigating the influence of emotion on consumer decision making, prior research has overlooked the impact that emotion-laden persuasive communications have on nearby unrelated products and brands. The current research identifies these contagion effects and provides evidence for an affect-as-information explanation of contagion. The results of four studies provide new insights into the role of emotion used at the point of purchase, in a series of advertisements, and in evaluative conditioning. The transfer of emotion to nearby unrelated product judgments provides several important theoretical and managerial implications.

Theoretical Implications

Our findings extend affect-as-information research to capture how emotion used in persuasion can transfer beyond the targeted brand. Scholars have used affect as information to investigate how general feeling states such as mood can be misattributed in decision making (Cohen et al. 2008; Labroo and Patrick 2009; Pham 1998). Herein, we demonstrate that affect as information can also explain why emotion-laden persuasive communications influence other products and brands that are nearby. In doing so, we extend affect-as-information theory. Whereas prior research has suggested that mood must be perceived as representative of the object under consideration (Pham 1998) or that two objects must share a common link in memory for affect to transfer (Dimofte and Yalch 2011; Walther 2002), Study 4 shows that emotions used in persuasion attempts merely need to be accessible to influence subsequent unrelated product judgments.

Our findings also provide important theoretical implications for the study of persuasion. We extend Pham, Geuens, and De Pelsmacker (2013), who identify that affect as information may explain consumer evaluations of advertising. In this article, we show that contagion effects may emerge beyond the source (a spokesperson or image) and target of persuasion (the brand) to unrelated evaluations when conditions facilitate affect-as-information responses. Our findings suggest that persuasion attempts are not evaluated in isolation. Rather, emotions used in persuasion seem to be temporally linked and transferrable to subsequent unrelated judgments if accessible in memory.

Finally, our research provides implications for the study of emotional contagion. Whereas the law of contagion suggests that two objects must have either direct or perceived contact for contagion to occur (Howard and Gengler 2001; Nemeroff and Rozin 1994), we demonstrate that this relationship was not necessary across persuasive communication. Furthermore, research has suggested that contagion effects are relatively permanent and resistant to extinction (Morales and Fitzsimons 2007). However, we find that contagion effects can be eliminated by making the original source of affect salient after a source–target pairing. Together, our findings suggest that affect as information plays an important role in explaining consumer responses to contagion.

Managerial Implications

This research also provides managerial implications regarding product perceptions. We show that the emotions

used in one persuasive communication can influence other products and brands that are in close proximity. Two areas that marketers should monitor for potential spillover are advertising and store layout. Managers should be aware of the surrounding material when distributing promotional information. For example, magazines and television often feature several advertisements in succession. An advertisement occurring before a target ad that evokes negative emotion (such as an ad that is disparaging toward a competitor or an ad featuring a controversial celebrity) may also affect perceptions of the target.

Managers should also pay close attention to magazine and newspaper content that is often placed next to store items at the point of purchase. As Study 1 demonstrates, images can evoke emotions that create contagion effects toward unrelated consumer purchases. In a retail setting, magazines and books often contain emotion-eliciting stimuli on their covers and are often placed near the store checkout to increase purchase likelihood. However, this may lead to a contagion effect on nearby items. Managers should consider keeping items that elicit negative emotions isolated in the layout of the store while placing items that elicit positive emotions closer to unrelated products that the retailer would like to boost in sales.

Limitations

Although this research provides an important step in understanding how targeted emotions used in persuasion can influence subsequent decision making, there are limitations. First, we investigated only contagion effects in which no contact was present between the persuasion target and the unrelated product. In some cases, however, advertisements may come into direct contact with one another. For example, the pages of a magazine or newspaper may feature advertisements on successive pages that touch when the media is closed. Because direct contact often facilitates contagion effects (Nemeroff and Rozin 1994), further research should investigate contagion effects when a series of persuasion attempts actually come in contact with one another.

Second, our conditioning studies did not consider contingency awareness, or the degree to which people perceive a relationship between unconditioned and conditioned stimuli (Field 2000). Hofmann et al.'s (2010) meta-analysis found contingency awareness to be an important determinant of attitude change in evaluative conditioning. However, recent research has questioned the use of recognition tasks in measuring contingency awareness (Hütter et al. 2012) and has developed a new methodology utilizing the Process Dissociation Procedure (Jacoby 1998). This procedure is superior to traditional approaches of measuring contingency awareness, but it cannot generate awareness levels within subjects; thus, we did not include it herein. We believe that contagion effects from conditioning may depend on whether participants are classified as contingent aware or unaware.

Third, a potential alternative explanation for our results in Study 2 is that participants who made decisions on the basis of their own feelings (self-monitoring condition) were more involved with the decision and thus more attentive to the affect from a prior persuasion attempt. Although Study 2 did not measure involvement, it is unlikely that involvement can account for our results. Models of involvement, including the elaboration likelihood model (Petty and Cacioppo 1986), predict that peripheral cues such as emotion guide decision making when involvement with the decision is low. Recall that in Study 2, our manipulation required participants to make judgments drawing on their own attitudes and beliefs in the self-monitoring of feelings condition. By asking participants to make judgments on the basis of their own beliefs, it is likely that these participants were more involved with the task. However, these participants were actually more likely to fall prey to emotional contagion, which is consistent with our proposed affect-as-information model and counter to an involvement explanation. Future studies should examine this relationship empirically to further understand the impact of involvement in contagion.

Furthermore, the current research uses the PANAS (Watson et al. 1998) to control for mood. However, research has questioned the reliability of the PANAS to detect changes in mood (Cohen et al. 2008). Although we did detect mood effects in Studies 2 and 3, future studies should use additional measures of mood to further rule out mood transfers in persuasion attempts to unrelated evaluations. To conclude, we discuss several areas for further research.

Further Research

The current research offers a fundamental belief shift regarding the importance of emotion in a series of persuasive communications. These results extend the work of Han et al. (2007) by demonstrating that emotions persist after persuasion has concluded. Further research should continue to examine the nature of these transfers. For example, marketing communications often include positive emotions for hedonic products (Adaval 2001; Johar and Sirgy 1991) and frequently use negative emotional appeals to inhibit harmful behavior and transform consumer decision making (Keller and Block 1996; Shehryar and Hunt 2005). For persuasion attempts involving positive emotion, further research should consider the duration that consumers will continue to utilize those feelings. Given that favorable emotions are often recalled to maintain an overall positive affective state (Bagozzi et al. 1999), consumers may utilize positive affect in several subsequent unrelated decisions. Conversely, the impact of negative emotions on subsequent judgments is less clear. For example, antismoking appeals could also negatively affect other consumer advocacy issues (e.g., antidrinking) or cause consumers to subsequently use positive affect to cope with negative feelings from the prior appeal (Bagozzi et al. 1999). Future studies should address these issues to further our understanding of when emotion transfers from persuasive appeals to nearby products.

Furthermore, we provided evidence that affect as information underlies the emotional contagion effects demonstrated herein. We extend both theories of emotional contagion (Hatfield and Cacioppo 1994; Howard and Gengler 2001) and affect as information (Pham 1998) by demonstrating that emotions from a prior persuasion attempt merely need to be accessible in memory to influence other nearby products and brands. Future work should

further investigate factors that affect the emotional transfers we identified. For example, in Study 3, source salience eliminated the contagion effect after evaluative conditioning. Thus, does a consumer need to contemplate the original source of emotion before every future evaluation, or is the contagion link broken after a single recollection of the source's valence? Furthermore, emotional ability was shown to weaken the contagion effects we identified. Might emotional awareness have the opposite effect?

In conclusion, we demonstrate the unintended consequences of using emotions in persuasion attempts. Persuasive communications such as point-of-purchase displays, advertising, and evaluative conditioning have the ability to change consumption preferences through transfers of emotion beyond the original target of persuasion.

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WEB APPENDIX

More Than a Feeling:
Emotional Contagion Effects in Persuasive Communication

Jonathan Hasford

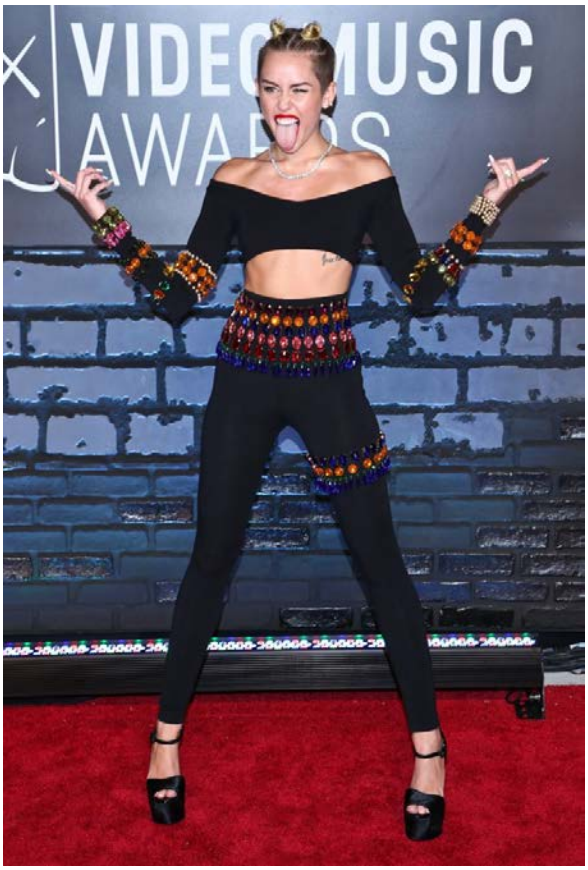
David M. Hardesty

Blair Kidwell

Study 1 Stimuli

Positive Celebrity Image

Negative Celebrity Image



Point-of-Purchase Displays

Positive Image Condition

Negative Image Condition

Store Items*

Item	Regular Price	Sale Price
Keychain	$5.99	$3.00
Blue Book	$.30	$.25
Spiral Notebook	$2.19	$1.00
Pencil	$.59	$.25
Decal	$3.99	$2.00
1" Binder	$3.49	$1.75
Pen	$.59	$.25
Folder	$1.29	$.50
Mechanical Pencil	$3.29	$1.50

*All items featured school's logo

Shopping Task Instructions

"We are giving you $3 and asking you to imagine that you brought it with you to a store. In just a moment, you will look over items available at the store. You may purchase as much as you'd like. If you purchase a $2 product, you'll leave with the product and $1. The products are over there and you can purchase as much as you'd like."

Positive and Negative Affect Schedule (Watson, Clark, and Tellegen 1988)

Instructions

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now. Use the following scale to record your answers.

Scale

	Very Slightly or Not at All	A Little	Moderately	Quite A Bit	Extremely
Interested					
Distressed					
Excited					
Upset					
Strong					
Guilty					
Scared					
Hostile					
Enthusiastic					
Proud					
Irritable					
Alert					
Ashamed					
Inspired					
Nervous					
Determined					
Attentive					
Jittery					
Active					
Afraid					

Study 1 Results

Image Ratings by Condition

Image Condition	n	Compelling*	Interesting*	Exciting*	Intriguing*	Attention Capturing*
Positive Celebrity	60	3.62 (2.05)	3.73 (2.11)	3.52 (2.07)	3.80 (2.18)	3.93 (2.35)
Negative Celebrity	62	3.23 (1.87)	3.80 (2.30)	3.26 (1.92)	3.49 (2.11)	3.90 (2.43)

*Std. Dev. in parentheses

Tobit Regression*

Predictors	β	Std. Error	t-value	*p*
Intercept	1.27	.40	3.18	.002
Celebrity Image Condition	.75	.38	1.95	.054
Mood (Control)	.01	.02	.53	.597

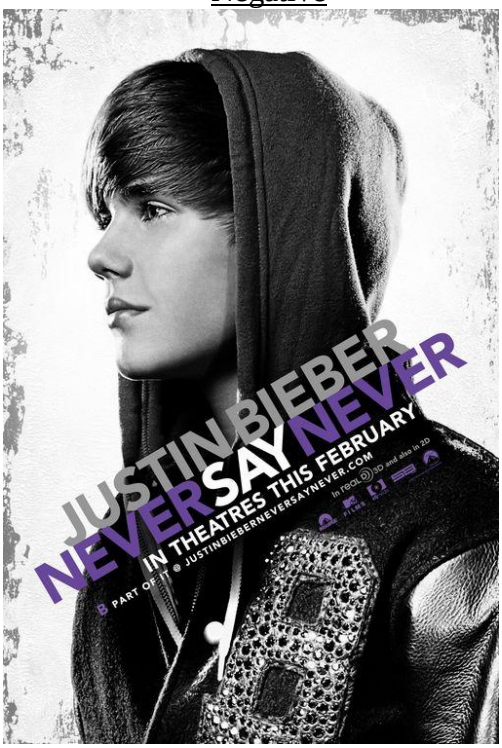
*24 left-censored observations (LL = $0)
65 uncensored observations
33 right-censored observations (UL = $3)

Study 2 Stimuli

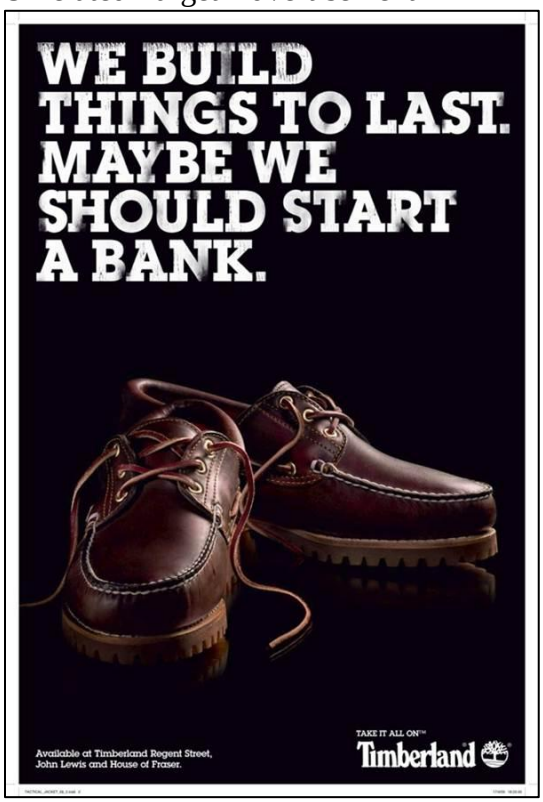
Celebrity Advertisements

Positive

Negative



Unrelated Target Advertisement



Filler Advertisements

First Ad Viewed

Last Ad Viewed

Experimental Material for Studies 3 and 4

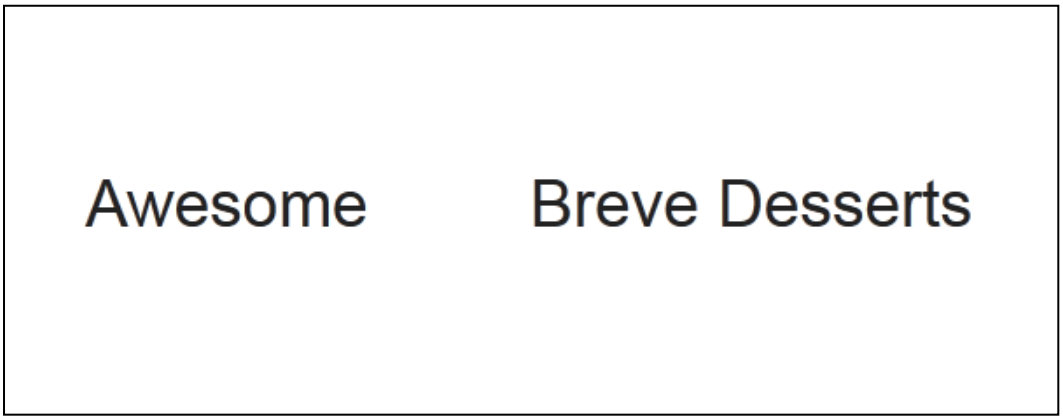
Video Surveillance Instructions

You are about to begin the video surveillance task for this study. You will see several images, words, and brand names appear on the screen over the next few minutes. Whenever you see the brand name **Oxa Bananas**, press the space bar as quickly as you can. We will be measuring the speed by which you react to this brand name, so make sure to respond as quickly as possible.

Stimuli Used in Conditioning Procedure

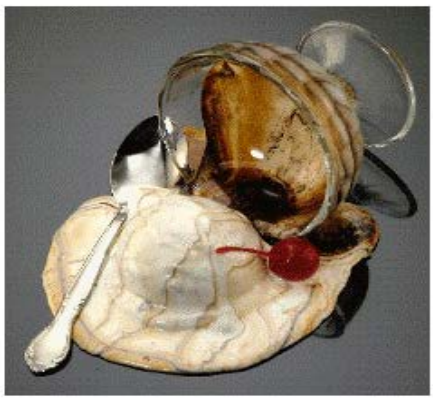
*all stimuli in Web Appendix are condensed for space considerations

Positively Conditioned Brand
(each pair randomly displayed twice in trials 1-84, stimuli counterbalanced on screen)



Negatively Conditioned Brand
(each pair randomly displayed twice in trials 1-84, stimuli counterbalanced on screen)

Disgusting Corretto Desserts



Corretto Desserts

Corretto Desserts Terrible

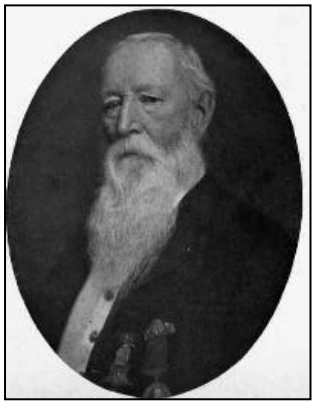
Neutral Brand – Perry Desserts
(randomly displayed eight times in trials 1-84, centered on screen)

Perry Desserts

Filler Brand – focus of video surveillance task
(randomly displayed eight times in trials 1-84, centered on screen)

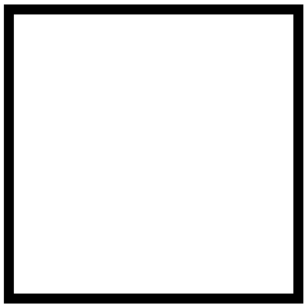
Oxa Bananas

Filler Images and Words
(randomly displayed four times each in trials 1-84, centered on screen)

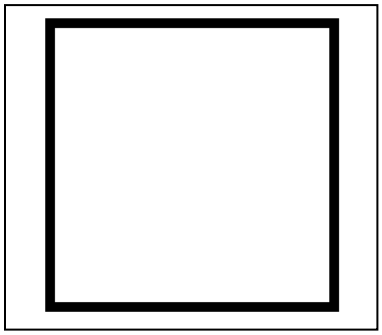


Same	Moderate

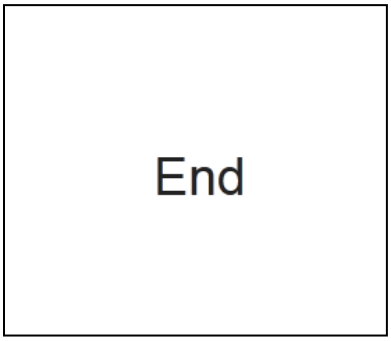
Still	Level

Knob		Blank

Trial #85 – Neutral Image



Trial #86 – End



Study 3 Results

ANCOVA Predicting Conditioned Brand Attitudes

Source	SS	df	MS	F	sig
Evaluation Condition (A)	33.66	2	16.83	1.49	.40
Salience of Affect (B)	1.00	1	1.00	.09	.79
A*B	22.49	2	11.24	9.36	.00
Mood (Control)	2.01	1	2.01	1.67	.20

Conditioned Brand Attitudes

Evaluation Condition	Affect Salience	n	Mean Attitude Ratings	Std. Dev.	Est. Marginal Means*	Std. Dev.*
Positively Conditioned Brand	Not Salient	30	5.19	1.28	5.19	1.10
	Salient	32	4.23	1.14	4.24	1.10
Neutral Brand	Not Salient	35	4.33	1.27	4.35	1.10
	Salient	25	4.23	.88	4.18	1.11
Negatively Conditioned Brand	Not Salient	34	3.37	.94	3.37	1.10
	Salient	38	4.06	1.00	4.06	1.10

*controlling for mood

ANCOVA Predicting Attitudes in Unrelated Domain

Source	SS	df	MS	F	sig
Evaluation Condition (A)	9.10	2	4.55	.44	.70
Salience of Affect (B)	.24	1	.24	.03	.89
A*B	20.74	2	10.37	9.31	.00
Mood (Control)	9.82	1	9.82	8.82	.00

Attitudes in Unrelated Domain

Evaluation Condition	Affect Salience	n	Mean Attitude Ratings	Std. Dev.	Est. Marginal Means*	Std. Dev.*
Positively Conditioned Brand	Not Salient	30	6.18	.98	6.19	1.06
	Salient	32	5.34	1.13	5.36	1.06
Neutral Brand	Not Salient	35	5.61	1.25	5.64	1.06
	Salient	25	5.62	.75	5.52	1.06
Negatively Conditioned Brand	Not Salient	34	4.88	1.07	4.89	1.06
	Salient	38	5.63	1.11	5.63	1.05

*controlling for mood

ANCOVA Predicting Time to Make Evaluation in Unrelated Domain

Source	SS	df	MS	F	sig
Evaluation Condition (A)	1076.68	2	538.34	1.05	.49
Salience of Affect (B)	79.79	1	79.79	.16	.73
A*B	1023.38	2	511.69	6.84	.00
Mood (Control)	10.83	1	10.83	.15	.70

Time to Make Evaluation in Unrelated Domain

Evaluation Condition	Affect Salience	n	Mean Time	Std. Dev.	Est. Marginal Means*	Std. Dev.*
Positively Conditioned Brand	Not Salient	30	9.41	2.84	9.40	8.65
	Salient	32	13.39	7.30	13.37	8.66
Neutral Brand	Not Salient	35	14.29	7.74	14.26	8.70
	Salient	25	13.34	6.86	13.44	8.75
Negatively Conditioned Brand	Not Salient	34	20.58	14.67	20.57	8.63
	Salient	38	13.52	7.07	13.51	8.63

*controlling for mood

Study 4 Results

ANCOVA Predicting Conditioned Brand Attitudes in Measured Attitude Conditions

Source	SS	df	MS	F	sig
Evaluation Condition (A)	31.72	2	15.86	9.26	.00
Mood (Control)	1.41	1	1.41	.82	.37

Conditioned Brand Attitudes in Measured Attitude Conditions

Evaluation Condition	n	Mean Attitude Ratings	Std. Dev.	Est. Marginal Means*	Std. Dev.*
Positively Conditioned Brand	27	5.08	1.21	5.06	1.31
Neutral Brand	30	4.24	1.33	4.25	1.31
Negatively Conditioned Brand	27	3.51	1.37	3.52	1.31

*controlling for mood

ANCOVA Predicting Attitudes in Unrelated Domain

Source	SS	df	MS	F	sig
Evaluation Condition (A)	81.59	2	40.80	346.93	.00
CS Attitudes (B)	4.72	1	4.72	29.68	.00
A*B	.22	2	.11	.04	.96
Mood (Control)	4.43	1	4.43	1.72	.19

Unrelated Attitudes in Measured Attitude Conditions

Evaluation Condition	n	Mean Attitude Ratings	Std. Dev.	Est. Marginal Means*	Std. Dev.*
Positively Conditioned Brand	27	4.94	1.56	4.95	1.64
Neutral Brand	30	4.02	1.74	4.01	1.63
Negatively Conditioned Brand	27	3.26	1.55	3.25	1.64

*controlling for mood

Unrelated Attitudes in Primed Attitude Conditions

Evaluation Condition	n	Mean Attitude Ratings	Std. Dev.	Est. Marginal Means*	Std. Dev.*
Positively Conditioned Brand	26	4.53	1.74	4.56	1.58
Neutral Brand	29	3.72	1.71	3.72	1.57
Negatively Conditioned Brand	29	2.81	1.32	2.78	1.59

*controlling for mood