

MSc Thesis

**The Effect of Good-ending and Bad-ending Stories on  
Brand Evaluation in Evaluative Conditioning and the  
Mediating Role of the Need for Affect**

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## **Abstract**

To date, only one study by Strick and Volbeda (2018), titled 'When the valence of unconditioned stimuli evolves over time: Evaluative conditioning with good-ending and bad-ending stories', investigated stories in the context of evaluative conditioning to change brand attitudes. To find additional support for stories as unconditioned stimuli, we performed a partial replication of this study. As an extension, we also investigated the role of the need for affect as a mediator in this conditioning process. Our study had a within-subject design, in which MTurk workers (N = 66) participated in both our good- and bad-ending story conditions. In line with the original study and our hypothesis, our results suggest that the valence of the story ending determines the direction of the conditioning effect. Brands presented after good-ending stories have a stronger brand liking than brands presented after bad-ending stories. In practice, this would imply that advertisements should always end positively to induce a positive brand evaluation. Furthermore, as we hypothesized, our results indicate that the need for affect mediates this conditioning effect as people with a high need for affect rate brands more emotionally and strongly according to the story-ending valence than people with a low need for affect. Future research may distinguish other characteristics that mediate this effect to identify separate groups for targeted advertisements. To conclude, the ending of dramatic stories is determinative in brand evaluation when the brand is presented directly after, and the effect of these story endings is mediated by the need for affect.

*Keywords:* Storytelling; Advertising; Evaluative Conditioning; Backward Conditioning; Explicit Attitude; Need for Affect; Emotions

## **Introduction**

From childhood on to adulthood, stories play a crucial role in our life. Not only do we exchange a considerable part of information in a story format (Appel & Malečkar, 2012; Appel & Richter, 2010), humans have been long known to have a narrative way of thinking (Escalas, 2006; Weick, 1995). From bedtime stories to soap operas and biographies to documentaries, both fictional and nonfictional stories can inform

us of useful information on a variety of subjects. Apart from the informational value, some stories are meant to entertain, whereas others, like advertisements, are primarily meant to persuade. Despite the intent, stories in either verbal or visual form have been shown to have a strong influence on our attitudes (e.g., Green & Brock, 2002; Green & Donahue, 2009; Prentice, Gerrig, & Bailis, 1997; Strange & Leung, 1999).

The attitudes, or overall evaluations of an attitude object (e.g., person, place, or object), we hold can be based on affective, cognitive, and behavioral information (Haddock & Maio, 2004). Generally, we acquire our attitudes through associative learning (e.g., classical, operant, or evaluative conditioning), in which an association between two stimuli is learned (De Houwer, 2009; Haddock & Maio, 2004). Evaluative conditioning, in which the liking of a neutral conditioned stimulus is subject to change by the pairing with an affective unconditioned stimulus (De Houwer, 2009; De Houwer, Thomas, & Baeyens, 2001), is, for example, extensively used in advertising to change the liking of a brand or product. An example of an advertisement could be when it forms an association between a brand name and images of smiling people to develop a positive attitude towards the brand (De Houwer, 2009).

Research on evaluative conditioning demonstrates that when a brand is paired with a particular affective stimulus, the brand will take on the valence of that stimulus (Allen & Janiszewski, 1989; Shimp, Stuart, & Engle, 1991). Various stimuli have been studied after their ability to transfer a positive attitude to a brand, among these stimuli were music, pictures, odor, and humor (De Houwer et al., 2001). The commonality between these stimuli is that they had a stable valence (Strick & Volbeda, 2018). Stimuli of changing valence, however, for example, stories, had not been examined before in evaluative conditioning trials. To close this research gap, a recent study by Strick and Volbeda (2018) investigated the use of dramatic stories as unconditioned stimuli in evaluative conditioning trials.

The authors combined good- and bad-ending stories with either a before beginning, before end or after end brand presentation, making up a total of six conditions (2 story ending x 3 brand presentation timing). The study consisted of

three experiments; Experiment 1 tested the conditioning effect in a laboratory setting using an implicit and explicit attitude measure, Experiment 2 aimed to replicate Experiment 1 in the less-controlled online environment of Amazon Mechanical Turk (Amazon's online labor market) using only the explicit attitude measure, lastly Experiment 3 was similar to Experiment 2 but reversed the order of story segments (i.e., presenting the ending before the beginning). From the three experiments was concluded that the valence of the story ending, independent of the valence of the beginning, influences the conditioning effect (i.e., the explicit attitude towards the brand) the most. Specifically, brands that are presented directly after the story endings produced the strongest effects, resulting in greater brand liking for good-ending stories and lesser brand liking for bad-ending stories ( $d = 0.33$ ). However, this is the only study, to date, to investigate the use of stories in evaluative conditioning trials to influence attitudes towards an attitude object. Furthermore, any individual characteristics that could play a part in this relationship remain unclear.

The current study, therefore, performed a (partial) replication to aim to establish repeatability and strengthen both reliability and validity. Additionally, as certain individual characteristics might determine the extent to which narrative stories have an impact, and attitudes can be formed based on affective information (Haddock & Maio, 2004), we investigated the need for affect as a predictor in the relationship between the story-ending valence and explicit attitude. The need for affect is a construct that represents an individual's motivation to approach or avoid emotion-inducing situations and activities, that is related to being motivated to view emotional movies, and to getting engaged with emotional public events like the death of Princess Diana (Maio & Esses, 2001). Before going in more detail at this point, we will first discuss narrative advertising and dramatic stories in the following paragraphs, after which the need for affect, and the study objectives will be discussed more extensively.

### ***Narrative advertising***

Narrative advertising, or storytelling, provides brands with the power to capture an individual's attention and achieve greater emotional engagement (Escalas, 1998;

Escalas, 2004; Woodside, Sood, & Miller, 2008). Whereas argumentative advertisements feature arguments and factual product information, narrative advertisements stress brand values and evoke emotion through the use of stories (Dessart, 2018). Remarkably, narrative advertisements are evidenced to hold more persuasive power in changing brand attitudes than argumentative advertisements (Chang, 2009; Escalas, 2004). However, in contrast to evaluative conditioning studies in which the conditioned and unconditioned stimulus are unrelated to each other, these studies investigated advertisements in which brands and storylines are intertwined and related to each other. Narrative-based persuasion is thought to be induced by transportation, which describes the extent to which individuals are carried away by the emotional journey of a story (Appel & Richter, 2010; Escalas, 2004; Green & Brock, 2000). When people are transported, they are more likely to be persuaded by the story and, consequently, match their beliefs and attitudes to those of the story (Appel & Richter, 2010; Green and Brock, 2000). In addition, greater use of drama in advertisements is indicated to lead to greater rates of immersion and transportation (Deighton, Romer, & McQueen, 1989).

### ***Dramatic stories***

One of the important aspects to a story, especially narrative advertisements, is the story structure, as it is determinative of the narrative delivery (Reagan, Mitchell, Kiley, Danforth, & Dodds, 2016). The structure is determined by chronology and causality (Escalas, 1998), in which chronology organizes the sequence of events in a dimension of time and causality defines the relationship between the different story events. Other elements a story should include are a protagonist, a basic conflict and an outcome (Bennett & Royle, 2004). In general, a story is built as follows: from beginning to end, the story follows the events a protagonist goes through. Then, somewhere during the story, this protagonist encounters a basic conflict (e.g., dilemma, personal block) that he or she will try to resolve. This conflict and the following events then build up the tension or suspense towards the outcome to increase emotional experience and story involvement in the receiver (Woodside et

al., 2008). Finally, the succeeding or failing to resolve the conflict defines whether the outcome of the story will constitute a good or bad ending.

The sequence of the events, or emotional journey, in a story determines the emotional arc of the story. Research suggests a set of six emotional arcs to summarize all story shapes: 'Rags to riches' (rise), 'Riches to rags' (fall), 'Man in a hole' (fall-rise), 'Icarus' (rise-fall), 'Cinderella' (rise-fall-rise), 'Oedipus' (fall-rise-fall; Reagan et al., 2016). For example, the 'Riches to rags' story represents the protagonist starting off badly to end up even worse. The most important feature of the emotional arc is likely to be the ending, specifically the ending valence, as it determines the liking (Iran-Nejad, 1987) and may influence the overall persuasiveness of the narrative (Hamby & Brinberg, 2016). The story-ending valence, as determined by the emotional charge, lists the story as good or bad ending. The valence of the story ending is indicated to be transferred on to the receiver, causing a positive response after a good-ending story, and vice versa (Scott, 1994). Pleasurable feelings particularly arise when, after a sequence of suspenseful events, the narrative is relieved from its negative valence (Plantinga, 2018).

### ***Need for affect***

The extent to which narrative stories impact individuals is based on individual differences in, for example, the need for affect, a personality trait helpful in understanding processes related to feelings and emotions (Appel & Richter, 2010; Maio & Esses, 2001). As briefly mentioned, the need for affect represents an individual's motivation to approach or avoid emotion-inducing situations and activities (Maio & Esses, 2001). While people naturally prefer positive affective states (e.g., happiness) over negative affective states (e.g., sadness; Plantinga, 2018), individuals with a high need for affect pursue to experience feelings and emotions in general (Appel, Gnambs, & Maio, 2012; Haddock & Maio, 2004). When it comes to persuasion, people with a high need for affect are more likely to be influenced in their attitudes and behavior by their emotions (Maio & Esses, 2001), are more strongly influenced by emotional messages (Haddock, Maio, Arnold, & Huskinson, 2008), and

are more likely to hold extreme attitudes than individuals with a low need for affect, as they are more likely to make use of the positive and negative emotional information during attitude formation (Haddock & Maio, 2004).

Emotionally charged information (e.g., dramatic stories) is suggested to more persuasive and more successful in changing an attitude towards an attitude object than factual information, as individuals with a high need for affect seek and enjoy affective stimulation (Appel et al., 2012; Appel & Richter, 2010; Green & Brock, 2002; Haddock & Maio, 2004). Due to their motivation to seek emotion, individuals with a high need for affect are suggested to be more inclined to become immersed and transported in a narrative (Appel et al., 2012; Appel & Richter, 2010; Green & Brock, 2000; Thompson & Haddock, 2012). The opposite is indicated to be true for individuals with a low need for affect. Due to their lower rate of transportation, individuals with a low need for affect show a less emotional response and presumably, as the manipulative intent becomes more clear, put more thought into counter-arguing the narrative objective (Appel, Richter, Mara, Lindinger, & Batinic, 2011).

### ***Study objectives***

As briefly mentioned, the current study had two purposes. First, we aimed to investigate the effect of the valence of story-endings on brand evaluation (i.e., explicit attitude) when the brand is presented after the story ending. This was done by performing a partial replication of Experiment 2 of the Strick and Volbeda (2018) study. This experiment was preferred over the first experiment as it took place in the less-controlled environment of Amazon Mechanical Turk and to replicate their results would, therefore, be more meaningful. In addition, this experiment was also preferred over the third experiment as it presents the story segments in chronological order. Furthermore, the before beginning and before end conditions of the original experiment were disregarded, as the after end condition was found to be the most promising condition. The after end condition had the strongest effects throughout the entirety of the study, whereas the other timing conditions yielded weaker or no effects at all. For our study, we hypothesized that brands presented after

good-ending stories would have a stronger brand liking than brands presented after bad-ending stories.

Second, as an extension to Experiment 2 of the original study, we aimed to investigate the role of the need for affect as a predictor in the relationship between the story-ending valence and brand evaluation (i.e., explicit attitude). As individuals with a high need for affect are more strongly influenced by their emotions, we predicted that individuals with a high need for affect would evaluate brands more emotionally than individuals with a low need for affect.

## **Methods**

### ***Participants and design***

The current cross-sectional study had a within-subject design, in which negative story beginnings with either a good- or bad-ending were combined with an after-end brand presentation. Participants were recruited through the online labor market Amazon Mechanical Turk (MTurk) until a minimum sample size of 59 was attained, as determined by a priori power analyses (see '*Statistical analyses*' for details). MTurk workers aged 18 or older who had participated in the negative story beginnings trials were included in the study ( $n = 66$ ). The exclusion criteria for participants were missing data on the explicit attitude measure and need for affect questionnaire ( $n = 0$ ).

### ***Materials***

Materials were obtained from the sources provided by the Strick & Volbeda study (Experiment 2; 2018). For the (neutral) conditioned stimulus in this evaluative conditioning, images of two foreign brands of mineral water were used (Ferrarelle and Fine; Appendix 1). The unconditioned stimuli in this evaluative conditioning included ten good-ending and ten bad-ending stories, of which the beginning segment always introduced a negative storyline (Appendix 2), resembling the 'Man in a hole' (fall-rise) and 'Riches to rags' (fall) emotional arcs, respectively (Reagan et al., 2016). The stories ranged from two to four sentences and depicted general

topics, among which social, health, and financial problems. With regard to the original stories, stories were slightly adjusted and shortened to improve the emotional valence and readability. An example of a good-ending story is: “Kevin’s basketball knee injury has lasted for more than a year and he has undergone multiple surgeries. Today, he was brought on as a substitute at the last game of the season and scored the winning goal.” An example of a bad-ending story is: “Nick loves his girlfriend very much but she is very distant and does not seem to care about him at all. At a party of the study association, he finds her kissing with an older student.”

### ***Conditioning procedure***

The evaluative conditioning script was written and carried out using Inquisit version 5. Before the beginning of the conditioning trial, participants were informed that they would be shown short stories combined with brands of mineral water. They were instructed to visualize the story as vividly as possible. Each participant was then presented with ten good-ending story (condition 1) and ten bad-ending story trials (condition 2) in a random order, making up a total of twenty conditioning trials. The trials went as follows (Figure 1); first the beginning segment of the story was presented (8000 ms), which was replaced by a blank screen (1000 ms), then the end segment of the story was presented (8000 ms), which was replaced by a blank screen (1000 ms), and lastly, a conditioned stimulus was presented (3000 ms), also replaced by a blank screen (1000 ms). The trials had an intertrial interval of 2000 ms. By means of the two counterbalancing trial blocks, the two conditioned stimuli were randomly assigned to either ten good-ending stories or ten bad-ending stories, but never with both within one set of trials. After the conditioning trials, participants were asked to fill in questions concerning their explicit attitude and need for affect.

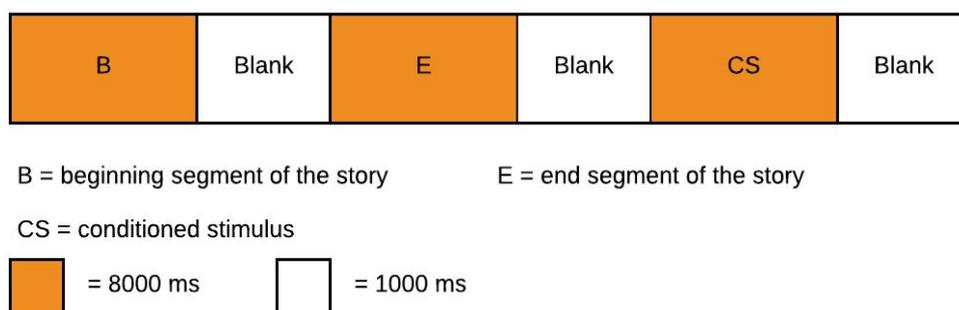


Figure 1. Schematic presentation of the conditioning trials

## Measurements

### *Explicit attitude*

The participant's explicit attitude (i.e., brand evaluation) was measured by asking the following questions: "How attractive do you find this brand?", "Does this brand appeal to you?", and "How much do you like this brand?". Likert scales ranging from 1 (not at all) to 7 (very much) were used to rate each question. Afterward, the ratings of the three questions were averaged into one score for each condition (i.e., good- and bad-ending stories) representing the explicit attitude. To check for internal consistency a Cronbach's alpha was calculated (Cronbach's alpha = 0.98). Notably, as was measured in a prior pilot study (N = 10) by Volbeda (2016), the two mineral water brands Ferrarelle and Fine attained an average explicit attitude of respectively 4.50 and 4.38 on a Likert scale from 1 (negative) to 7 (positive) before the start of the conditioning trials.

### *Need for affect*

The shortened version of the Need for Affect Questionnaire (NAQ-S; Appel et al., 2012; Appendix 3) was used to measure the participant's motivation to approach or avoid emotional situations. The NAQ-S consists of an approach and avoidance subscale with each five items. The ten items are scored on a seven-point scale ranging from -3 (strongly disagree) to +3 (strongly agree), with the total NAQ-S score varying between a minimum of -30 (low need for affect) and a maximum of +30 (high need for affect). An example item of the approach subscale is: "I feel that I need to

experience strong emotions regularly.” An example item of the avoidance subscale is: “I find strong emotions overwhelming and therefore try to avoid them.” As a shortened version of the well-established NAQ (Need for Affect Questionnaire; Maio & Esses, 2001), the NAQ-S has good reliability and high trait variance for assessing the need for affect (Appel et al., 2012). For interpretation purposes, the total NAQ-S scores were centered to make the mean match zero.

#### *Other characteristics*

Participants were also asked for their demographic data and remarks about the study. Demographic data included age and gender. Remarks about the study included the questions: “What do you think this research is about?” and “Do you have any comments on this research?”.

#### ***Statistical analyses***

A dependent t-test was carried out to analyze the difference in means of explicit attitudes (i.e., dependent variable) between the two different story-ending conditions (i.e., good- or bad-ending story; independent variable). Next, a repeated measures ANCOVA analysis was conducted to analyze the difference in means of explicit attitudes between the two story-ending conditions adjusted for the NAQ scores (i.e., predictor variable). From the ANCOVA analysis, the main effect of story ending and the interaction effect of story ending and need for affect were calculated. To further analyze the interaction between the need for affect and the explicit attitude that follows from the two different story-ending conditions, linear regression analyses were conducted. This was done separately for the good- and bad-ending story conditions. All statistical analyses were performed using SPSS version 25.

A priori power analyses were performed based on the outcome of the dependent t-test analyzing the explicit attitudes from the after end condition of Experiment 2 ( $d = 0.33$ ; Strick & Volbeda, 2018). With an estimated power of 80%, approximately 59 participants would need to be recruited. Due to technical reasons, we were unable to perform a power analysis for the repeated measures ANCOVA analysis. Power analyses were performed using G\*power version 3.

## **Results**

### ***Descriptive characteristics***

The current study population consisted of 66 MTurk workers, of which 54.54% were male ( $n = 36$ ). The age of the participants ranged from 24 to 65, with a mean age of 40.33 years ( $SD = 10.35$ ). The overall mean explicit attitude towards the mineral water brands after good-ending stories and bad-ending stories combined was 4.30 ( $SD = 0.92$ ), with a range from 2.50 to 7.00. Participants had a mean NAQ score of 9.05 points ( $SD = 12.00$ ).

### ***Association between explicit attitude and story ending***

A dependent t-test analysis was conducted to compare the mean explicit attitude after the good- and bad-ending stories. A visual depiction of the explicit attitude results can be found in Figure 2. The results revealed a significant difference between the explicit attitudes from the good-ending and bad-ending story conditions ( $t(65) = 6.42$ ,  $p < 0.001$ ,  $d = 0.79$ ). This means that the explicit attitude was significantly higher after the good-ending stories ( $M = 5.34$ ,  $SD = 1.34$ ) as compared to after the bad-ending stories ( $M = 3.26$ ,  $SD = 1.83$ ). On average, the explicit attitude after the good-ending stories was 2.08 points higher than the explicit attitude after bad-ending stories (95% CI [1.43, 2.73]).

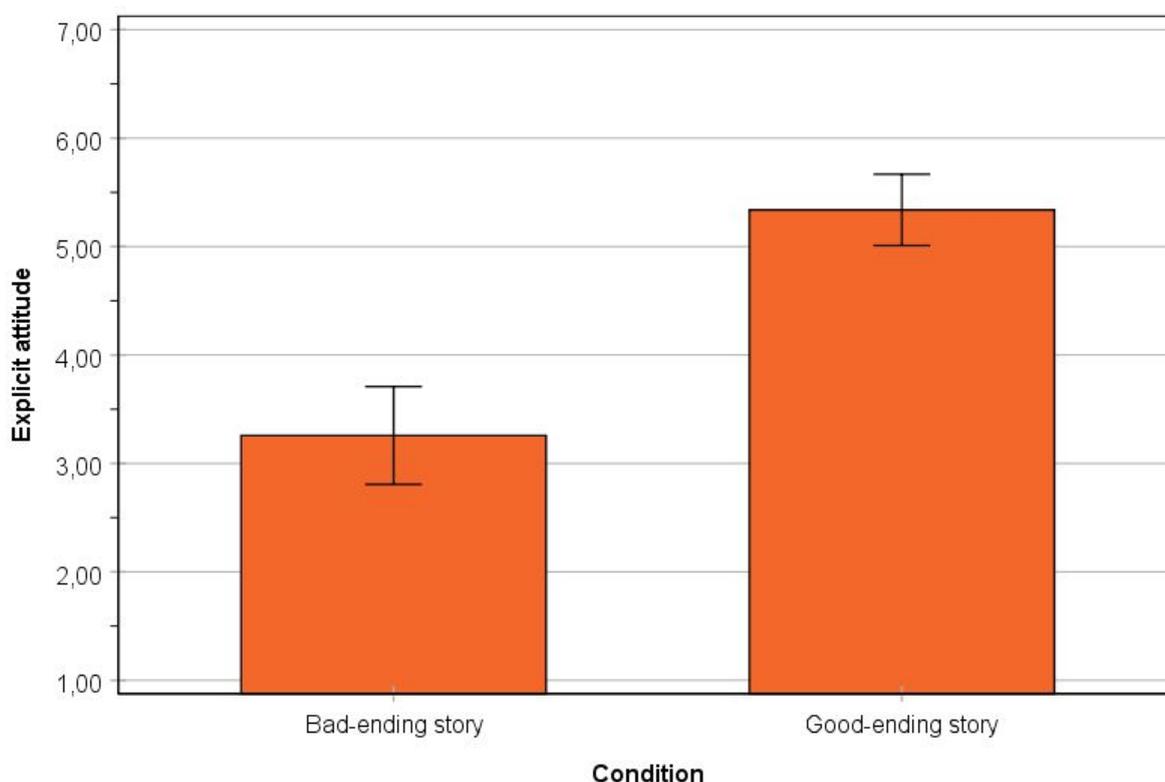


Figure 2. Explicit attitude as a function of story ending. Error bars represent 95% confidence intervals.

### ***Association between explicit attitude, story ending and need for affect***

A repeated measures ANCOVA analysis was conducted to investigate the effect of NAQ on the difference between the good- and bad-ending story conditions on the explicit attitude. There was a significant main effect of story ending on explicit attitude after controlling for NAQ ( $F(1, 64) = 43.95, p < 0.001$ ), with a partial  $\eta^2$  of 0.41. This indicates that the explicit attitude was significantly higher in the good-ending story condition ( $M = 5.34, SD = 1.34$ ) than in the bad-ending story condition ( $M = 3.26, SD = 1.83$ ). Conceptually, this analysis is similar to the dependent t-test analysis of the difference in explicit attitudes between good- and bad-ending stories.

Furthermore, the results of the analysis revealed a significant interaction effect of the need for affect and story ending on explicit attitude ( $F(1, 64) = 5.39, p = 0.023$ ), with a partial  $\eta^2$  of 0.08. This indicates that the explicit attitude is dependent on the combination of the NAQ score and story-ending condition. A visual depiction

of the relationship between the explicit attitude and the interaction between NAQ and story ending can be found in Figure 3. To further investigate the interaction effect of the need for affect and good- and bad-ending story conditions, and understand the effect of NAQ on brand evaluation, two regression analyses were performed, for good- and bad-ending stories, respectively.

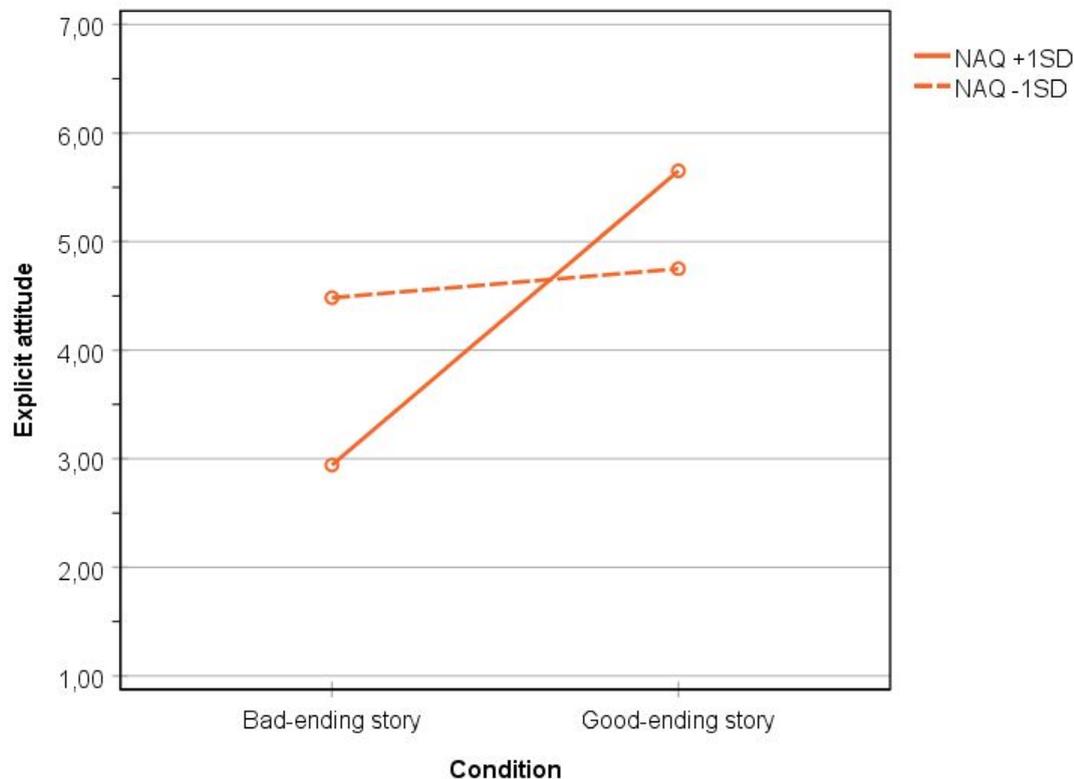


Figure 3. Relationship between the explicit attitude and the interaction between story ending and NAQ score. The solid and dashed lines represent the high and low NAQ scores, respectively 1 SD above and below the mean NAQ score.

#### Good-ending story condition

A linear regression analysis was calculated to predict the explicit attitude in the good-ending story condition based on NAQ scores. A visual depiction of these data points can be found in Figure 4 (depicted as orange circles). The results of the regression revealed that NAQ does not significantly contribute to the regression model ( $F(1, 64) = 2.57, p = 0.11$ ), with an  $R^2$  of 0.04. This indicates that the need for

affect does not significantly predict the explicit attitude that follows after a good-ending story. The explicit attitude after good-ending stories increased with 0.02 points for each NAQ point.

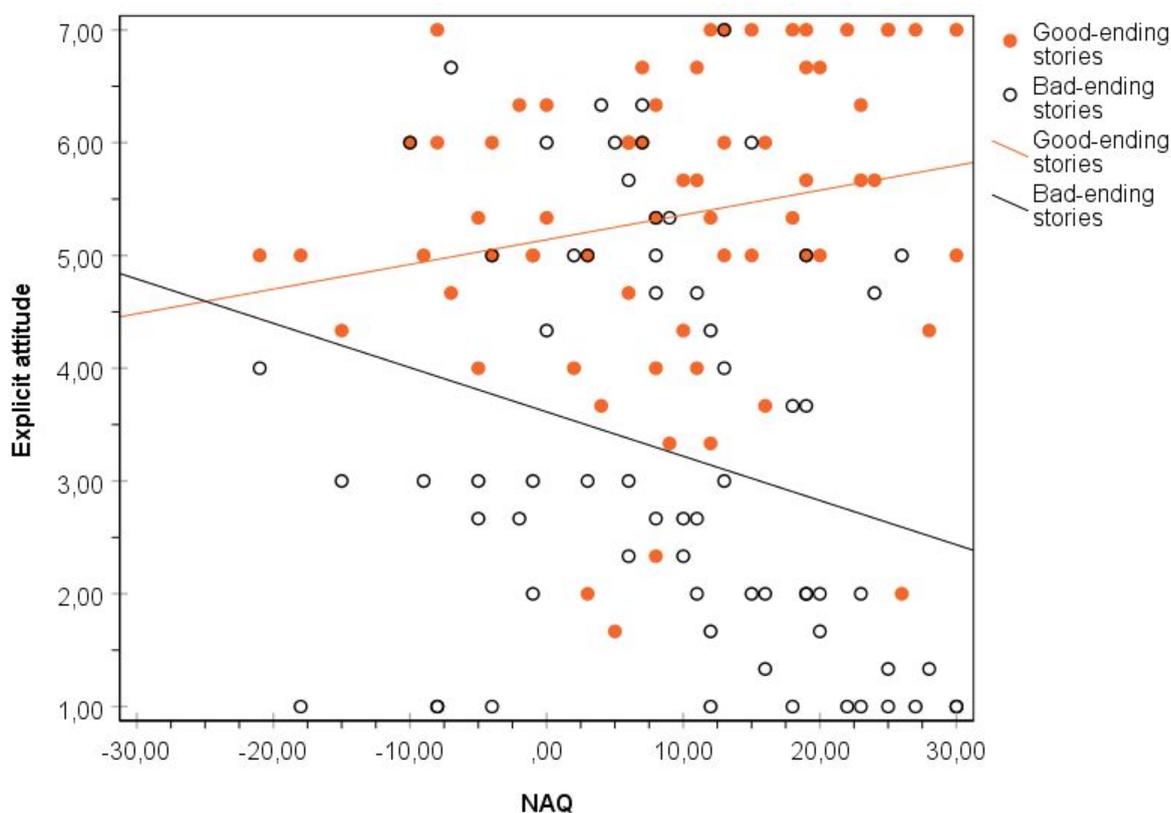


Figure 4. Relationship between the explicit attitude scores and NAQ scores separated for good-ending and bad-ending stories.

*Bad-ending story condition*

A linear regression analysis was calculated to predict the explicit attitude in the bad-ending story condition based on NAQ scores. A visual depiction of these data points can be found in Figure 4 (depicted as black circles). The results of the regression revealed that NAQ significantly contributes to the regression model ( $F(1, 64) = 4.53, p = 0.037$ ), with an  $R^2$  of 0.07. This indicates that the need for affect does significantly predict the explicit attitude that follows after a bad-ending story. The explicit attitude after bad-endings stories decreased with -0.04 points for each NAQ point.

## **Discussion**

The current study was a cross-sectional study with a within-subject design that, firstly, aimed to examine the effect of the story-ending valence on brand evaluation when the brand is presented after the story ending through replication of the Strick and Volbeda (2018) study. Secondly, as an addition to the original study, the current study aimed to investigate the role of the need for affect as a mediator in the relationship between the story-ending valence and brand evaluation. We hypothesized that brands presented after good-ending stories would have a stronger brand liking than brands presented after bad-ending stories. Furthermore, we predicted that individuals with a high need for affect would evaluate brands more emotionally than individuals with a low need for affect.

### ***Story ending***

We found that the explicit attitudes in the good-ending story condition were significantly higher than the explicit attitudes in the bad-ending story condition. The found effects were accompanied by a medium Cohen's  $d$  of 0.79 and a large partial  $\eta^2$  of 0.41. Overall, and consistent with the Strick and Volbeda (2018) study, these results may indicate that the valence of the story ending determines the liking of a brand that is shown directly after the story ending. Similarly, studies after evaluative conditioning found that a brand takes on the valence of the affective stimulus it was paired with (Allen & Janiszewski, 1989; Shimp et al., 1991). As the conditioning effect appears to be mediated by the story ending, we can assume that dramatic stories of which the valence changes over time can be used as unconditioned stimuli in evaluative conditioning trials. This adds to the literature of evaluative conditioning that not only stimuli with a stable valence but also stimuli with a changing valence can be used in evaluative conditioning trials to change the liking of an attitude object.

In contrast to the original study, the effect sizes we found are relatively large compared to the original small Cohen's  $d$  of 0.33. This could be explained for by two reasons. Firstly, we adapted the stories of the original studies to make them more easily readable and stronger in emotion. The improved emotional valence and

readability of the stories could have resulted in a larger effect size. Secondly, in contrast to the original study, we only use two conditioned stimuli in our evaluative conditioning trials compared to the six stimuli of the original study. As people may have remembered which brand was paired with which story-ending condition, they may have purposely rated the brands accordingly.

In further support of our results, another study describes how the story-ending valence is transferred on to the receiver, leading to a positive response after a good-ending story, and vice versa (Scott, 1994). Our results indicate that participants contain a positive explicit attitude towards a brand when they have been shown a good-ending story beforehand and a negative explicit attitude when shown a bad-ending story. Practically, this suggests that advertisements should end positively if the brand seeks to attain a positive brand evaluation. However, as there are a variety of positive emotions that could be induced by good-ending stories, the ending of the positive story should specifically focus on inducing high-arousing emotions (e.g., awe, happiness) if the company wants to stimulate sales. These high-arousing emotions are said to lead to action in contrast to low-arousing emotions (e.g., relaxation, contentment; Smith & Ellsworth, 1985). Follow-up research should indicate whether evaluative conditioning with good-ending stories can lead to buying behavior, as this is, next to a positive brand image, one of the main objectives of advertising.

### ***Need for affect***

We found that the explicit attitude is dependent on the interaction of the need for affect and story-ending condition. This significant effect was accompanied by a medium partial  $\eta^2$  of 0.08. However, we also found that the need for affect only significantly predicts the explicit attitude in the bad-ending but not in the good-ending condition. Nonetheless, overall, the conditioning effect increased with the increase in the need for affect. The participants with a high need for affect rated the brands more emotionally than the participants with a low need for affect. This finding is in line with the existing literature, as people with a high need for affect are more likely to be influenced by their emotions in their attitude formation (Maio & Esses, 2001), and are

more strongly influenced by emotional messages as compared to individuals with a low need for affect (Haddock et al., 2008).

From the results can be derived that need for affect is one of the important characteristics that influence narrative persuasion and brand evaluation. However, compared to our large partial  $\eta^2$  of 0.41 of the main effect, the medium partial  $\eta^2$  of 0.08 of the interaction effect seems relatively small. Based on these two effect sizes, we can speculate that the valence of the story ending is much more important in our attitude formation towards a brand than the interaction between an individual's need for affect and story endings. Nevertheless, this does not mean that the interaction between the need for affect and story ending is insignificant in narrative persuasion.

Collectively, they represent almost half of the variance and make up a good opportunity for marketers to strategically design their advertisements. Our findings suggest that advertisements that play on emotions and drama affect individuals with low to high ranging needs for affect in different manners. In marketing, predictive individual characteristics, like the need for affect, can be useful to predict which type of advertisement marketers should use to increase brand liking. Through studying, for example, the need for affect levels of a brand's various target groups, marketers can predict which individuals need to see which sort of advertisements to efficiently increase their brand liking. However, in our study, in both people with a high and low need for affect, the good-ending stories reached the highest explicit attitudes suggesting that this is the best story-ending scenario for an advertisement to end with.

Future research into the impact of other individual characteristics on narrative advertising could lead to more practical insights for targeted advertisements. Identifying a range of individual characteristics could lead to personalized advertisements suited to the needs and wants of a prospective customer. For example, people with a high need for affect but a low need for cognition are more likely to be persuaded by narrative advertisements, whereas people with a high need for cognition and a low need for affect are more likely to be persuaded by argumentative advertisements (Haddock et al., 2008). Advertisements that play on

drama and emotion, therefore, might only be effective for people with a high need for affect and not, for example, for people with a high need for cognition.

### ***Strengths and limitations***

The results of this study should be interpreted with the notion of the following strengths and limitations. Among the strengths of this study is its within-subject design that allowed us to observe differences in explicit attitude between the identical groups of participants in each story-ending condition. Whereas an online study environment may be considered a limitation, the online aspect of our study could be considered a strength within the context of studying the effect of narrative advertisements on brand attitudes. The less-controlled environment of an online study, where people are assumed to be more likely distracted by their at-home surroundings, may have shown more resemblance to the real-life situation of watching advertisements as a lab study would have.

Furthermore, we accounted for the effect the individual brands of mineral water could have by counterbalancing. This means that the two brands of mineral water were alternately paired with the two story-ending conditions between participants. Moreover, the stories from the original Strick and Volbeda study materials (2018) were adapted to improve emotional valence and readability. Compared to the original stories, our stories should be more easily read and contain a stronger valence, which could have amounted to our relatively higher effect size ( $d = 0.79$ , and partial  $\eta^2 = 0.41$ ) compared to the original study ( $d = 0.33$ ). Lastly, another strength of the study is the use of the shortened version of the need for affect questionnaire. Despite a reduction of over 60% of the items of the full-length need for affect questionnaire, the NAQ-S has high reliability and trait variance for assessing the need for affect (Appel et al., 2012).

Despite these strengths, the findings from the linear regression analysis of the explicit attitudes of the good-ending story may have suffered from a lack of power. Whereas both the repeated measures ANCOVA of the interaction effect and the linear regression analysis of the bad-ending story explicit attitudes yielded significant results, a significant association between the need for affect and good-ending stories

was absent against our prior expectations. Within the context of our study sample and method, our results suggest that the need for affect only significantly predicts explicit attitudes after bad-ending but not good-ending stories. Follow-up research with a sufficient sample size should indicate whether or not the need for affect can predict the explicit attitude that follows after a good-ending story.

Furthermore, our study may have lacked ecological validity. The written stories used in our study were nonvisual and rather short compared to the visual narrative advertisements people encounter in real life. Furthermore, from the comments that were gathered after completion of the conditioning trials, it became evident that the majority of participants had grasped the essence of the study and, more importantly, also had noticed which brand in their conditioning trials was paired with good-ending stories and which brand with bad-ending stories. From this, we can conclude that the two conditioned stimuli we used, compared to the amount of six stimuli that were used in the original Strick and Volbeda (2018) study, were not a sufficient amount for our study design. The apparent connection between the paired conditioned stimuli and story condition may have led to a distortion of our story ending effect, as participants may have purposely rated brands according to the good- or bad-ending valence of the stories. Despite this, our results still suggest participants were influenced by their emotions in forming their explicit attitudes towards the brands, as participants with a high need for affect rated brands more strongly according to the story-ending valence compared to participants with a low need for affect.

### ***Directions for future research***

As discussed, our findings contribute to a deeper understanding of what role story-ending valence and need for affect play in narrative persuasion. However, as about half of the variance in explicit attitude can be accounted for by the story ending (41.0%) and the interaction between the story ending and need for affect (8.0%), a lot of variance is left unexplained for that could be attributed to other factors that could influence the relationship between the explicit attitude and story ending condition. A factor of interest could be empathy, as empathetic processing is

suggested to enhance transportation and narrative persuasion (Deighton et al., 1989; Green & Donahue, 2009). Dramatic stories, especially, might initiate these processes in people with high empathy rates (Thompson & Haddock, 2012). Furthermore, the need for cognition, which is related to the need for affect (Maio & Esses, 2001), could also be an interesting factor. The need for cognition resembles an individual's motivation to approach cognitively challenging and effortful activities (Cacioppo & Petty, 1982). While people with a high need for cognition have been shown to be more persuaded by argumentative advertisements than narrative advertisements (Haddock et al., 2008), they might still experience high rates of transportation with more complex and plot-twisting narrative advertisements (Thompson & Haddock, 2012).

Furthermore, it would be interesting to investigate the other four story compositions (i.e., emotional arcs) that were mentioned before. In the current study, we investigated the 'Man in a hole' (fall-rise) and 'Riches to rags' (fall) emotional arcs (Reagan et al., 2016). In addition, the inverse versions of these stories (i.e., 'Icarus' (rise-fall), 'Rags to riches' (rise)) and the more complex stories (i.e., 'Cinderella' (rise-fall-rise), 'Oedipus' (fall-rise-fall)) could be investigated. The more complex, and undoubtedly more dramatic, stories could yield stronger explicit attitudes than the stories used in the current study did. This is because greater use of drama is indicated to lead to greater rates transportation (Deighton et al., 1989), which, in turn, leads people to be more likely to be persuaded and match their beliefs and attitudes to those of the story (Appel & Richter, 2010; Green & Brock, 2000).

## ***Conclusion***

To conclude, in this study, we found that the valence of the story ending is determinative of the evaluation of a brand that is presented directly after. Based on analysis of the explicit attitudes towards brands in evaluative conditioning with stories, brands presented after good-ending stories are found to have a stronger brand liking than brands presented after bad-ending stories. We also found the need for affect, as an individual characteristic, to be decisive in narrative persuasion, as people with a high need for affect evaluate brands more strongly according to the

story-ending valence. Individuals with a high need for affect were found to evaluate brands more emotionally in comparison with individuals with a low need for affect. Overall, the findings from this study contribute to a deeper understanding of the role story-ending valence and the need for affect play in narrative persuasion and can help guide marketers to make strategic decisions in their advertisement design.

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## Appendix

**Appendix 1.** Images of the two foreign mineral water brands; Ferrarelle (left) and Fine (right)



## ***Appendix 2. Stories***

\* denotes the end of the beginning segment and the start of the end segment

### Good-ending stories:

1. "Chris feared to get fired on his first working day after his burn-out, which had left him unable to work for months. \* When Chris arrived at the office, his colleagues welcomed him with a cake that was decorated with the line 'we missed you'."
2. "Everything went wrong when I took Charlie to the zoo. It was raining, we missed the train, and the zoo was closed. \* At the end of the day, he thanked me with a big hug and told me he had an awesome day."
3. "Jess has a severe congenital muscle disease and is in a wheelchair. \* This year, she graduates cum laude and has been offered an excellent job at a prestigious consultancy firm."
4. "Kevin's basketball knee injury has lasted for more than a year and he has undergone multiple surgeries. \* Today, he was brought on as a substitute at the last game of the season and scored the winning goal."
5. "Jack's company went bankrupt ten years ago. He had to sell his house and car. \* Today, he is celebrating the five-year anniversary of his new profitable enterprise."
6. "In his youth, Dylan had been severely abused by his father, after which he tried to find solace in drugs. \* Dylan has now been clean for five years. He is living together with Trish and is the happy father of a daughter."
7. "The terrace house of the Joneses family needed to be refurbished, but the family did not have any friends to ask for help. \* One morning, people from the entire neighborhood gathered to help make the house liveable again."
8. "Dave and Noah used to be close friends, but they lost sight of each other when Dave got a job on the other side of the world. \* Unexpectedly, they stood next to each other on a camping site in South-France and fell happily in each other's arms."

9. "Kate's cat disappeared. She was afraid that her cat had an accident and she decided to distribute some 'missing' posters. \* Today, Kate receives a phone call from a man telling her that her cat is safe and has been staying in his house for a few days."
10. "Jacob is a poor busker in London and barely has any financial means to make ends meet. \* A talent scout runs into him and is impressed. Not long after that, Jacob is at the top of America's pop charts."

Bad-ending stories:

1. "Nick loves his girlfriend very much but she is very distant and does not seem to care about him at all. \* At a party of the study association, he finds her kissing with an older student."
2. "Rachel's twin sister Mary was taken away by human traffickers. Rachel has been looking for her ever since. \* Today, Rachel passes away at the age of 85. She never found her sister."
3. "Sophia is a mother of two. She has lung cancer and visited the doctor for her monthly checkup. \* From the doctor's diagnosis, it is apparent that she is terminally ill."
4. "Alex was studying hard for the last exam of the academic year but one day before the exam he got very sick. \* After the last exam of the year, he comes five study points short to be able to study medicine next year."
5. "Lauren has spent the last 6 months organizing a music festival, instead of spending time with her baby daughter. \* On the festival day, it is raining cats and dogs and the festival needs to be canceled due to safety measures."
6. "Jamie's laptop had suddenly crashed while downloading data, just a few hours before an important deadline. \* When he comes home in the evening and turns on his laptop, his hard drive appears to be irreparably damaged and all his data are lost."
7. "Luke's successful enterprise faced serious losses because of the economic crisis. \* He has had to fire all of his personnel and today he has finally been declared bankrupt."

8. "Olivia has been diagnosed with breast cancer in a terminal state and she booked one last trip to meet her best friend. \* When she gets off the bus on the way to the airport, she breaks her ankle and cannot continue her trip."
9. "Nina has been mistreated by her husband and been unhappy for many years now. \* She has inadequate financial means to apply for divorce and shall inevitably have to spend the rest of her life with this man."
10. "Tom cannot pay his house anymore since he has not gotten the promotion he was promised. \* When he came to the office today, Tom's close colleague appeared to have gotten the promotion instead of him."

**Appendix 3.** *The 10-item Need for Affect Questionnaire-Short Form (NAQ-S; Appel et al., 2012)*

Item No.	NAQ-S item	Subscale
1.	“If I reflect on my past, I see that I tend to be afraid of feeling emotions.”	AV
2.	“I feel that I need to experience strong emotions regularly.”	AP
3.	“Emotions help people to get along in life.”	AP
4.	“I find strong emotions overwhelming and therefore try to avoid them.”	AV
5.	“I think that it is important to explore my feelings.”	AP
6.	“I would prefer not to experience either the lows or highs of emotion.”	AV
7.	“I do not know how to handle my emotions, so I avoid them.”	AV
8.	“It is important for me to be in touch with my feelings.”	AP
9.	“It is important for me to know how others are feeling.”	AP
10.	“Emotions are dangerous - they tend to get me into situations that I would rather avoid.”	AV

*Notes:* Items are presented with a seven-point scale (-3 = strongly disagree to 3 = strongly agree). To build an aggregate score of the Need for Affect, avoidance items must be reverse scored (Appel et al., 2012).

AP = Approach subscale, AV = Avoidance subscale.