In the mood for action: When negative program-induced mood improves the behavioral effectiveness of TV commercials

Eric Tafani [a*], Elyette Roux [a], Rainer Greifeneder [b]

[a] IAE Aix-Marseille Graduate School of Management, CERGAM, Clos Guiot Puyricard - CS 30063 - 13089 Aix-en-Provence Cedex 2, France

[b] University of Basel, Missionsstrasse 64a, 4055 Basel, Switzerland

---

[*] Corresponding author

E-mail adresses: eric.tafani@iae-aix.com (E. Tafani).

elyette.roux@iae-aix.com (E. Roux).

rainer.greifeneder@unibas.ch (R. Greifeneder).

Abstract:

We tested the influence of program-induced mood on advertising effectiveness at judgmental (product evaluation), conative (purchase intention), and behavioral levels (participation in a product launch event). Study 1 used a 3 (Induced-mood: positive *vs.* neutral *vs.* negative) x 2 (Brand attitude: favorable *vs.* unfavorable) design. Brand attitude had a stronger influence on product evaluation when mood was positive, compared to neutral or negative mood. Study 2 used a 2 (Induced mood: positive *vs.* negative) x 2 (Brand attitude: favorable *vs.* unfavorable) x 2 (Quality of product arguments: weaker *vs.* stronger) design. For positive mood conditions, evaluation and intent were influenced by brand attitude rather than by quality of arguments, reflecting top-down processing. The reverse was found for negative mood conditions, reflecting bottom-up processing. Study 3 focused on stronger arguments only, and assessed whether participants attended the product launch event. Results replicate Study 2's findings at both the judgmental and conative level. Furthermore, behavioral data revealed higher advertising effectiveness for negative mood conditions, because of higher elaboration of product information.

Keywords: Product launch; Advertising; Mood; Information processing; Consumer behavior.

1. Introduction

In the market place, brands need to renew and update their product-line to maintain their appeal, face innovation from competitors, and meet new consumer expectations. For instance, Apple launched a new version of its smartphone every year (from the very first iphone, launched in 2007, to the 2017 iphone 8), car-manufacturers regularly launch new versions of their vehicles (seven different versions of the Volkswagen *Polo* since 1975), and Levi's 501 has known many iterations since its beginning. To make these strategies successful, marketers are concerned about the best way to air commercials that promote a new product. Here we focus on one particular aspect of this airing, namely the mood participants are incidentally in. To illustrate the manuscript's particular focus, consider the following question: Would marketers prefer to have their advertising campaign aired in the midst of a happy or sad movie scene, for instance, when Romeo and Juliet meet and instantly fall in love versus when Romeo and then Juliet die?

On the one hand, research suggests that airing a commercial in a positive mood context could be preferable, because positive (compared to either negative or neutral) mood triggers positive evaluative responses toward both the commercial and the advertised brand or product (for a review, see Brown, Homer, & Inman, 1998). On the other hand, mood states are known to tune the nature of processing such that negative mood induces greater message elaboration compared to either positive or neutral mood (for a review, see Bagozzi, Gopinath, & Nyer, 1999). Because high compared to low message elaboration leads to the formation of attitudes that are more accessible, more resistant, and more predictive of effective behavior (for a review, see Petty, Haugtvedt, & Smith, 1995; Rucker, Petty & Priester, 2007), evaluative responses formed in conditions of negative mood may predict related behavior well, thus increasing the commercial's behavioral effectiveness. In other words, when considering commercial processing and its behavioral outcomes rather than its declarative outcomes only (e.g. attitudes,

evaluations, or intentions), airing a commercial in a negative rather than positive mood context may prove beneficial because of higher elaboration. This gap has not yet been studied even though it entails important managerial implications, since behaviors are the major level in hierarchical models of ad effectivenness (Vakratsas, & Ambler, 1999).

The present research aims to account for the gap between divergent findings observed at the declarative *versus* the behavioral level of ad effectiveness. To that end, we propose a conceptual framework that integrates several lines of research that focus on mechanisms implied in mood effect on ad processing and its behavioral outcomes. To capture such mechanisms, we carried out the following experimental setting: a new version of a car from an existing product line clearly associated with a favorable *vs.* unfavorable parent brand is presented *via* a TV commercial that delivers visual information about this product. This commercial is embedded in a TV program that elicits a positive, neutral, or negative mood state. Participants are provided with arguments in favor of the product; these arguments are weak or strong. In this context, individuals may rely on either or both of these information sources— parent brand attitude and/or product information—when evaluating the product and displaying behavior. It should be noted that this setting is different from what is generally referred to as brand extension research, since the new product explicitly belongs to an existing product line that participants know well. This setting is also not a classic instance of product line extensions, since the new product is a continuation instead of a line stretching. In addition, making both product and brand information accessible is a way to address limitations regarding the external validity of brand extension research, resulting from the fact that participants have very little information about the product (see, Klink & Smith, 2001).

We suggest that taking into account incidental mood states may help to understand when product and when brand information is relied on. In that context, we posit that beyond the nature of available information (brand- *vs.* product-related), what matters is the way the available

information is processed. According to the mood-and-general-knowledge model (Bless, 2000), negative mood states trigger a bottom-up processing that is data-driven in the sense that it consists in a detailed examination of relevant information (such as specific product information in the present setting). Positive mood states, in contrast, trigger a top-down processing that is heuristic and schema-driven as it relies on general knowledge (such as brand attitude in the present setting). Thus, we argue that negative mood fosters attention to and elaboration of product information rather than brand information, leading to the formation of evaluative responses that are more predictive of actual behavior. As a result, and perhaps counter-intuitively, higher advertising effectiveness at the behavioral level can be expected when commercials are aired in negative mood contexts.

In what follows, we review the literature on mood and ad processing as to its behavioral outcomes, and then derive our set of hypotheses, which we test with three experiments. Study 1 uses a 3 (Program-induced mood: positive *vs.* neutral *vs.* negative) x 2 (Brand attitude: unfavorable *vs.* favorable) design to address the role of mood in ad effectiveness, based on declarative measure only (advertised product evaluation). In Study 2, program-induced mood (positive *vs.* negative), brand attitude (unfavorable *vs.* favorable) and quality of arguments (weaker *vs.* stronger) are manipulated to investigate further mechanisms involved in ad processing and ad declarative effectiveness. Study 3 varies induced mood (positive *vs.* negative) and brand attitude (unfavorable *vs.* favorable) to focus on behavioral outcomes of commercial elaboration.

2. Theoretical background

Mood states have been defined as specific affective subjective experiences or feelings (e.g., Clore, Schwarz, & Conway, 1994). Compared to emotions, mood states are less intense (e.g., Isen, 1987), less salient, tend to last longer, and are not related to a specific object (e.g.,

5

Clore & Ortony, 2000). Furthermore, individuals are often unaware of the cause or the source of their mood (Holbrook & O'Shaugnessy, 1984). Mood states are incidental if caused by a source other than the judgmental target (as in our setting, where the TV program causes the mood state, but what is evaluated is the target product), or integral if emanating from the target itself (such as when the target product itself causes the mood state; e.g., Bodenhausen, 1993). Several accounts have been proposed to explain the impact of mood states in contexts that bear similarity to product launches. Here we briefly review four, including research on brand extension, since much of pertinent prior research has been conducted in this domain.

2.1. Mood and categorization processes

If a new product is *not* perceived as assigned to the brand, brand information is not relevant (e.g., Bless & Schwarz, 2010). The situation is likely different, however, when the new product is perceived as being assigned to the brand. Mood comes into play by affecting the likelihood that the new product is perceived as an exemplar of the brand. In particular, in the case of brand extension it has been shown that positive relative to neutral mood states increase the likelihood that an extension product is categorized into the brand (Barone, Miniard, & Romeo, 2000). Presumably, this is because positive mood increases the flexibility in categorization processes (Isen & Daubman, 1984). Indeed, positive mood increases the perceived similarity between the core brand and the extension product, and thus facilitates transfer of the brand attitude to the product. These effects were shown for extension products moderately similar to the brand; for very similar or dissimilar products, no bolstering effect of mood was observed (Barone et al., 2000). Moreover, these effects were observed only when brand attitude is favorable (Barone & Miniard, 2002), because positive mood does not lead to increased accessibility of information related to a negatively connoted category (Isen, Niedenthal, & Cantor, 1992). Against this background, mood likely plays a critical role via

6

categorization processes when the association between the product and the brand is unclear. However, when a new product is clearly assigned to a specific brand (as in our case, since the product is not a brand extension, but falls within an existing product-line), categorization is not? evident [Hmm – should it say "not evident" here?], so that mood effects on categorization likely play a negligible role.

2.2. Mood as direct information

A second line of research has focused on how mood states directly change evaluations by serving as a source of information (e.g., Pham, 1998; for a review, see Greifeneder, Bless & Pham, 2011). Research in this tradition builds on the affect-as-information account (e.g., Schwarz & Clore, 1983; for a review, see Schwarz & Clore, 2003), which holds that mood states may be relied on as a source of information in itself. For instance, when evaluating an advertised product, individuals may ask themselves "How do I feel about it?," and then rely on this feeling in evaluation. This process is inferential in nature (rather than automatic, see Pham, 2004; Schwarz, 2004), and known to be moderated by several variables (for an overview, see Greifeneder et al., 2011). Perhaps most important in the present context is evaluative malleability, which holds that affect-as-information effects are more likely when judgments are evaluatively malleable, that is, when it is not necessarily clear whether something is good or bad (e.g., Gorn et al., 1993). Consistent with this reasoning, Gorn, Pham, and Sin (2001), for example, observed that mood states influence the evaluation of an affectively ambiguous ad, but not the evaluation of an ad with a clearly pleasant affective tone. Malleability may further arise as a function of the amount of other information provided. For instance, Bakamitsos (2006) observed direct mood effects when no information about the product's attributes is provided, but not when additional product information is given. These findings have critical implications for the current set-up. Because the brand is clearly favorable or unfavorable, and

because strong or weak arguments in favor of the products are available, both the brand and the product do not meet the precondition of evaluative malleability. Hence, against the background of existing theorizing and evidence, no direct effects of mood on brand or product should be observed in our context.

2.3. Mood and evaluative extremity

A third account has focused on how mood states affect the extremity of evaluations (Adaval, 2003). This account holds that individuals in a positive compared to negative mood state are more likely to elaborate on the implications of a brand. As a result, happy individuals evaluate initially positive brands even more positively, and initially negative brands more negatively, resulting in evaluative extremity. Because this mechanism hinges on elaboration, it should vanish in conditions of low processing intensity, as empirically substantiated (Adaval, 2003). Arguably, a commercial break is often a situation of low rather than high processing intensity, for instance, because it is the movie, not the break, individuals are interested in, or because many different commercials are shown in quick succession. Therefore, in the setting investigated here, mood effects on brand extremity may be unlikely.

2.4. Mood and information use

The previous two lines of research suggest that mood may change the evaluations of either the product or the brand. This fourth line takes a different angle and asks which of these two information sources—product or brand information—is used in judgment. This question is important, because even if both types of information are present, individuals need not rely on brand information when judging the product, but could solely focus on product information instead. Conversely, it is conceivable that individuals solely rely on brand information and ignore product information altogether. Given that the very goal of launching new products

within existing product lines is to help new products by transferring information from the brand to the product, it is critical to understand which variables channel information use. Prior research in the realms of stereotyping and product launch suggests that mood is one of these variables. For instance, Bodenhausen, Kramer, and Süsser (1994) observed that happy compared to neutral or sad mood participants relied more on category than individuating information in person perception (for conceptually related findings, see also Krauth-Gruber & Ric, 2000; Park & Banaji, 2000). Relatedly, in the consumer domain, Greifeneder, Bless, and Kuschmann (2007) manipulated program-induced mood (positive *vs.* neutral *vs.* negative) and brand attitude (favorable *vs.* unfavorable). The authors observed that when a new product is assigned to a favorable brand, product evaluation is more positive in conditions of positive rather than negative program-induced mood. The reverse is found when brand attitude is unfavorable. This observation can be interpreted as increased reliance on brand attitude when in a positive mood, in a top-down processing mode. In contrast, negative mood leads to bottom-up processing that reduces the impact of brand information on evaluations. Evidence reported by Batra and Stayman (1990) further suggests that the quality of arguments presented has less impact on brand attitude in conditions of positive compared to neutral mood, due to more superficial information processing. Moreover, less bias is observed in the evaluation of message-related thoughts when comparing negative to positive program-induced mood (Mathur & Chattopadhyay, 1991).

Findings such as those reviewed in the previous paragraph can be conceptualized in terms of the *mood-and-general-knowledge* model proposed by Bless (2000). This model holds that mood states impact both the depth (systematic *vs.* heuristic) and style (bottom-up *vs.* top-down) of information processing. On the one hand, processing is more systematic when individuals are in a negative mood, and more heuristic when they are in a positive mood (for pertinent evidence, see Bohner, Moskowitz, & Chaiken, 1995; Mackie, Asuncion, & Rosselli,

1992; Schwarz, Bless, & Bohner, 1991; Wegener & Petty, 1996). On the other hand, processing is more bottom-up when individuals are in a negative mood, and more top-down when they are in a positive mood. This is presumably because positive mood signals a benign environment, in which general knowledge such as scripts, schemas, categories, and stereotypes can be relied on. In contrast, negative mood signals that the situation is problematic and therefore deserves close scrutiny. As a result, negative mood individuals are less confident in their general knowledge structures, and pay more attention to available information, in a bottom-up fashion. Notably, the mood-and-general-knowledge model invokes neither cognitive capacity deficits nor motivational deficits. Indeed, positive mood does not reduce either performance in a secondary task (Bless, Clore, Schwarz, Golisano, Rabe, & Wölk, 1996), or elaboration of incongruent information that requires additional resources (Krauth-Gruber & Ric, 2000). Hence, the increased depth of processing in negative mood states may be seen as a consequence of bottom-up processing, based on both the use and elaboration of available information (Bless & Schwarz, 1999). Supporting these conjectures with a meta-analytic approach, Hullett (2005) showed that negative mood generally induces systematic information processing. Positive mood generally results in less intensive processing, except when systematic processing allows the person to maintain his or her positive mood (see also Wegener, Petty, & Smith, 1995).

Extending the mood-and-general-knowledge model perspective, recent theorizing by Huntsinger and Clore (e.g., Clore & Huntsinger, 2009; Huntsinger, 2012; 2013) holds that positive and negative affect is not directly linked to specific processing styles. Rather, positive mood signals that the currently ongoing processing is fine (whatever it is), whereas negative mood states constitute a stop signal. To the extent that top-down compared to bottom-up processing is generally more frequent, Huntsinger and Clore's account dovetails with predictions derived from the mood-and-general-knowledge model, namely that positive affect is associated with top-down processing, and negative affect with bottom-up processing.

2.5. Implication for behavioral effectiveness: Mood and the attitude-intention-behavior link

The conjectures on differential information elaboration reviewed above have important implications for behavioral effectiveness. Research in the realm of attitude suggests that attitudes resulting from high rather than low elaboration of message content better predict intention and behavior (for a review, see, Petty et al. 1995 ; Rucker et al., 2007). Specifically, it has been shown that high compared to low elaboration leads to higher levels of congruency between individuals' attitudes and their intention (Petty, Cacioppo, & Schumann, 1983) and behavior (Cacioppo, Petty, Kao, & Rodriguez, 1986; Leippe & Elkin, 1987). High levels of elaboration thus facilitate the realization of behaviors in line with previously formed attitudes and intention (Martin, Martin, Smith, & Hewstone, 2007). Consequently, applying this evidence to the present context results in an intriguing prediction: Because negative compared to positive mood results in higher levels of elaboration, the link between product evaluation, intention, and behavior should be stronger for negative mood-inducing TV programs. Moreover, because negative mood fosters bottom-up processing and thus the integration of product arguments, a commercial featuring strong arguments may yield the highest behavioral effectiveness when aired in a negative mood-inducing context. To our knowledge, despite the importance placed on behavior in hierarchical models of ad effectiveness (e.g., Vakratsas & Ambler, 1999), these predictions have not yet been studied.

3. Hypotheses

A set of four major hypotheses (Table 1) was derived against the background of the theorizing and evidence reviewed above as well as the design of our setting: a product with some attribute information, clearly assigned to a positively or negatively valenced brand and

presented within a TV commercial break, that is, in a low processing intensity context. Hypotheses focus on the judgmental, conative, and behavioral levels.

First, given the nature of our setting, we assume that mood effects are best investigated in terms of the fourth line of research described above, that is, the effects of mood on information use. Of course, this does not preclude the possibility that the three other mechanisms—mood and categorization; mood as direct information; mood and brand extremity—are also at work, especially given that mood may play more than one role in a given experiment (e.g., Hirt, Levine, McDonald, Melton, & Martin, 1997). However, as delineated above, the present setting does not meet at least one important precondition for each of these three other mechanisms.

Second, based on the mood-and-general-knowledge model, we propose that program-induced mood moderates both the style and depth of ad processing. Specifically, because positive mood fosters *top-down* processing and negative mood *bottom-up* processing, we predict that brand attitude will have a stronger impact on product evaluation in positive compared to negative mood states (Hypothesis 1a). In addition, reliance on brand attitude may be at an intermediate level when mood is neutral: that is, lower when compared to positive mood condition (H1b), but higher when compared to negative mood condition (Hypothesis 1c). Evidence supporting Hypotheses 1a, 1b, and 1c directly replicates earlier findings by Greifeneder and colleagues (2007), who observed that reliance on brand information is more pronounced for participants in a positive compared to either a negative or a neutral mood. Extending such findings, we hypothesize similar effects on behavioral intention, since product evaluation and purchase intention are regarded as two distinct, but highly related constructs, with product evaluation as one of the main drivers of intention (Ajzen, 2008). That is to say, we expect that brand attitude will have a stronger effect on purchase intention in conditions of positive compared to negative mood (Hypothesis 1d).

Third, because we also varied product information, the present set of experiments allows for conclusions about the use of such information that have not been tested before. Consistent with the tenets of the mood-and-general-knowledge model, we hypothesize that product information will be elaborated on more in conditions of negative mood compared to either neutral mood (Hypothesis 2a) or positive mood conditions (Hypothesis 2b). As a result, negative but not positive mood participants should produce more favorable ad-related thoughts when product arguments are strong compared to weak (Hypothesis 2c). Therefore, we hypothesized that product evaluation (Hypothesis 3a) and purchase intention (Hypothesis 3b) of negative compared to positive mood individuals reflect whether weak or strong product arguments were presented. Intriguingly, findings in accordance with Hypotheses 3a and 3b would suggest that a product with strong attribute information may benefit from being aired in a negative mood-inducing program.

Fourth, given that high compared to low elaboration of arguments induces the formation of attitudes that are more predictive of intention and behavior (e.g., Petty, et al., 1995 ; Rucker et al., 2007), we hypothesized that embedding a commercial in a negative compared to positive mood-inducing program should lead to a stronger evaluation-intention-behavior link that may increase commercial effectiveness (Hypothesis 4). Hypothesis 4 may be of particular interest, because studies on mood effects on product evaluation often focus on the judgmental and declarative level only. In fact, we are not aware of any experimental study at the intersection of mood and product launch that reports behavioral data.

Taken together, the present research investigates how incidental mood states induced via a TV program influence attitudes, intention, and behavior toward an advertised new product. This research covers new ground, and at the same time has high managerial relevance by addressing which affective conditions are conducive for airing commercials.

4. Study 1

Study 1 aimed to provide a first test for Hypotheses H1a/b/c and H2a/b. It builds upon findings reported by Greifeneder et al. (2007). In addition, we introduced a thought-listing task to capture ad elaboration to test the prevalence of a top-down (relying on brand attitude) *vs.* bottom-up (based on product information) processing, as a function of program-induced mood (negative *vs.* neutral *vs.* positive).

4.1. Participants and procedure

One hundred and eighty students (107 females) of Aix-Marseille University, aged 18 to 25, all holders of a driver's license and owners of a car, participated in the study. The study relied on a 3 (Program-induced mood: Positive *vs.* Neutral *vs.* Negative) x 2 (Brand attitude: Favorable *vs.* Unfavorable) between-participants factorial design. Participants were run in groups of 3 to 5 persons, randomly assigned to one of the six experimental conditions, resulting in a total of 30 participants per condition.

Participants were informed that the present study focused on students' taste in movies and the way watching a movie makes them feel. First, they completed several questions about their interest in cinema, the kind of movies they like, and how often they go to movie theatres or watch movies on TV. Then, to induce differential mood states, participants watched a 20-minute long movie clip with a positive, neutral, or negative tone. With the goal to approximate real-world ad campaigns and to reach a high level of ecological validity, product and brand information was provided in a short TV commercial that was part of an 11-second [??] commercial break. This commercial break was inserted mid-way through the movie clip. The target commercial promoted a new car that was associated with either a favorable *vs.* an

unfavorable brand (to manipulate brand attitude). Participants' mood state was assessed immediately after viewing the full clip. We then measured brand attitude and evaluations of the advertised car, before participants worked on a thought-listing task to capture message elaboration. Finally, participants were asked for comments about the movie they just saw. Participants were thoroughly debriefed at the end of the experimental session.

4.2. Independent variables

4.2.1 Mood Manipulation

Mood was induced using three distinct 20-minute long clips that were shown on a 65-inch television screen. The first two clips were taken from the 20th Century Fox movie *Romeo + Juliet*, an adaptation of Shakespeare's romantic drama. One clip was selected to induce a happy mood and featured how Romeo and Juliet met, how they instantly fell in love, kissed, and consummated their relationship. A second clip was selected to induce a negative mood and showed Romeo taking poison, Juliet waking up, shooting herself, and the two lovers lying dead. The third clip, intended to induce neutral mood, consisted of sequences from the making of *Romeo + Juliet*, including interviews with the director and the main actors, along with some behind-the-scene views.

Ninety-six students recruited from a comparable population participated in a pre-test that assessed participants' mood three times: before exposure to the sad (*N*=32), the neutral (*N*=32), or the happy clip (*N*=32), after 10 minutes of viewing, and after watching the full clip (20 minutes). Three items from Barone (2005) measured mood state on 11-point scales, ranging from 0 *(bad mood/sad/depressed)* to 10 *(good mood/happy/cheerful)*. Ratings were averaged, separately, for the three points in time: before (α=.83), after 10 minutes (α=.91), and after 20 minutes (α=.93) of viewing the film. Planned contrasts revealed no significant differences

between conditions before watching the clip. However, after 10 minutes of watching, participants' mood was more positive in the happy (M=7.07) compared to the sad (M=4.59) clip condition, $t(93)$=6.40, p<.001, η^2=.30. The neutral clip condition fell in between (M=5.42) and differed significantly from both the happy clip, $t(93)$=2.13, p<.04, η^2=.03, and the sad clip condition, $t(93)$=4.28, p<.001, η^2=.14. Similarly, after watching the full clip, mood was more positive in the happy (M=7.49) compared to the sad (M=3.93) clip condition, $t(93)$=9.38, p<.001, η^2=.48, with the neutral clip condition (M=5.58) differing from the two other conditions, $t(93)$=5.02, p<.001, η^2=.14 and $t(93)$=4.36, p<.001, η^2=.11. In addition, comparisons of mood assessed before (baseline) and after viewing the clip indicated that the neutral clip did not significantly impact participants' mood (ts<2). In contrast, the happy clip rendered experienced mood more positive after both 10 minutes, $t(31)$=5.77, p<.001, η^2=.52, and 20 minutes, $t(31)$=7.43, p<.001, η^2=.64; the sad clip made mood more negative after either 10 minutes, $t(31)$=5.64, p<.001, η^2=.51, or 20 minutes, $t(31)$=6.56, p<.001, η^2=.58. Thus, the three clips successfully induced positive *vs.* negative *vs.* neutral mood after 10 minutes (the moment when the commercial break is inserted in the main studies) and after 20 minutes (the moment when measures are collected).

4.2.2 Brand attitude manipulation

The target commercial was placed in the 6th position of the commercial break, which comprised a total of eleven ads (ten pretested ads, including five with a positive tone and five with a negative tone, plus the target commercial). These ten commercials concerned student-relevant products - such as sneakers, computers, mobile phones, apparel or soda – and were held constant across conditions. We chose to embed the target ad among other ads for reasons of experimental realism. We opted for the 6th position to limit salience and possible primacy or recency effects. No measure about non-focal ads was administered. The target commercial

lasted 33 seconds and consisted of a succession of outside views (front, side, rear, and at a ¾ angle) and inside views (interior and dashboard) of a city car that participants had never seen before, accompanied by a pop-rock soundtrack. The ads were retouched so that the brand name was clearly visible on the vehicle, and the commercial's last image presented both the alleged car-maker's logo and signature (Appendix A).

Based on a second pre-test, brand attitude was manipulated by identifying the advertised vehicle as either the new Volkswagen *Polo* (favorable brand attitude) *vs.* Fiat *Punto* (unfavorable brand attitude). Fifty-seven students from a comparable population rated the 10 most popular brands in their country, using three items from Yoo and MacInnis (2005), ranging from 0 *(negative/unfavorable/dislike)* to 10 *(positive/favorable/like)*. Ratings were aggregated to provide composite measures of brand attitude (Cronbach's α range from .79 to .92). This procedure made it possible to identify a favorable brand, Volkswagen (*M*=6.43), and an unfavorable brand, Fiat (*M*=3.72), which are significantly different, $t(56)=9.64$, $p<.001$, $\eta^2=.62$, and quite equidistant from the midpoint of the brand attitude scale (5).

4.3. Dependent variables

First, mood was assessed immediately after viewing the full clip (including the commercial break), using three 11-point scales from Barone (2005; see first pre-test). Second, brand attitude was measured using three 11-point scales from Yoo and MacInnis (2005), ranging from 0 *(negative/unfavorable/dislike)* to 10 *(positive/favorable/like)*, to answer the question:*"What is your opinion about Volkswagen (Fiat)?"* Third, the same response scales were used to measure the product evaluation, by answering the following question: *"What is your opinion about the new Polo (Punto)?"* Fourth, in line with the procedure used by Baker and Petty (1994), participants were asked to write down all thoughts that came to mind as they watched the target commercial; subsequently they indicated whether each of the thoughts they

listed was favorable, neutral, or unfavorable with respect to the advertised car by checking one of these three categories. Beyond the total amount of listed thoughts, which reflects the overall level of ad elaboration, the ratio of favorable thoughts is of particular interest here, because it captures major outcomes: adherence to (positive ratio) or rejection of product-information (negative ratio). In that sense, the ratio of favorable thoughts is a key indicator of ad effectiveness.

4.4. Results

A 3 (Program-induced mood: Positive *vs.* Neutral *vs.* Negative) x 2 (Brand attitude: favorable *vs.* unfavorable) between factorial ANOVA was performed on all measures.

4.4.1. Mood

The three items used to measure participants' mood were averaged (α=.91). Anova revealed a significant effect of program-induced mood, $F(2, 174)$=49.88, $p<.001$, η^2=.36 (for all other effects, $Fs<2$). Planned contrasts indicated that the experienced mood was more positive after viewing the positive clip (M=7.14) rather than the negative clip (M=3.37), $t(174)$=9.99, $p<.001$, η^2=.36. The neutral clip condition fell in between (M=5.31) and differed significantly from the happy clip, $t(174)$=4.86, $p<.001$, η^2=.09, and the sad clip conditions, $t(174)$=5.13, $p<.001$, η^2=.10. This pattern of results suggests successful mood manipulation.

4.4.2. Brand attitude

The three items measuring brand attitude were averaged (α=.90). The only significant effect was a more favorable attitude toward Volkswagen (M=7.03) than Fiat (M=3.85), $F(1, 174)$=108.06, $p<.001$, η^2=.38 (for all other effects, $Fs<3$). This indicates that brand attitude was successfully manipulated. Note that program-induced mood had no significant effect on brand

attitude, thus supporting our reasoning that direct mood as information effects or mood effects on evaluative extremity are likely not at play in the present setting.

Insert Table 2 here

4.4.3. Product evaluation

A main effect of brand attitude was found on product evaluation (α=.86 ; see Table 2): the product was rated more positively when associated with the favorable ($M_{Volkswagen}$=6.90) rather than with the unfavorable brand (M_{Fiat}=5.36). This effect was qualified by an interaction with program-induced mood. Planned contrast indicated that positive mood participants rated the product more positively when it was associated with the favorable ($M_{Volkswagen}$=7.39) compared to the unfavorable brand (M_{Fiat}=4.53), t(174)=5.90, p<.001, η^2=.16. In contrast, ratings from negative mood participants were similar for the favorable ($M_{Volkswagen}$=6.43) compared to the unfavorable brand (M_{Fiat}=5.98), t(174)<1. Finally, in the neutral mood condition, the effect of brand attitude on product evaluation was also significant ($M_{Volkswagen}$=6.89 *vs.* M_{Fiat}=5.56), t(174)=2.75, p<.01, η^2=.03. This effect was smaller compared to the positive mood condition (z=3.24, p<.01), but higher compared to the negative mood condition (z=1.89, p<.06). This pattern confirms Hypotheses 1a, 1b and 1c: positive mood compared to either neutral or negative mood strengthens reliance on brand attitude.

In a nutshell, results suggest that when brand attitude is unfavorable, the commercial is more efficient in a positive mood condition compared to either the negative mood, t(174)=2.98, p<.01, η^2=.04, or the neutral mood condition, t(174)=2.10, p<.04, η^2=.02, But when brand attitude is favorable, the commercial is more efficient in a negative rather than in a positive mood condition, t(174)=1.97, p<.05, η^2=.02, while the neutral mood condition fell in between, but did not differ significantly from the two other mood conditions, ts<2.

4.4.4. Elaboration of product information

We first noted that the total amount of generated thoughts was somewhat low (M=3.69; SD=1.59) and did not significantly vary as a function of brand attitude or program-induced mood (Fs<3), indicating similar levels of low elaboration in our setting. Then, following Baker and Petty's (1994) procedure, we calculated for each participant the ratio of favorable thoughts to the total number of favorable and unfavorable thoughts generated. ANOVA performed on these scores (see Table 2) revealed a main effect of program-induced mood, $F(2, 174)$=5.58, p<.01, η^2=.06. Planned contrasts indicated that the ratio of favorable thoughts was higher when in a negative mood (M=0.39), compared to either the neutral mood (M=0.24), $t(174)$=2.12, p<.04, η^2=.02, or the positive mood condition (M=0.15), $t(174)$=3.30, p<.01, η^2=.06. We note that the two latter mood conditions did not differ significantly, $t(174)$<2. These findings support Hypotheses 2a and 2b: negative mood compared to either neutral or positive mood increases elaboration of and thus adherence to product information.

Insert Table 3 here

4.4.5. Reliance on brand- vs. product-information

We investigated further reliance on brand- *vs.* product-information by regressing product evaluation onto five predictors: brand attitude, ratio of favorable thoughts, program-induced mood, and two interaction terms that aimed to capture the moderating role of mood on the influence of the two former variables. First, the program-induced mood was contrast-coded (-1 *vs.* 0 *vs.* +1, for negative, neutral, and positive mood, respectively, thus considering neutral mood as a baseline). Then, following Little, Bovaird and Widaman's (2006) procedure, two interaction terms were created by residual centering the product of brand attitude by contrast-

coded mood, and the product of favorable thoughts ratio by contrast-coded mood [I don't know the exact conventions for this in social psychology, but usually a "product" is expressed as "the product of a **and** b" rather than "a by b," or as "product of a x b."]. Since residuals are uncorrelated with first-order effects, this procedure removes collinearity, and orthogonalizes each interaction term and its first-order effect terms. Thus, it provides estimates that fully represent the unique variance of interaction effect terms.

Results indicate that brand attitude (β=.48, p<.001) and favorable thoughts ratio (β=.18, p<.01) both positively influence product evaluation. In addition, induced mood moderated these two first-order effects (see Table 3). On the one hand, compared to neutral mood as a baseline, positive mood strengthened, while negative mood weakened, the positive influence of brand attitude on product evaluation. On the other hand, compared to neutral mood, positive mood weakened, whereas negative mood strengthened, the positive influence of favorable thoughts ratio on product evaluation. Therefore, in both the positive (z=8.91, p<.001) and neutral mood (z=3.26 p<.01) conditions, brand attitude exerted a stronger influence on product evaluation than did the favorable thoughts ratio . The reverse was found in the negative mood condition (z=2.15, p<.04). Together, these findings suggest that top-down processing relying on brand attitude occurred in conditions of positive and neutral mood. Consistent with our hypotheses, this reliance is stronger in positive compared to neutral mood conditions. In contrast, bottom-up processing based on the elaboration of product information prevailed when mood was negative.

5. Study 2

Study 2 aimed to replicate Study 1 and to further investigate the moderating role of mood on product information use. To do so, we varied program-induced mood (negative *vs.* positive), brand attitude (unfavorable *vs.* favorable), and argument quality (weaker *vs.*

stronger). Similar to Study 1, product evaluation and ad elaboration were measured. In addition, a purchase intention measure was introduced to extend previous findings from the judgmental to the conative level. Finally, participants' mood was measured before and after watching the clip to be certain that desired negative *vs.* positive mood states were achieved. This study provides an empirical framework for testing hypotheses H1a/d, H2b/c, and H3a/b.

5.1. Participants and procedure

Two hundred and forty students (147 females) of Aix-Marseille University, aged 18 to 25, all holders of a driver's license and owners of a car, participated in the study. The study relied on a 2 (Program-induced mood: Positive *vs.* Negative) x 2 (Brand attitude: Favorable *vs.* Unfavorable) x 2 (Quality of product arguments: Weaker *vs.* Stronger) between-participants factorial design. Participants were run in groups of 3 to 5, randomly assigned to one of the eight experimental conditions, resulting in a total of 30 participants per condition.

We used the same introduction as in Study 1. Mood and brand attitude were varied using the same procedure as in Study 1, with the exception that only negative and positive mood was manipulated. In addition, we manipulated the quality of product arguments by inserting rolling titles and voice overs in the target commercial. The specific arguments were pre-tested to be either stronger or weaker. Fifty participants from a comparable population rated the importance of each of 14 expectations toward cars, derived from previous studies (Tafani, Haguel, & Menager, 2007; Tafani, Michel, & Rosa, 2009). Responses were collected on 11-point scales, ranging from 0 *(not important for me)* to 10 *(very important for me)*. We considered the three most important expectations—reliable (*M*=8.22), pretty (*M*=7.96), and cheap to run (*M*=7.88)—as stronger arguments, and the three least important expectations—fully equipped (*M*=5.88), original (*M*=5.60), and innovative (*M*=5.54)—as weaker arguments. All paired

comparisons between one of the three stronger arguments and one of the three weaker arguments were significant at $p<.001$..

To increase internal validity, mood was assessed twice: before participants watched the film and immediately after, using three 11-point scales from Barone (2005). Second, as in Study 1, brand attitude and product evaluation were both measured using three 11-point scales from Yoo and MacInnis (2005). Third, purchase intention was measured by asking participants to rate the chance that they would buy the advertised car, in case they wanted to get a new one. To this end, we used Juster's (1966) 11-point scale ranging from 0 = *no chance, almost no chance (1 in 100)* to 10 = *certain, practically certain (99 in 100).* Fourth, as in Study 1, we measured ad elaboration using Baker and Petty's (1994) procedure. Then, participants reported comments about the movie, before being debriefed.

5.2. Results and discussion

A 2 (Program-induced mood: Positive *vs.* Negative) x 2 (Brand attitude: favorable *vs.* unfavorable) x 2 (Quality of product arguments: Weaker *vs.* Stronger) between factorial ANOVA was performed on all dependent variables.

5.2.1. Mood

We averaged the three items used to measure participants' mood to give an aggregated score of before (α=.93) and after (α=.88) watching the film. Analyses revealed no significant difference in participants' mood scores before watching the film ($M_{Positive\_Clip}$=5.40 *vs.* $M_{Negative\_Clip}$=5.91), $F(1, 232)<2$, thus suggesting a similar affective baseline. In contrast, participants' mood was more positive after watching the happy clip (M=6.99) rather than the sad clip (M=4.11), $F(1, 232)=117.70$, $p<.001$, η^2=.33 (for all other effects, $Fs<3$). In addition, comparisons of mood assessed before and after watching the film indicate that the happy clip

rendered mood more positive, $t(119)=8.78$, $p<.001$, $\eta^2=.40$, whereas the sad clip rendered mood more negative, $t(119)=11.98$, $p<.001$, $\eta^2=.55$. These findings suggest that differential levels of positive *vs.* negative mood were successfully induced. Note that the positive and the negative mood conditions not only differed from each other, but also compared to the baseline measure. This sets the present study apart from other studies in the mood realm, where conclusions are confined to differences between the positive and negative mood conditions (i.e., one can conclude that something different occurs for conditions of positive *vs.* negative mood, but not whether states of positive or negative mood were realized).

5.2.2. Brand attitude

The three items measuring brand attitude were averaged ($\alpha=.88$). The only significant effect was a more favorable attitude toward Volkswagen ($M=7.21$) than Fiat ($M=4.11$), $F(1, 232)=134.50$, $p<.001$, $\eta^2=.36$, indicating that brand attitude manipulation was successful.

Insert Table 4 here

5.2.3. Product evaluation and purchase intention

Similar to Study 1, product evaluation ($\alpha=.84$) revealed a main effect of brand attitude (Table 4): the product was rated more positively when associated with the favorable ($M_{Volkswagen}=7.32$) rather than the unfavorable brand ($M_{Fiat}=5.97$), $F(1, 232)=28.51$, $p<.001$, $\eta^2=.10$. This main effect was qualified by an interaction with program-induced mood, $F(1, 232)=16.33$, $p<.001$, $\eta^2=.06$. Planned contrasts indicate that positive mood participants evaluated the product more positively when associated with the favorable ($M_{Volkswagen}=7.74$) compared to the unfavorable brand ($M_{Fiat}=5.38$), $t(232)=7.10$, $p<.001$, $\eta^2=.17$. Conversely,

evaluations of negative mood participants were similar for the favorable ($M_{\text{Volkswagen}}$=6.89) and the unfavorable brand (M_{Fiat}=6.57), $t(232)<1$. This finding confirms Hypothesis 1a.

The effect of argument quality also achieved significance: product evaluation was more positive when arguments were stronger (M=7.06) rather than weaker (M=6.24), $F(1, 232)$=10.55, $p<.001$, η^2=.04. An interaction between argument quality and induced mood qualified this main effect, $F(1, 232)$=3.71, $p<.06$, η^2=.01: when participants were in a negative mood, stronger (M=7.38) $vs.$ weaker arguments (M=6.08), $t(232)$=3.66, $p<.001$, η^2= 05, resulted in more positive product evaluation. In contrast, when participants were in a positive mood, no significant difference was observed (M=6.73 $vs.$ M=6.39, respectively), $t(232)<1$. Together these findings support Hypothesis 3a. Other main or interaction effects did not reach significance (Fs < 1).

A similar pattern was observed for purchase intention (see Table 4), which was higher when brand attitude was favorable ($M_{\text{Volkswagen}}$=5.25) rather than unfavorable (M_{Fiat}=3.96), $F(1, 232)$=17.66, $p<.001$, η^2=.07. An interaction between brand attitude and induced mood, $F(1, 232)$=6.92, $p<.01$, η^2=.03, indicated that the effect of brand attitude on intent was significant when participants were in a positive mood ($M_{\text{Volkswagen}}$=5.62 $vs.$ M_{Fiat}=3.52), $t(232)$=4.20, $p<.001$, η^2=.07, but not when in a negative mood ($M_{\text{Volkswagen}}$=4.88 $vs.$ M_{Fiat}=4.40), $t(232)<2$, supporting Hypothesis 1d. Furthermore, the quality of arguments had an effect on purchase intention: intent was higher when arguments are stronger (M=4.87) rather than weaker (M=4.33), $F(1, 232)$=3.11, $p<.08$, η^2=.01. However, the interaction between mood and argument quality failed to reach significance, $F(1, 232)<2$. Nevertheless, planned contrast analysis revealed that for negative mood participants, purchase intention was higher when stronger (M=5.10) rather than weaker arguments were presented (M=4.18), $t(232)$=2.11, $p<.04$, η^2=.02. In contrast, no significant difference was observed for positive mood participants (M=4.65 $vs.$ M=4.48, respectively), $t(232)<1$. Together, these results provide partial support for

Hypothesis 3b. Again, when brand attitude was favorable, the commercial was more efficient with respect to product evaluation when participants were in a positive rather than in a negative mood, $t(232)=2.38$, $p<.02$, $\eta^2=.02$, and somewhat less strong with respect to purchase intention, $t(232)=1.69$, $p<.10$, $\eta^2=.01$. In contrast, when brand attitude is unfavorable, the commercial was more efficient both with respect to product evaluation, $t(232)=3.33$, $p<.01$, $\eta^2=.04$, and purchase intention, $t(232)=2.03$, $p<.05$, $\eta^2=.02$, when participants were in a negative rather than in a positive mood.

5.2.4. Elaboration of product information

Similar to Study 1, the total amount of generated thoughts ($M=4.38$; $SD=1.75$) did not vary as a function of brand attitude or mood. In addition, Study 2 indicates that argument quality did not impact this measure ($Fs<3$). Of greater interest is the ratio of favorable thoughts. ANOVA performed on this ratio (Table 4) revealed three main effects: the ratio was higher when (i) the program induced negative ($M=0.46$) rather than positive mood ($M=0.31$), $F(1, 232)=17.34$, $p<.001$, $\eta^2=.06$, (ii) the arguments were stronger ($M=0.45$) rather than weaker ($M=0.32$), $F(1, 232)=14.81$, $p<.001$, $\eta^2=.05$, and (iii) brand attitude was favorable ($M=0.44$) rather than unfavorable ($M=0.34$), $F(1, 232)=9.83$, $p<.01$, $\eta^2=.04$. Of importance, the interaction between argument quality and induced mood was also significant, $F(1, 232)=8.35$, $p<.01$, $\eta^2=03$,(all other $Fs<1$). Planned contrast analysis indicated that when in a negative mood, participants generated a higher ratio of favorable thoughts in the stronger ($M=0.58$) rather than in the weaker arguments condition ($M=0.34$), $t(232)=4.76$, $p<.001$, $\eta^2=.08$. In contrast, when in a positive mood, the effect of arguments quality was not significant ($M=0.33$ vs. $M=0.30$, respectively), $t(232)<1$. Together, these findings support Hypotheses 2b and 2c: negative compared to positive mood increases elaboration of product information and adherence to a commercial's claims, in particular when arguments are strong.

Insert Table 5 here

5.3. Structural equation modeling

      Finally, we ran a structural equation model (Figure 1) using the maximum likelihood estimation procedure (Jöreskog, 1970) to explore more precisely the influence of program-induced mood on dependent variables. First, we checked the convergent and discriminant validity of the measurement model that includes three latent constructs (mood state, brand attitude, and product evaluation) and three manifest indicators (argument quality, favorable thought ratio, and purchase intention). All Jöreskog's rhos were higher than 0.7 and Fornell and Larcker's (1981) Average Variances Extracted (AVE) were higher than 0.5 (Table 5), thus indicating convergent validity. In addition, absolute correlations among latent constructs were lower than the squared root of AVE, offering evidence of discriminant validity.

Insert Table 6 here

      Then, we performed a multigroup analysis as a function of induced mood (positive *vs.* negative) to test mood's moderating role (see Iacobucci, 2010). Following recommendations of Steenkamp and Baumgartner (1998), we first checked for the measurement model's configural, metric, and scalar invariance, before comparing the structural model across groups. Configural invariance indicates that the pattern of salient and non-salient factor loadings is the same across groups, that is, that the same observed items are associated with the same latent constructs across groups. Configural invariance was checked using multigroup confirmatory factor analysis (CFA) with no equality constraints across groups (Model 1). This model achieved good fit according to Hu and Bentler's (1999) cutoff criteria (see Table 6): Comparative Fit Index

(CFI)=.97, Tucker Lewis Index *(TLI)*=.95, Root Mean Square Error of Approximation *(RMSEA)*=.05, Standardized Root Mean Residual *(SRMR)*=.04. Model 1 provided a relevant baseline for testing metric and scalar invariance. Metric invariance reflects that the strength of the relationships between observed items and related latent constructs is equivalent across groups. It was tested by comparing Model 1 to a metric invariance model (Model 2) that constrained all factor loadings to be the same across groups. Given that the difference in the two models' χ^2 was not significant, $\Delta\chi^2(6)=4.20$, $p=.65$, full metric invariance was supported. In addition, scalar invariance indicates that group differences in observed item do not result from measurement error, but are consistently related to group differences in latent constructs. Such invariance was tested by constraining both factor loadings and intercepts to be the same across groups (Model 3). Model 3 fitted the data not lesser than Model 2, $\Delta\chi^2(10)=4.83$, $p=.57$, thus supporting full scalar invariance. Finally, as the measurement model appeared to be equivalent across groups, we tested structural invariance by comparing Model 3 to a model constraining the 9 structural pathways to be equal across groups (Model 4). Model 4 fitted the data worse than Model 3, $\Delta\chi^2(9)=50.23$, $p<.001$, thus revealing the moderating role of induced mood (Byrne, 2010). Indeed, comparisons of coefficients associated with the different pathways as a function of mood (Table 7) showed stronger positive direct effects of brand attitude on product evaluation, purchase intention, and the ratio of favorable thoughts, when participants were in a positive rather than in a negative induced mood. In contrast, three direct effects were stronger when participants were in a negative mood: the positive influence of argument quality on favorable thoughts ratio, the positive influence of favorable thoughts ratio on product evaluation, and the positive influence of product evaluation on purchase intention.

Insert Table 7 here

In the next step, we tested chain effects using bootstrapping (see MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). In a nutshell, bootstrapping consists of resampling the original sample with replacement to estimate a confidence interval around the indirect effect estimation [CI]. According to Hayes (2009), a significant indirect effect is present when the 0 value, which corresponds to the null hypothesis of absence of indirect effect, is not included in the confidence interval. In line with this procedure, we conducted 5,000 bias-corrected bootstraps (with 95% interval confidence) that provide more reliable results, especially for complex structural models (see Williams & MacKinnon, 2008).

Insert Figure 1 here

Bootstrapping did not reveal any indirect effect when in a positive mood. However, for negative mood it revealed a positive indirect effect of argument quality on purchase intention, γ=.22, p<.001, CI [.09, .34]. Two chain mediations took part in this indirect effect: on the one hand, the positive influence of arguments quality on product evaluation is mediated by the ratio of favorable thoughts, γ=.10, p<.01, CI [.03, .20], and on the other hand, the positive influence of favorable thoughts on purchase intention is mediated by product evaluation, γ=.18, p<.01, CI [.06, .30]. In addition, brand attitude also exerted a positive indirect effect on purchase intention via product evaluation, γ=.26, p<.001, CI [.14, .39].

Taken together, the observed findings suggest differential processing as a function of mood. For positive mood, participants relied strongly on brand-attitude, which exerted a direct, unmediated positive influence on product evaluation, purchase intention, and the ratio of favorable thoughts. Consistent with the mood-and-general-knowledge model, we suggest that this pattern is best explained as top-down processing. For negative mood, a different picture was expected and found: Here, argument quality plays an important role, which exerted a direct

positive influence on favorable thoughts and product evaluation. Favorable thoughts and product evaluation, in turn, guide purchase intention. We suggest that this pattern is best explained as bottom-up processing.

6. Study 3

Study 2 allows for insights into underlying processes, but conclusions are confined to the judgmental and conative levels. Study 3 extends the scope to behavioral measures. Emphasis is placed on testing Hypothesis 4, which predicts higher behavioral effectiveness when a commercial is placed in a program inducing negative mood. This hypothesis builds on (a) Study 1 and 2's finding that negative mood is associated with higher elaboration of product information, and (b) research suggesting that high compared to low elaboration of arguments strengthens the link between attitude and behavior (e.g., Petty et al., 1995).

6.1. Participants and procedure

Four hundred students (255 females) of Aix-Marseille University, aged 18 to 25, all holders of a driver's license and owners of a car, were randomly assigned to a 2 (Program-induced mood: positive *vs.* negative) X 2 (Brand attitude: favorable *vs.* unfavorable) between-subjects factorial design. The two independent variables were manipulated using the same procedure as in Study 2. Different from Study 2, we used strong arguments only, as this is likely the strategy favored in real-world ad campaigns. Dependent variables (as well as order of presentation) were the same as those used in Study 2, except that we added a behavioral measure to gauge ad effectiveness. Briefly, at the end of the session, participants received an invitation card for the launch of the advertised car, including the possibility to test-drive it. Participants learned that the launch would take place the following Saturday evening on their campus, and that presenting the invitation card at the front desk would allow them to be part of the event. A

code identifying which experimental condition the participant had randomly been assigned to was written on the invitation card. Study 3's main dependent variable is the number of participants who showed up at the launch. On their arrival, participants were told that there was no launch event, and were individually and thoroughly debriefed as to the real purpose of the experiment. Participants were offered drinks and snacks to compensate for the time they invested to show up at the launch.

Insert Table 8 here

6.2. Results and discussion

All measures, except the behavioral measure, which was a categorical variable, were submitted to a 2 (Induced mood) x 2 (Brand attitude) between factorial ANOVA.

6.2.1. Mood

As in Study 2, averaged measures of mood before watching the mood-inducing film clips (α=.90) revealed no significant difference between participants, $M_{Positive\_Clip}$=5.82, $M_{Negative\_Clip}$=5.51, $F(1,396)<2$, thus suggesting similar affective baselines. In contrast, participants' mood (α=.92) was more positive after watching the happy (M=7.21) rather than the sad clip (M=3.54), $F(1, 232)=340.79$, $p<.001$, η^2=.46 (all other Fs<2). Similar to Study 2, compared to the affective baseline, the happy clip rendered participants' mood more positive, $t(199)=16.92$, $p<.001$, η^2=.59, whereas the sad clip rendered participants' mood more negative, $t(199)=17.51$, $p<.001$, η^2=.61. Again, conclusions about the effect of inducing positive compared to negative mood with respect to the baseline are possible.

6.2.2. Brand attitude.

Similar to Studies 1 and 2, participants' brand attitude (α=.87) was more favorable toward Volkswagen (*M*=6.70) than Fiat (*M*=4.36), $F(1, 396)$=137.70, p<.001, η^2=.26 (for all other effects, Fs<3), indicating that the manipulation of brand attitude was successful.

6.2.3. Product evaluation and purchase intentions

There was a significant effect of brand attitude on product evaluation (α=.85), reflecting more positive evaluations when the ostensible new car was associated with the favorable ($M_{Volkswagen}$=7.47) rather than unfavorable brand (M_{Fiat}=6.42), $F(1, 396)$=34.82, p<.001, η^2=.07 (Table 8). This effect was qualified by a significant interaction between brand attitude and induced mood, $F(1, 396)$=21.58, p<.001, η^2=.05, indicating that brand attitude significantly influenced evaluations in conditions of positive mood ($M_{Volkswagen}$=7.80 *vs.* M_{Fiat}=5.92), $t(396)$=7.46, p<.001, η^2=.12), but not negative mood ($M_{Volkswagen}$=7.13 *vs.* M_{Fiat}=6.91), $t(396)$<1). Replicating results from Study 1 and 2, these findings support H1a.

A similar pattern was found for purchase intention (Table 8), which was higher when the new product was associated with a favorable ($M_{Volkswagen}$=5.51) rather than an unfavorable brand (M_{Fiat}=4.08), $F(1, 396)$=36.99, p<.001, η^2=.08. Again, this main effect is qualified by an interaction with induced mood, $F(1, 396)$=23.96, p<.001, η^2=.05. Planned contrast analysis revealed a significant effect of brand attitude on intents for conditions of positive mood ($M_{Volkswagen}$=5.99 *vs.* M_{Fiat}=3.40), $t(396)$=8.20, p<.001, η^2=.15, but not negative mood (*M*=5.03 *vs. M*=4.75), $t(396)$<1. These results again provide support for Hypothesis H1d.

Hence, when brand attitude was favorable, the commercial was more effective in conditions of positive compared to negative mood, both with respect to product evaluation, $t(396)$=2.68, p<.01, η^2=.02, and intents, $t(396)$=2.88, p<.01, η^2=.02. In contrast, when brand attitude was unfavorable, the reverse was true, both with respect to product evaluation, $t(396)$=3.89, p<.001, η^2=.03, and behavioral intention, $t(396)$=4.05, p<.001, η^2=.04.

6.2.4. Elaboration of product information

Similar to Studies 1 and 2, the total amount of generated thoughts did not significantly vary across conditions (*Fs*<3). As expected, however, the *ratio* of favorable thoughts (Table 8) was higher in conditions of negative (*M*=0.54) compared to positive mood (*M*=0.38), $F(1, 396)=34.67$, $p<.001$, $\eta^2= 08$ (all other *F*s<3). This finding confirms that for strong arguments, negative mood favors elaboration of product information and adherence to the commercial claim, supporting Hypothesis 2c.

6.2.5. Behavioral measure.

A χ^2 test was used to analyze the behavioral measure, that is, whether participants showed up at the launch event. This test reveals differential attendance as a function of the mood induced before watching the commercial, which notably happened several days before the ostensible launch event. Indeed, more participants attended the launch (see Table 8), when a negative (23.5%) compared to positive (10%) mood was induced, $\chi^2(1)=13.07$, $p<.001$, thus supporting Hypothesis 4. Moreover, this increase in behavioral impact was observed for both favorable brand attitude (26% *vs.* 14%), $\chi^2(1)=4.50$, $p<.04$ and unfavorable brand attitude (21% *vs.* 6% respectively), $\chi^2(1)=9.63$, $p<.001$, thus illustrating how elaboration of product information can outweigh brand attitude in conditions of negative mood.

Insert Figure 2 here

6.2.6. Structural equation modeling

Following-up on Study 2, we used a structural equation model (see Figure 2) to further investigate the influence of program-induced mood on dependent variables. The model includes

three latent constructs (mood state, brand attitude, and product evaluation) and three manifest indicators (favorable thought ratio, purchase intention, and participation in the launch event). Jöreskog's rho higher than 0.7 and AVE higher than 0.5 (Table 9) indicate convergent validity. In addition, all absolute inter-construct correlations were lower than the squared root of AVE, offering evidence of discriminant validity.

Insert Table 9 here

Then, the model's invariance across program-induced mood was tested (Table 10). A multigroup CFA with no constraints across groups (Model 5) achieved good fit: *CFI*=.98, *TLI*=.97, *RMSEA*=.04, *SRMR*=.03, indicating configural invariance. This unconstrained model did not fit the data better than a model constraining factor loadings (Model 6), $\Delta\chi^2(6)$=1.22, *p*=.98, supporting metric invariance. Supporting scalar invariance, Model 6 did not fit the data better than a model constraining both factor loadings and intercepts (Model 7), $\Delta\chi^2(6)$=4.90, *p*=.56. Finally, we compared Model 7 to a model constraining structural pathways to be equal across groups (Model 8). Model 8 fitted the data worse than Model 7, $\Delta\chi^2(10)$=65.99, *p*<.001, revealing the moderating role of program-induced mood.

Insert Table 10 here

Pathway comparisons as a function of induced mood (Table 11) revealed that when participants were in a positive rather than negative mood, brand attitude exerted stronger positive direct effects on the ratio of favorable thoughts, product evaluation, purchase intention, and participation in the launch event. In contrast, three direct effects were more pronounced when participants were in a negative compared to positive mood: the positive influence of

favorable thoughts on product evaluation, the positive influence of product evaluation on purchase intention, and the positive influence of intention on actual participation. A bias-corrected bootstrapping (5,000 bootstrap samples) indicated that no indirect effect occurred in a positive mood. Conversely, favorable thoughts ratio exerted an indirect effect on participation in the launch event when participants were in a negative mood, $\gamma=.12$, $p<.001$, CI [.07, .19]. This indirect effect consisted of two chain mediations: on the one hand, the positive influence of favorable thoughts on purchase intention was mediated by product evaluation, $\gamma=.29$, $p<.001$, CI [.20, .38], and on the other hand, the positive influence of product evaluation on participation was mediated by intention, $\gamma=.29$, $p<.001$, CI [.19, .38]. Furthermore, brand attitude had a positive indirect effect on purchase intention via product evaluation, $\gamma=.19$, $p<.001$, CI [.09, .30]. Consistent with Study 2, these findings allow for the conclusion that conditions of positive mood favor top-down processing and reliance on brand attitude. In contrast, conditions of negative mood foster bottom-up processing and elaboration of product information. Because high elaboration of arguments makes formed attitude more predictive of behavior (e.g., Petty et al., 1995), we observed higher level of commercial effectiveness on the behavioral level for conditions of negative mood. That this effect was independent of brand attitude (which is relied on in positive but not negative mood) further supports our theorizing about underlying processes.

Insert Table 11 here

7. General Discussion

The hope that a parent brand can give a new product a head-start on the market is widespread (Schneider & Hall, 2011). For this hope to play out, the presumably positive brand attitude needs to be transferred to the new product and result in attitude-consistent behavior.

Here we address one condition that influences these processes: surrounding mood as induced by the TV program into which commercials are inserted. Specifically, three studies investigate how incidental mood states induced *via* a TV program influence whether brand attitude and specific product information impact product evaluation, purchase intention, and behavior. Among other conclusions, results suggest that airing a commercial in a negative mood context may prove fruitful given that the product features themselves provide good reasons for purchase. These results were obtained in a setting of high ecologically validity: a new product version in a well-known product line was clearly assigned to its parent brand by means of a TV commercial that was shown amongst several other commercials. In what follows, we discuss theoretical and managerial implications.

7.1. Theoretical implications

One of the main objectives of this research was to provide a conceptual framework that accounts for the divergent effects of mood on declarative versus behavioral measures of advertising effectiveness. The setting chosen here allowed focused testing of the mood-and-general-knowledge model (Bless, 2000), which holds that conditions of positive mood foster heuristic top-down processing and reliance on general knowledge structures. Applied to the context of a new product launch, the mood-and-general-knowledge model allows for the prediction that brand attitude (a relevant general knowledge structure) should receive particular weight in conditions of positive compared to neutral or negative mood. Findings are in support of these conjectures and consistent with H1a, H1b and H1c. These findings replicate and critically extend evidence reported by Greifeneder and colleagues (2007). Consistent with H3a and H3b, the present results further show that the strength of arguments exerts a stronger influence on both product evaluation and purchase intention in conditions of negative compared to positive mood. Taken together, this pattern is fully in line with the mood-and-general-

knowledge model: put simply, in regard to declarative (judgmental and conative) measures, positive mood favors reliance on brand attitude (top-down processing), whereas negative mood favors reliance on product information (bottom-up processing).

Differences in ad processing manifested in the elaboration of ad content, with the ratio of favorable thoughts being higher in negative mood conditions, compared to either positive (Studies 1, 2 and 3) or neutral (Study 1) mood, thus supporting H2a and H2b. Interestingly, as predicted (H2c), the quality of product arguments had a stronger and positive impact on favorable thoughts ratio when mood was negative rather than positive. Together, these findings indicate that airing a commercial in a negative mood context can lead to a deeper elaboration of the ad content, resulting from a bottom-up processing that fosters generation of ad-congruent thoughts, which may prove beneficial when the ad content is strong. We should note that these findings deviate from results reported in earlier studies, in which positive compared to either neutral (Batra & Stayman, 1990) or negative mood states (Mathur & Chattopadhyay, 1991) were shown to increase the favorable thoughts ratio. In that research, participants' attention was drawn to the focal ad, thus facilitating mood-congruency effects. In contrast, we did not present the target commercial in isolation, but placed it within an ad break comprising eleven commercials, rendering direct mood-congruency effects less likely. Instead, negative mood participants likely considered the positive arguments in favor of the car, which ultimately increased the favorable thoughts ratio.

Perhaps most importantly, the higher elaboration of ad content observed in conditions of negative mood had a major behavioral outcome: as predicted (H4), higher elaboration increased attendance at the product launch event, regardless of the attitude toward the parent brand (Study 3). This finding conceptually dovetails with results reported in the realm of attitude-behavior research: elaboration favors the formation of attitudes that better predict actual behavior (Petty et al., 1995; Rucker et al. 2007). In Study 3, SEM analysis confirmed

that the positive influence of both product evaluation and purchase intention on attendance was higher in conditions of negative rather than positive mood. This suggests that higher elaboration resulting from negative mood states renders attitude and intention strong predictors of effective behavior. In contrast, in conditions of positive mood, the elaboration of ad-content predicted behavioral outcomes less strongly. Moreover, attitude and intention in conditions of positive mood did not predict effective behavior well. Therefore, despite a potential increase in product evaluation (when brand attitude is favorable), airing the ad in a positive mood context did not result in actual behavior in favor of the advertised product. These novel findings critically advance attitude-behavior research with regard to the behavioral consequences of specific mood states.

We should note that all the hypotheses derived from the mood-and-general-knowledge model were verified, indicating that this model constitutes a relevant conceptual framework to better understand the divergent effects of mood on declarative *vs.* behavioral measures of ad effectiveness. More particularly, on the one hand, positive mood contexts favor a top-down processing, relying on parent brand attitude. While resulting in measurable effects on the level of attitudes, such heuristic processing limits the elaboration of ad-content, and thus down-stream consequences with respect to behavior. On the other hand, negative mood contexts favor a bottom-up processing that relies on product information, and thus leads to higher elaboration of ad-content. Consequently, when commercials display strong arguments, product evaluations and intention positively influence ad-consistent behavior. In this view, divergences observed on declarative *vs.* behavioral measures result from differences in ad processing and related elaboration of ad-content that Bless' model accounts for.

Several aspects of the present research deserve specific mention. First, compared to the paper-pencil format used by Greifeneder and colleagues (2007), the TV commercials placed in an ad bloc create a much richer and complex information processing situation. Second, because

the chosen mood manipulation increased or decreased mood compared to an affective baseline (Studies 2 and 3), conclusions about the respective effects of induced positive or negative mood are viable. This is different from many studies in the realm of mood, where conclusions are confined to the relative difference between the mood conditions. Third, by varying product information, more refined model tests could be run, highlighting how such information is processed. Fourth, the present research allows for conclusions about the elaboration of product information (and thus, resulting adherence to commercials' claim). Fifth, by using structural equation modeling, the hypothesized underlying mechanisms could be tested more directly. Sixth, whereas studies on product launch or ad effectiveness are often confined to the judgmental or conative level, the present research is among the very few that tested behavioral outcomes. That such a high percentage of participants attended the launch event suggests that our setting was one of high experimental (and likely ecological) reality. Together, these extensions allow for new conclusions that strongly add to our understanding of the role of mood in ad effectiveness, and thus move the respective literature ahead.

7.2. Managerial implications

Here, the main question for marketers relates to the benefit of airing a commercial in a positive vs. negative mood-inducing program, and the resulting ad effectiveness expected at several levels. By airing the commercial amidst other commercials and within a TV program, we opted for a particularly naturalistic setting. Even in this rich and complex information environment, we were able to document mood effects on the judgmental, the conative, and the behavioral levels, the latter even after a few days. Such findings clearly show the importance of taking mood effects into account when planning the broadcasting of TV commercials, which appears as an important managerial implication. Both individuals and companies seem to be aware of this possibility. For instance, Goldberg and Gorn (1987) report that participants

perceive advertising effectiveness to be higher when aired in positive affective contexts. Such assumptions can be contrasted against predictions based on scientific models that paint a more nuanced picture, supported by the evidence reported here: when brand attitude is favorable, product evaluation and intention are higher in condition of positive compared to negative mood, because processing is top-down, giving preferential weight to brand attitude. This prediction dovetails with individuals' beliefs. However, when brand attitude is unfavorable, bottom-up processing and higher elaboration associated with negative mood states may prove beneficial. This is especially the case when a product has strong arguments on its side. Hence, for products that 'speak for themselves', a negative mood context may result in more positive evaluation and intention, because the strong arguments are elaborated on.

Going beyond purely declarative measures and focusing on real behavior (attendance at a product launch event), the present results are first to show that airing a commercial in a negative mood context may produce a particularly high level of ad effectiveness, as long as the advertised product is supported by strong arguments. Interestingly, this gain applies to both favorable and unfavorable brands. Given that behavioral effectiveness has been recognized as the most important level in the hierarchy of advertising effects (Barry, 1987), this finding offers meaningful implications for media planning strategy. Accordingly, placing a TV commercial in a negative mood-inducing program may favor the implementation of favorable behaviors toward the advertised product, regardless of the parent brand attitude. In the present setting, we considered the attendance at a product launch event, and conclusions are strictly speaking limited to this setting. However, on a speculative note, we believe that the present findings extend to a larger set of consumer behaviors, such as information search, positive word-of-mouth, or purchase decision. Indeed, one may expect the greater elaboration resulting from negative mood states to facilitate behaviors consistent with the commercial's claim, because it leads consumer to pay attention to, and to better integrate, the (strong) arguments displayed by

the commercial. In addition, since parent brand attitude did not reduce behavioral effectiveness observed in negative mood conditions, airing a commercial in such context may provide unfavorable brands with a means to manage the detrimental effect they could suffer from. Indeed, negative mood states limit reliance on parent brand attitude in favor of reliance on product information, making the former less influential. Finally, from a practitioner's perspective, the significant development of TV replay and streaming video websites provides marketers with relevant media to use our findings. More particularly, it gives media-planners the opportunity to choose the affective tone of movies or documentaries into which commercials are placed. It may seem counterintuitive, but selecting a documentary or movie sequence that induces negative mood states may prove beneficial.

7.3. Limitations

A first set of limitations relates to the results' generalizabilty. First, students were recruited as participants, albeit only those for whom some level of knowledge about and interest in cars appeared likely (we recruited only students who had a driving licence and owned a car). Although we have no reason to assume that the underlying psychological mechanisms documented here are specific to a student population only, future research may benefit from recruiting participants outside the university context. Second, all studies relied on the same product category (cars) and used the same material. Strictly speaking, our conclusions are therefore limited in this respect. But again, from a theoretical perspective (e.g., Bless's mood-and-general-knowledge model), we have no reason to assume that specific effects should be obtained for the product category or material we chose. With the necessary level of precaution, we therefore suggest that conclusions may generalize to other product categories and materials. A third limitation pertains to our behavioral measure. Although attendance at a launch event certainly represents an actual behavior, we did not assess true purchase behavior that might be

of higher interest with respect to managerial implications. Assessment of true purchase behavior is certainly commendable, and further studies may fruitfully continue here. In the meantime, attending a launch event is not a "cheap talk" behavior and thus constitutes a reasonably good proxy. In addition, buying a car is a multi-step process, in which participation in a launch event can be a relevant step forward.

8. Conclusion

We started by evoking a case in which a new product is launched as a continuation of an existing product-line, and we asked whether the advertising campaign is best aired in the midst of a happy or sad movie scene. Against the background of theorizing and evidence, we offer a three-pronged answer. First, transfer of brand attitude to product evaluation is particularly likely in conditions of positive mood. Hence, should brand attitude be favorable, advertising the new product in positive mood contexts is beneficial. Second, product arguments exert a strong impact on evaluation in conditions of negative mood. Hence, should the product have strong arguments on its side, negative mood contexts are helpful. Finally, if ad effectiveness is defined with respect to behavior, negative mood contexts are particularly conducive (when providing strong arguments in favor of the advertised product). This is because the link between product evaluation, intention, and actual behavior is stronger when evaluation results from the substantial elaboration of product information.

References

Adaval, R. (2003). How good gets better and bad gets worse: Understanding the impact of affect on evaluations of known brands. *Journal of Consumer Research,* 30(3), 352–367.

Ajzen, I. (2008). Consumer attitudes and behavior. In C. P. Haugtvedt, F. Kardes & P. Herr (Eds.), *Handbook of consumer psychology* (pp. 525-548), Mahwah, NJ: Lawrence Erlbaum Associates.

Bagozzi, R. P., Gopinath, M., & Nyer, P. U. (1999). The role of emotions in marketing. *Journal of the Academy of Marketing Science, 27*(2), 184–206.

Bakamitsos, G. A. (2006). A cue alone or a probe to think? The dual role of affect in product evaluation. *Journal of Consumer Research,* 33(3), 403–412.

Baker, S. M., & Petty, R. E. (1994). Majority and minority influence: Source-position imbalance as a determinant of message scrutiny. *Journal of Personality & Social Psychology,* 67(1), 5–19.

Barone, M. J. (2005). The interactive effect of mood and involvement on brand extension evaluations. *Journal of Consumer Psychology,* 15(3), 263–270.

Barone, M. J., & Miniard, P. W. (2002). Mood and brand extension judgments: Asymmetric effects for desirable versus undesirable brands. *Journal of Consumer Psychology,* 12(4), 283–290.

Barone, M. J., Miniard, P. W., & Romeo, J. B. (2000). The influence of positive mood on brand extension evaluations. *Journal of Consumer Research,* 26(4), 386-400.

Barry, T. E. (1987). The development of the hierarchy of effects: An historical perspective. *Current Issues and Research in Advertising*, 10(1-2), 251–295.

Batra, R., & Stayman, D. M. (1990). The role of mood in advertising effectiveness. *Journal of Consumer Research,* 17(2), 203–214.

Bless, H. (2000). The interplay of affect and cognition: The mediating role of general

knowledge structures. In J. P. Forgas (Ed.), *Feeling and thinking* (pp. 201–222). Cambridge: Cambridge University Press.

Bless, H., Clore, G. L, Schwarz, N., Golisano, V., Rabe, C., & Wölk, M. (1996). Mood and the use of scripts: Does happy mood make people really mindless? *Journal of Personality & Social Psychology,* 71(4), 665–679.

Bless, H., & Schwarz, N. (1999). Sufficient and necessary conditions in dual process models: The case of mood and information processing. In S. Chaiken & Y. Trope (Eds.), *Dual process theories in social psychology* (pp. 423–440). New York: Guilford Press.

Bless, H., & Schwarz, N. (2010). Mental construal and the emergence of assimilation and contrast effects: The inclusion/exclusion model. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 42, pp. 319–373). New York: Academic Press.

Bodenhausen, G. V. (1993). Emotions, arousal, and stereotypic judgments: A heuristic model of affect and stereotyping. In D. M. Mackie & D. L. Hamilton (Eds), *Affect, cognition, and stereotyping: Interactive processes in group perception* (pp. 13–37). San Diego, CA: Academic Press.

Bodenhausen, G. V., Kramer, G. P., & Süsser, K. (1994). Happiness and stereotypic thinking in social judgment. *Journal of Personality & Social Psychology*, 66(4), 621–632.

Bohner, G., Moskowitz, G. B., Chaiken, S. (1995). The interplay of heuristic and systematic processing of social information. In W. Stroebe & M. Hewstone (Eds.), *European Review of Social Psychology* (Vol. 6, pp. 33–68). Chichester: Wiley & Sons.

Brown, S. P., Homer, P. M., & Inman, J. (1998). A meta-analysis of relationships between ad-evoked feelings and advertising responses, *Journal of Marketing Research*, *35*(1), 114–126.

Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications and programming.* New York: Routledge.

Cacioppo, J. T., Petty, R. E., Kao, C. F., & Rodriguez, R. (1986). Central and peripheral routes to persuasion: An individual difference perspective. *Journal of Personality & Social Psychology*, 51(5), 1032–1043.

Clore, G. L., & Huntsinger, J. R. (2009). How the object of affect guides its impact. *Emotion Review*, 1(1), 39–54.

Clore, G. L., & Ortony, A. (2000). Cognition in emotion: Always, sometimes, or never. In R. D. Lane & L. Nadel (Eds.), *Cognitive neuroscience of emotion* (pp. 24–61). New-York: Oxford University Press.

Clore, G. L., Schwarz, N., & Conway, M. (1994). Affective causes and consequences of social information processing. In R. S. Wyer & T. K. Srull (Eds.), *Handbook of social cognition* (pp. 323–417). Hillsdale, MI: Lawrence Erlbaum Associates.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.

Goldberg, M. E., & Gorn, G. J. (1987). Happy and sad TV programs: How they affect reactions to commercials, *Journal of Consumer Research,* 14(3), 387–403.

Gorn, G. J., Goldberg, M. E., & Basu, K. (1993). Mood, awareness, and product evaluation. *Journal of Consumer Psychology*, 2(3), 237–256.

Gorn, G. J., Pham, M. T., & Sin, L. Y. (2001). When arousal influences ad evaluation and valence does not (and vice versa). *Journal of Consumer Psychology,* 11(1), 43–55.

Greifeneder, R., Bless, H., & Kuschmann, T. (2007). Extending the brand image on new product: The facilitative effect of happy mood states. *Journal of Consumer Behaviour,* 6(1), 19–31.

Greifeneder, R., Bless, H., & Pham, M. T. (2011). When do people rely on affective and cognitive feelings in judgements? A review. *Personality & Social Psychology Review,* 15(2), 107–141.

Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs,* 76(4), 408–420.

Hirt, E. R., Levine, G. M., McDonald, H. E., Melton, R. J., & Martin, L. L. (1997). The role of mood in quantitative and qualitative aspects of performance: Single or multiple mechanisms?. *Journal of Experimental Social Psychology*, 33(6), 602–629.

Holbrook, M. B., & O'Shaugnessy, J. (1984). The role of emotion in advertising, *Psychology & Marketing,* 1(2), 45–64.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling,* 6**(**1), 1–55.

Hullett, C. R. (2005). The impact of mood on persuasion: A meta-analysis. *Communication Research,* 32(4), 423–442.

Huntsinger, J. R. (2012). Does positive affect broaden and negative affect narrow attentional scope? A new answer to an old question. *Journal of Experimental Psychology: General*, 141(4), 595–600.

Huntsinger, J. R. (2013). Does emotion directly tune the scope of attention?. *Current Directions in Psychological Science*, 22(4), 265–270.

Iacobucci, D. (2010). Structural equations modeling: Fit indices, sample size, and advanced topics. *Journal of Consumer Psychology*, 20(1), 90–98.

Isen, A. M. (1987). Positive affect, cognitive processes, and social behavior. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 20, pp. 203–253). San Diego, CA: Academic Press.

Isen, A. M., & Daubman, K. A. (1984). The influence of affect on categorization. *Journal of Personality & Social Psychology,* 47(6), 1206–1217.

Isen, A. M., Niedenthal, P. M., & Cantor, N. (1992). An influence of positive affect on social categorization. *Motivation and Emotion,* 16(1), 65–78.

Jöreskog, K. G. (1970). A general method for analysis of covariance structures. *Biometrika*, 57(2), 239–251.

Juster, F. T. (1966). Consumer buying intentions and purchase probability: An experiment in survey design. *Journal of the American Statistical Association*, 61(315), 658–696.

Klink, R. R., & Smith, D. C. (2001). Threats to the external validity of brand extension research. *Journal of Marketing Research*, 38(3), 326–335.

Krauth-Gruber, S., & Ric, F. (2000). Affect and stereotypic thinking: A test of the mood-and-general-knowledge model. *Personality & Social Psychology Bulletin,* 26(12), 1587–1597.

Leippe, M. R., & Elkin, R. A. (1987). When motives clash: Issue involvement and response involvement as determinants of persuasion. *Journal of Personality & Social Psychology*, 52(2), 269–278.

Little, T. D., Bovaird, J. A., & Widaman, K. F. (2006). On the merits of orthogonalizing powered and product terms: Implications for modeling interactions among latent variables. *Structural Equation Modeling*, *13*(4), 497–519.

Mackie, D. M., Asuncion, A. G., & Rosselli, F. (1992). The impact of positive affect on persuasion processes. In M. S. Clark (Ed.), *Emotion and social behaviour* (pp. 247–270). Thousand Oaks, CA: Sage.

MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods,* 7(1), 83–104.

Martin, R., Martin, P. Y., Smith, R. S., & Hewstone, M. (2007). Majority versus minority influence and predictions of behavioral intentions and behavior. *Journal of Experimental Social Psychology,* 43(5), 763–771.

Martin, L. L., Ward, D. W., Achee, J. W., & Wyer, R. S. (1993). Mood as input: People have to

interpret the motivational implications of their moods. *Journal of Personality & Social Psychology*, 64(3), 317–326.

Mathur, M., & Chattopadhyay, A. (1991). The impact of moods generated by television programs on responses to advertising. *Psychology & Marketing*, 8(1), 61–76.

Park, J., & Banaji, M. R. (2000). Mood and heuristics: the influence of happy and sad states on sensitivity and bias in stereotyping. *Journal of Personality & Social Psychology*, 78(6), 1005–1023.

Petty, R. E., Cacioppo, J. T., & Schumann, D. (1983). Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of Consumer Psychology,* 10(2), 532–543.

Petty, R. E., Haugtvedt, C. P., & Smith, S. M. (1995). Elaboration as a determinant of attitude strength: Creating attitudes that are persistent, resistant, and predictive behavior. In R. E. Petty, & J. A. Krosnick (Eds.), *Attitude strength: Antecedents and consequences* (pp. 93–130)*.* Mahwah, NJ: Lawrence Erlbaum Associates.

Pham, M. T. (1998). Representativeness, relevance, and the use of feelings in decision making. *Journal of Consumer Research*, 25(2), 144–159.

Pham, M. T. (2004). The logic of feeling. *Journal of Consumer Psychology,* 14(4), 360–369.

Rucker D. D., Petty, R. E., & Priester J. R. (2007). Understanding advertising effectiveness from a psychological perspective: The importance of attitudes and attitude strength. In G. J. Tellis & T. Ambler (Eds.), *The handbook of advertising* (pp. 73–88). Thousand Oaks, CA: Sage.

Schneider, J., & Hall, J. (2011). Why most product launches fail. *Harvard Business Review*, 89(4), 21-23.

Schwarz, N. (2004). Meta-cognitive experiences in consumer judgment and decision making. *Journal of Consumer Psychology,* 14(4), 332–348.

Schwarz, N., Bless, H., & Bohner, G. (1991). Mood and persuasion: Affective states influence the processing of persuasive communications. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 24, pp. 161–197). New York: Academic Press.

Schwarz, N., & Clore, G. L. (1983). Mood, misattribution, and judgments of well-being: Informative and directive functions of affective states. *Journal of Personality & Social Psychology,* 45(3), 513–523.

Schwarz, N., & Clore, G. L. (2003). Mood as information: 20 years later. *Psychological Inquiry*, 14(3-4), 296–303.

Steenkamp, J. B. E. M., & Baumgartner, H. (1998). Assessing measurement invariance in cross-national consumer research. *Journal of Consumer Research*, 25(1), 78–107.

Tafani, E., Haguel, V., & Ménager, A. (2007). Des images de marque aux représentations sociales des marques : une application dans le secteur de l'automobile. *Cahiers Internationaux de Psychologie Sociale*, *73,* 27-46.

Tafani, E., Michel, G., & Rosa, E. (2009). Vertical product line extension strategies: An evaluation of brand halo effect according to range level. *Research & Applications in Marketing,* 24(2), 73–88.

Vakratsas, D., & Ambler, T. (1999). How advertising works: what do we really know? *Journal of Marketing,* 63(1), 26–43.

Wegener, D. T., & Petty, R. E. (1996). Effects of mood on persuasion processes. In L. L. Martin & A. Tesser (Eds.), *Striving and feeling: Interactions among goals, affect, and self-regulation* (pp. 303–328). Mahwah, NJ: Lawrence Erlbaum Associates.

Wegener, D. T., Petty, R. E., & Smith, S. M. (1995). Positive mood can increase or decrease message scrutiny: The hedonic contingency view of mood and message processing. *Journal of Personality & Social Psychology,* 69(1), 5–15.

Williams, J., & MacKinnon, D. P. (2008). Resampling and distribution of the product methods

for testing indirect effects in complex models. *Structural Equation Modeling,* 28(1), 23–51.

Yoo, C., & MacInnis, D. J. (2005). The brand attitude formation process of emotional and informational ads. *Journal of Business Research*, 58 (10), 1397–140.

Table 1
Hypotheses overview.

Topic	Label	Prediction	Target Study
Reliance on Brand Attitude	H1a	Brand attitude has a stronger impact on product evaluation when mood is positive compared to negative.	Studies 1, 2 & 3
	H1b	Brand attitude has a stronger impact on product evaluation when mood is positive compared to neutral.	Study 1
	H1c	Brand attitude has a stronger impact on product evaluation when mood is neutral compared to negative.	Study 1
	H1d	Brand attitude has a stronger impact on purchase intention when mood is positive compared to negative.	Studies 2 & 3
Elaboration of product information	H2a	Elaboration of product information is higher when mood is negative compared to neutral.	Study 1
	H2b	Elaboration of product information is higher when mood is negative compared to positive.	Studies 1, 2 & 3
	H2c	The quality of product arguments has a stronger impact on elaboration when mood is negative compared to positive.	Study 2
Judgemental and Conative Effectiveness	H3a	The quality of arguments has a stronger impact on product evaluation when mood is negative compared to positive.	Study 2
	H3b	The quality of arguments has a stronger impact on intention when mood is negative compared to positive.	Study 2
Behavioral Effectiveness	H4	In the case of strong arguments, behavioral effectiveness is higher when mood is negative compared to positive.	Study 3

Table 2
Means (Standard Deviations) and ANOVAs for product evaluation and ratio of favorable thoughts as a function of program-induced mood and brand attitude: Study 1.

	Negative Mood		Neutral Mood		Positive Mood	
	Unfavorable Brand Attitude (Fiat)	Favorable Brand Attitude (VW)	Unfavorable Brand Attitude (Fiat)	Favorable Brand Attitude (VW)	Unfavorable Brand Attitude (Fiat)	Favorable Brand Attitude (VW)
Product Evaluation	5.98 (2.18)	6.43 (1.80)	5.56 (2.08)	6.89 (1.94)	4.53 (1.64)	7.39 (1.52)
	Df	Sum of Squares	Mean Square	*F*-value	*p*-value	η^2
Mood	2	2.56	1.28	0.36	*p*=.70	.00
Brand Att.	1	107.85	107.85	30.66	*p*<.001	.14
Mood * Brand Att.	2	44.24	22.12	6.29	*p*<.01	.06
Error	174	612.1	3.52			
Fav. Thoughts Ratio	0.37 (0.42)	0.41 (0.38)	0.22 (0.39)	0.26 (0.38)	0.11 (0.37)	0.19 (0.43)
	Df	Sum of Squares	Mean Square	*F*-value	p-value	η^2
Mood	2	1.75	0.88	5.58	*p*<.01	.06
Brand Att.	1	0.13	0.13	0.85	*p*=.36	.00
Mood * Brand Att.	2	0,02	0,01	0.05	*p*=.95	.00
Error	174	41,41	41,41			

Table 3
Standardized regression coefficients of product evaluation onto brand attitude and ratio of favorable thoughts as a function of program-induced mood: Study 1.
Note: *p<.05; **p<.01; ***p<.001

	Negative Mood	Neutral Mood	Positive Mood
Brand Attitude	.15	.51***	.76***
Favorable Thoughts Ratio	.41**	.13	.01

Table 4
Means (Standard Deviations) for product evaluation, purchase intention, and ratio of favorable thoughts as a function of program-induced mood, brand attitude, and quality of product arguments: Study 2.

	Negative Mood				Positive Mood			
	Unfavorable Brand Attitude (Fiat)		Favorable Brand Attitude (Volkswagen)		Unfavorable Brand Attitude (Fiat)		Favorable Brand Attitude (Volkswagen)	
	Weaker Arguments	Stronger Arguments	Weaker Arguments	Stronger Arguments	Weaker Arguments	Stronger Arguments	Weaker Arguments	Stronger Arguments
Product Evaluation	5.84 (2.48)	7.29 (2.06)	6.31 (2.13)	7.48 (1.52)	5.26 (2.11)	5.50 (1.86)	7.53 (1.72)	7.96 (1.58)
Purchase Intention	3.83 (2.23)	4.97 (2.44)	4.53 (2.83)	5.23 (2.66)	3.27 (1.91)	3.77 (2.11)	5.70 (2.47)	5.53 (2.27)
Ratio of favorable thoughts	0.31 (0.26)	0.52 (0.33)	0.38 (0.27)	0.63 (0.21)	0.25 (0.21)	0.26 (0.34)	0.35 (0.26)	0.41 (0.23)

Table 5
Correlation matrix and indexes of convergent validity (Study 2)

	Mood State (1)	Arguments Quality (2)	Brand Attitude (3)	Product Evaluation (4)	Thought Ratio (5)	Purchase intention (6)
1	1.00	-.04	-.03	.04	-.25***	-.07
2		1.00	.03	.21**	.23**	.11
3			1.00	.34***	.09	.26***
4				1.00	.23**	.50***
5					1.00	.20**
6						1.00
Jöreskog's *rho*	.90	__	.88	.83	__	__
Average Variance Extracted	.74	__	.70	.64	__	__

Table 6

Assessment of measurement and structural invariance across groups: Indexes of model fit and model comparisons (Study 2).

	$\chi^2(df)$	RMSEA	SRMR	TLI	CFI	Model Comparisons
Configural Invariance (Model 2)	64.55 (40)	.05	.04	.96	.97	
Full Metric Invariance (Model 3)	68.75 (46)	.05	.04	.96	.97	Model 2 *vs.* 3 $\Delta\chi^2(6)=4.20$, $p=.6496$
Full Scalar Invariance (Model 4)	73.58 (52)	.05	.04	.96	.97	Model 3 *vs.* 4 $\Delta\chi^2(6)=4.83$, $p= 5658$
Structural Invariance (Model 5)	123.81 (61)	.07	.09	.91	.93	Model 4 *vs.* 5 $\Delta\chi^2(9)=50.23$, $p<.001$

Table 7
Standardized path coefficients as a function of program-induced mood in Study 2.
Note: *p<.05; **p<.01; ***p<.001

Pathways	Negative Mood	Positive Mood	Comparisons
Brand Attitude → Fav. Thoughts Ratio	.05	.28**	z=1.80, p< .08
Brand Attitude → Product Evaluation	.36***	.74***	z=2.54, p<.02
Brand Attitude → Purchase Intention	.01	.63***	z=3.71, p<.001
Arguments Quality → Fav. Thoughts Ratio	.39***	.04	z=3.07, p<.001
Arguments Quality → Product Evaluation	.23*	.03	z=1.40, ns
Arguments Quality → Purchase Intention	.08	-.02	z=1.17, ns
Fav. Thoughts Ratio → Product Evaluation	.25**	-.12	z=2.93, p<.001
Fav. Thoughts Ratio → Fav. Thoughts Ratio	.03	.00	z=0.32, ns
Product Evaluation → Purchase Intention	.75***	-.01	z=4.21, p<.001

Table 8
Means (Standard Deviations) for product evaluation, purchase intention, ratio of favorable thoughts, and percentage of actual participation as a function of program induced mood and brand attitude: Study 3.

	Negative Mood		Positive Mood	
	Unfavorable Brand Attitude (Fiat)	Favorable Brand Attitude (Volkswagen)	Unfavorable Brand Attitude (Fiat)	Favorable Brand Attitude (Volkswagen)
Product Evaluation	6.91 (1.97)	7.13 (1.91)	5.93 (1.78)	7.80 (1.40)
Purchase Intention	4.75 (2.56)	5.03 (2.39)	3.40 (2.33)	5.99 (2.12)
Ratio of favorable thoughts	0.55 (0.23)	0.52 (0.31)	0.33 (0.26)	0.43 (0.27)
Actual Participation	21%	26%	6%	14%

Table 9

Correlation matrix and indexes of convergent validity (Study 3)

	Mood State (1)	Brand Attitude (2)	Product Evaluation (3)	Thought Ratio (4)	Purchase intention (5)	Event Attendance (6)
1	1.00	.03	-.05	-.25***	-.04	-18***
2		1.00	.30***	.07	.28***	.09
3			1.00	.31***	.55***	.30***
4				1.00	.28**	.22***
5					1.00	.33**
6						1.00
Jöreskog's rho	.92	.87	.86	—	—	—
Average Variance Extracted	.80	.69	.66	—	—	—

Table 10

Assessment of measurement and structural invariance across groups: Indexes of model fit and model comparisons (Study 3).

	$\chi^2(df)$	RMSEA	SRMR	TLI	CFI	Model Comparisons
Configural Invariance (Model 5)	73.78 (41)	.05	.03	.96	.98	
Full Metric Invariance (Model 6)	75.00 (47)	.04	.03	.97	.98	Model 5 *vs.* 6 $\Delta\chi^2(6)=1.22$, $p=.9759$
Full Scalar Invariance (Model 7)	79.90 (53)	.04	.03	.97	.98	Model 6 *vs.* 7 $\Delta\chi^2(6)=4.90$, $p=.5557$
Structural Invariance (Model 8)	145.89 (63)	.06	.09	.93	.94	Model 7 *vs.* 8 $\Delta\chi^2(10)=65.99$, $p<.001$

Table 11
Standardized Path Coefficients as a function of program-induced mood in Study 3.
Note: *p<.05; **p<.01; ***p<.001

Pathways	Negative Mood	Positive Mood	Comparisons
Brand Attitude → Fav. Thoughts Ratio	.05	.33***	z=2.66, p<.01
Brand Attitude → Product Evaluation	.26***	.70***	z=4.02, p<.001
Brand Attitude → Purchase Intention	.11	.34***	z=1.99, p<.05
Brand Attitude → Participation	.11	.46***	z=2.07, p<.04
Fav. Thoughts Ratio → Product Evaluation	.41***	-.04	z=4.72, p<.001
Fav. Thoughts Ratio → Purchase Intention	.09	.06	z=0.30, ns
Fav. Thoughts Ratio → Participation	.10	-.07	z=1.71, ns
Product Evaluation → Purchase Intention	.60***	.19	z=2.87, p<.01
Product Evaluation → Participation	.06	-.05	z=.72, ns
Purchase Intention → Participation	.33***	.02	z=2.97, p<.01

Fig. 1. Standardized Path Coefficients as a function of program-induced mood (Study 2**).**

*Note: solid (dotted) arrows indicate (non) significant pathways, *p<.05; **p<.01; ***p<.001.*
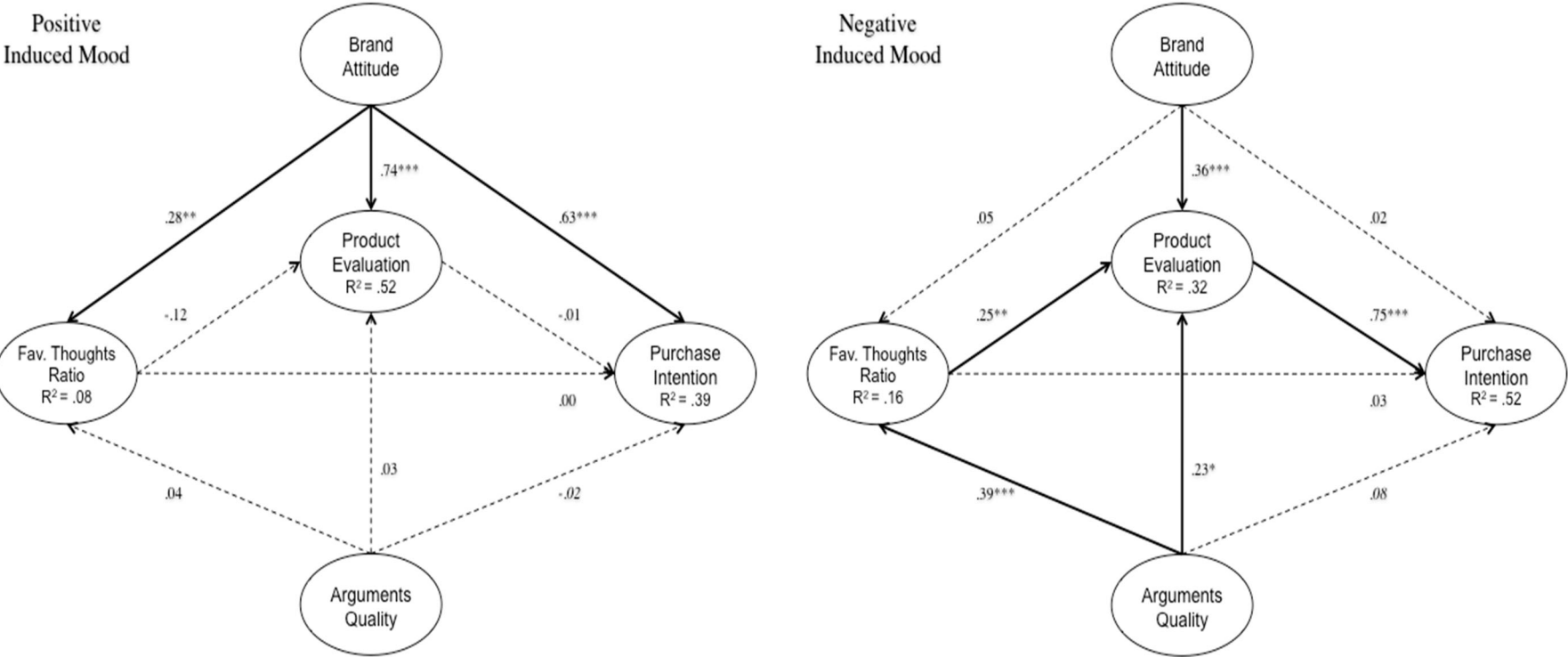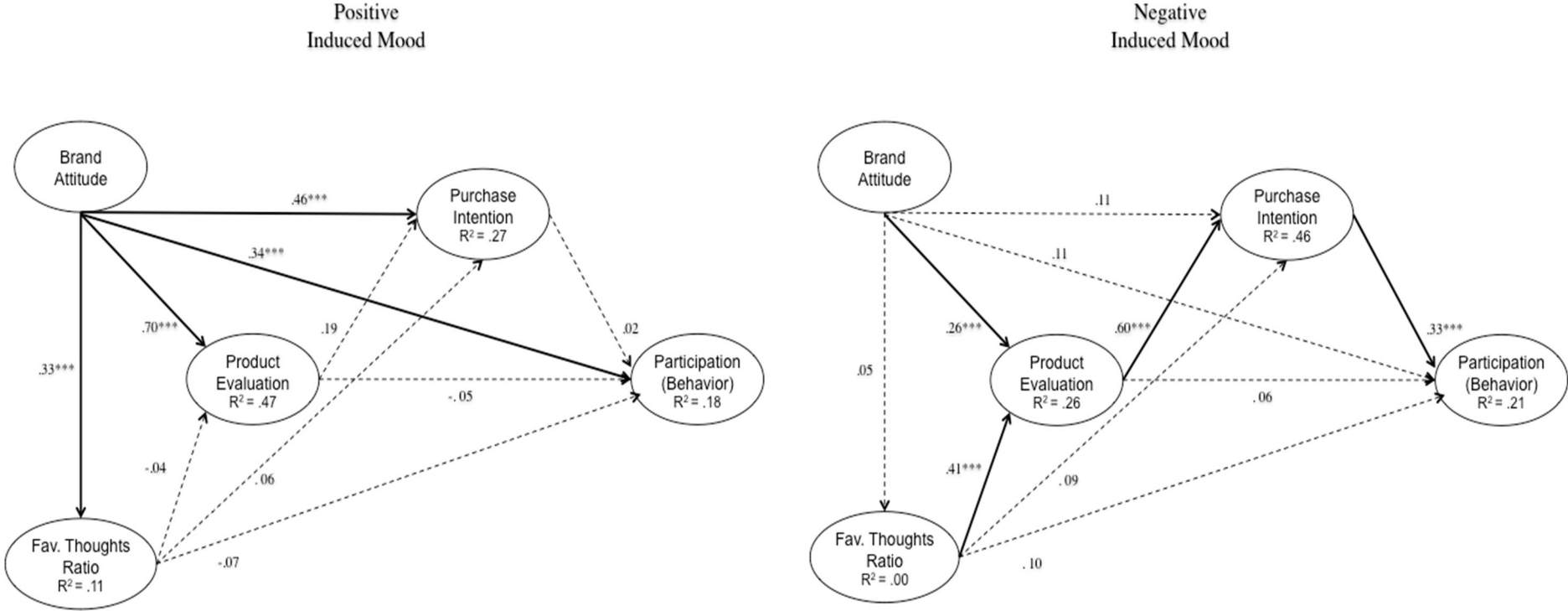
Fig. 2. Standardized Path Coefficients as a function of program-induced mood (Study 3).

Note: solid (dotted) arrows indicate (non) significant pathways, *p<.05; **p<.01; ***p<.001.

Appendix A. Example of car views used in the TV commercials.