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A Laughing Matter? How Humor in Alcohol Ads Influences Interpersonal Communication and Persuasion

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ABSTRACT

Exposure to alcohol ads increases alcohol consumption. A potential partial explanation is that certain (e.g., humorous) alcohol ads trigger conversations which can, in turn, increase drinking behaviors. Therefore, we investigated the influence of humor in alcohol ads on conversational occurrence, length, and valence about alcohol and alcohol ads. One hundred and fourteen participants were shown one of three beer ads (humor; positive; no ad), after which participants could voluntarily discuss the ad and alcohol. Next, all participants were requested to discuss the topic and answered a questionnaire assessing conversational valence and ad, brand, and alcohol evaluations. Results showed that humor leads to more conversations about the ad and alcohol, longer conversations about alcohol, and more positive conversations about the ad. This interpersonal communication, and especially conversational valence, was subsequently related to ad, brand, and alcohol evaluations. These findings may explain the effect of alcohol ads on alcohol consumption, and provide important starting points for using humor as a potentially effective behavior change tool.

Alcohol use and binge drinking are prevalent problems, leading to severe negative consequences both on an individual (e.g., brain and liver damage; Rehm, Samokhvalov, & Shield, 2013) and societal level (e.g., vandalism and accidents; Hughes, Anderson, Morleo, & Bellis, 2008). Although considerable attention has been paid to health campaigns aiming to decrease alcohol abuse (e.g., Noar, 2006), commercialized messages promoting alcohol consumption (e.g., beer ads) have received less empirical scrutiny. The relatively few studies that have focused on alcohol ads show a worrisome effect of such messages (e.g., Hastings, Anderson, Cooke, & Gordon, 2005). For instance, exposure to alcohol ads has been found to increase alcohol consumption one year later (Stacy, Zogg, Unger, & Dent, 2004). Despite these unwanted public health effects, alcohol marketing is commonplace (e.g., Ringel, Collins, & Ellickson, 2006).

Some explanations suggest that alcohol ads increase drinking behaviors by decreasing skepticism toward the ad and increasing the desirability of alcohol use (e.g., Austin, Chen, & Grube, 2006). However, one important, and very plausible, explanation has been overlooked; that is, alcohol ads may trigger conversations about alcohol and alcohol-messages and these conversations may, in turn, influence drinking behaviors. Furthermore, the use of certain message strategies in these alcohol messages – such as the use of activating emotions like amusement and humor (Berger, 2011; Berger & Milkman, 2012) – is likely to impact interpersonal communication and subsequent alcohol consumption as well. The purpose of this study is to shed light on the effects of alcohol ads on interpersonal communication, and in specific we aim to explore whether humor in alcohol ads affects interpersonal communication and subsequent persuasion.

How interpersonal communication shapes health message effects

Although no knowledge exists regarding the effects of alcohol ads on interpersonal communication, many studies show the effects of health campaigns (such as anti-alcohol campaigns) on interpersonal communication and subsequent persuasion. In fact, according to classic theories such as the two-step flow theory (Katz, 1957) and diffusion of innovations theory (Rogers, 1983), interpersonal communication plays a key role in determining message effects by increasing message dissemination. For a myriad of health behaviors (e.g., alcohol consumption, smoking, vaccination behaviors) it has been consistently shown that talking about these behaviors and related media messages can influence whether people are likely to engage in these behaviors (David, Cappella, & Fishbein, 2006; Southwell & Yzer, 2007). For example, it has been shown that talking (versus not talking) about alcohol can increase intentions to binge drink (Hendriks, Van den Putte, de Bruijn, & De Vreese, 2014). Moreover, recent studies have revealed that the valence of these conversations is

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especially important (Dunlop, Kashima, & Wakefield, 2010; Hendriks & de Bruijn, 2015). For example, Hendriks, Van den Putte, and de Bruijn (2014) revealed that whereas positive (i.e., unhealthy) conversations about alcohol lead to more positive attitudes, intentions, and behaviors regarding alcohol, negative conversations about alcohol lead to more negative alcohol attitudes, intentions, and behaviors.

The current study aims to replicate and extend these studies on interpersonal communication triggered by health campaigns to the domain of advertising about health-related products. It is important to test the importance of interpersonal communication in this more commercialized context, because advertisements about health-related products have a different goal (e.g., increasing consumer buying behavior) than health campaigns (e.g., decreasing alcohol consumption). Because health campaigns often implore viewers to change their behavior this can be viewed as more threatening to the self, and can elicit more defensive responses such as avoidance of the message (Van 't Riet & Ruiter, 2011). Such defensive responses could potentially result in less interpersonal communication. Because advertisements may be less threatening to the self, alcohol ads may more easily trigger conversations about the ad and topic. We argue that such conversations can subsequently influence alcohol consumption, and could therefore provide an important explanation for the found effects of alcohol ads on alcohol consumption. We aim to test this idea.

Besides the possibility that alcohol ads can elicit conversations, it is also likely that some alcohol ads will do so more than others and that some alcohol ads will lead to a more positive (i.e., unhealthy) valence about alcohol than other alcohol ads. We expect that humor plays an important role in this.

The role of humor

Before describing the role of humor in advertising, it is useful to define 'humor' as it is used here. In line with many psychology and marketing studies, this work subscribes to an incongruity-resolution theory, which defines humor as a combination of two mental processes: the experience of an incongruent contrast, followed by positive affect (e.g., Strick, Holland, Van Baaren, Van Knippenberg, & Dijksterhuis, 2013; Woltman Elpers, Mukherjee, & Hoyer, 2004).

Humor has often been used in ads. Estimations of the prevalence of humorous TV ads in the US have ranged from 11 percent to as high as 50 percent (Beard, 2005). The persuasive effect of humor in advertising has received considerable empirical attention leading to several literature reviews (e.g., Eisend, 2009; Weinberger & Gulas, 1992). In his meta-analysis, Eisend (2009) synthesized the findings of 43 independent studies on humor in advertising and concluded that the persuasive effect of humor is mainly driven by affective processes rather than cognitive processes. That is, humor in advertising increases positive affect and decreases negative affect, creates positive attitudes toward the ad and the brand, and increases purchase intentions. In contrast, humor does not increase positive or negative cognitions, recall and recognition of the ad or brand, or message comprehension (see also Nabi, 2015; Strick et al., 2013).

Besides influencing affective persuasion processes, humor has been shown to influence involvement, that is, the motivation to process the message of the ad (Zhang & Zinkhan, 2006). Especially when initial motivation to process a message is neither particularly high nor low (which is arguably a frequent situation in day-to-day persuasion contexts), humor helps to improve involvement from a moderate to a high level. It has been argued that humor increases involvement because it signals a reward (Zhang & Zinkhan, 2006). A content analysis showed that 15% of magazine ads contain a meaningful combination of pictures, puns, and wordplays and that the pleasurable incongruity present in such humor increases message elaboration and deeper processing (McQuarrie & Mick, 1992). Similarly, Nabi (2015) showed that humorous health messages led to increased motivation to process the message. The Elaboration Likelihood Model by Petty and Cacioppo (1986) also stresses the importance of motivation and suggests that increased involvement generally leads to higher attention for the ad message. Provided that this increased attention leads to favorable evaluations, involvement should increase attitude strength and the likelihood that pro-active action in line with the message goals will be undertaken (Petty & Cacioppo, 1986).

Humor and conversational occurrence

Given the fact that humor increases involvement, and that involvement can lead to favorable pro-active behavior (Petty & Cacioppo, 1986), a possible consequence is that humor leads to more, and potentially longer, conversations about the topic and the message. A study by Berger and Milkman (2012) on the social transmission of news articles from the New York Times indeed suggests that this is the case. That is, they showed that news stories were more often shared with others when people felt activating positive emotions due to the story (e.g., feelings of amusement or awe). The authors conclude that activating emotions (such as those related to humor) increase the occurrence of conversations (see also Berger, 2011). Thus, it can be expected that humor in alcohol ads will lead to more, and longer, conversations about alcohol and the ad than other messages.

Humor and conversational valence

Besides the potential impact of humor on conversational occurrence, it is also likely that humor influences whether people talk negatively or positively about the topic and message (i.e., conversational valence). The first evidence that emotions may influence conversational valence in a health context was provided by Dunlop et al. (2010), who suggested that emotionally engaging (vs. not engaging) stories about the HPV-vaccine led to more positive discussions about this vaccine. Other emotion research (e.g., Higgins, 1996; Nabi, 2003; Strack & Mussweiler, 1997) also suggests that message-elicited emotions can influence conversational valence, by increasing the accessibility of relevant beliefs and knowledge, which may guide the conversation to be in line with these emotions. Hendriks et al. (2014) provided the first tentative support for the influence of humor on conversational valence by showing that humor in anti-alcohol campaigns decreases feelings of fear, which in turn leads to more positive (i.e., unhealthy) conversations about alcohol. Thus, it can be

expected that humor in alcohol ads leads to more positive conversations about alcohol and about the ad than other messages.

The present study

The goal of the current research is to shed light on the effects of alcohol ads on interpersonal communication. Specifically, we investigate the influence of humor in alcohol ads on conversational occurrence, length, and valence about alcohol and alcohol-messages. The study presents an important contribution to theory and practice because, to our knowledge, this is the first study testing the potential indirect impact of humor in advertising on persuasion via interpersonal communication. To exclude the explanation that a general positive feeling (instead of humor-emotions in specific) influence interpersonal communication, we compare the effects of a humorous alcohol ads with an equally positive – but not humorous – ad. Additionally, a condition without ad exposure will serve as control group.

Based on the abovementioned, we expect

H1: People talk more often, and longer, about *alcohol ads* (H1a) and about *alcohol* (H1b) if they are exposed to humorous alcohol ads than if they are exposed to positive alcohol ads or no alcohol ads.

H2: People talk more positively about *alcohol ads* (H2a) and *about alcohol* (H2b) if they are exposed to humorous alcohol ads than if they are exposed to positive alcohol ads or no alcohol ads.

H3: Talking more often and talking longer *about alcohol and alcohol ads* (H3a) and talking more positively *about alcohol and alcohol ads* (H3b) is related to more positive evaluations of the ad, brand, and alcohol (i.e., binge drinking attitudes, subjective norms, perceived behavioral control, and intentions; Ajzen, 1991).

Method

Participants

One hundred and fourteen students from Leiden University participated in this study. One participant was excluded from analysis (because he/she had accidentally also participated in the pilot study), which left 113 participants for the data analysis (24 males, 89 females, M_{age} = 20.12, SD_{age} = 1.71, Min_{age} = 18, Max_{age} = 28, Median_{age} = 20). Pairs of two same-sex participants were randomly assigned to one of the three between-subjects conditions (humorous ad, positive ad, no ad). Participants were rewarded with course credits or money.

Procedure

Participants were recruited via convenience sampling (i.e., students present at the university's campus were approached by the experimenters and asked to participate). Upon arrival in the lab, participants were asked to individually watch either four (four filler posters about neutral products) or five (one target alcohol poster and four filler posters about neutral products) sequentially shown advertisements, depending on the condition. After both participants individually watched the posters (each shown for 10 seconds) on a PC, they were seated together in a different room. The experimenter left the participants alone in this room for three minutes by using the cover story, "Please wait here, I have to pick up the instructions. I'll be right back." During this time, it was measured whether participants started talking about the alcohol ad or alcohol (by coding the recorded conversations afterward). Next, all participants were instructed to engage in a five-minute discussion on the topic of alcohol consumption and binge drinking. In line with Hendriks, De Bruijn, and Van Den Putte (2012), they were told that all participants would talk about a certain topic, and that for them this topic happened to be alcohol. Furthermore, they were instructed to talk to each other however they liked and about whatever they wanted (as long as it was related to alcohol). In Hendriks et al.'s (2012) study, this instruction resulted in conversations that participants considered to be relatively normal and realistic. In the current study, after five minutes, the experimenter returned to the room and led participants to their previous cubicle to answer the questionnaire. Afterward, participants were debriefed and rewarded.

Materials

Posters

The posters used in this study were based on a pilot study (N = 31, 7 males, 24 females, M_{age} = 23.81, SD_{age} = 3.53) in which self-developed beer ads (three per condition) for the nonexistent beer brand "Molenaer" were tested on several measures, such as humor (e.g., "This advertisement was: funny; humorous; amusing"), involvement (e.g., "This advertisement was … to me, meaningful; worthwhile; involving for me; necessary"), arousal (e.g., "After viewing this advertisement, I felt: passive/active; mellow/fired-up; low energy/high energy"; "After viewing this advertisement, I felt: jittery; intense; fearful; clutched-up; tense; active; energetic; vigorous; lively; full of pep"). Items were based on Berger (2011), Hendriks, Van den Putte, & De Bruijn (2014), Henthorne, LaTour, and Nataraajan (1993), and Thayer (1978, 1986)). Based on the pilot study, the most suitable poster was chosen (one per condition) that most strongly elicited the intended effects. That is, two alcohol ads were chosen with similar ratings on positivity but with different humor scores (high for the humorous ad [M = 5.24, SD = 1.11], low for the positive ad [M = 3.59, SD = 1.69], t = −5.959, p < .001)[1]. The positive ad stated "*we love beer*" and showed a "heart-shaped beer". The humor ad stated "*light beer*" and showed a "lightbulb-shaped beer" (thereby using pun-humor, as it is frequently used in ads and therefore faithfully represents how humor is used in real advertising contexts; Leigh, 1994; Van Mulken, Van Enschot, & Hoeken, 2005), see Figure 1.

Conversational occurrence and length

The first three minutes of the conversation, in which participants could voluntarily discuss the ad or alcohol, were coded

Figure 1. The humorous (left) and positive (right) ads used in this study, based on a pilot study.

by two independent coders. Coder agreement was excellent (intraclass correlation coefficients between the coders varied from .955 to .998) and in case of disagreement the first author was consulted. It was coded (1) whether (one of) the discussants talked about the alcohol ad or alcohol in general and (2) how many seconds they talked about these topics. If participants started talking about, for example, the alcohol ad for five seconds, then talked about something else, and then later on talked about the alcohol ad again for another seven seconds, we added these two time periods resulting in a total of twelve seconds in which participants talked about the alcohol ad.

Questionnaire

The questionnaire was used to measure conversational valence, ad evaluations, brand evaluations, and alcohol evaluations (i.e., in line with the theory of planned behavior [Ajzen, 1991], we measured attitudes, subjective norms, perceived behavioral control, and intentions). At the beginning of the questionnaire, participants were informed about the definition regarding binge drinking (i.e., 4 or more drinks for women and 6 or more drinks for men on one occasion).

Conversational valence. Conversational valence was based on Hendriks et al. (2012); (2014) and was measured as the mean score of three questions: "How negative or positive have you spoken during the conversation about … " "drinking alcohol", "binge drinking", and "being drunk"? The responses were given on seven-point scales (1 = *very negative* to 7 = *very positive; M* = 3.88, *SD* = 1.19, α = .77). This perceived conversational valence measure has been validated in previous research, and has been found a better predictor of health determinants than a more objective (i.e., coded) valence (Hendriks, Van den Putte, & De Bruijn, 2015). Conversational valence about the advertisement itself was measured by three items starting with "How negative or positive have you spoken during the conversation about … " "the persuasiveness of the ad", "the effectiveness of the ad", and "the alcohol brand") on seven-point scales (1 = *very negative* to 7 = *very positive; M* = 4.00, *SD* = 0.99, α = .74).

Ad evaluations. Ad evaluations were measured with the following questions: "What do you think about the alcohol advertisement? I think the ad is … " The seven point scales ranged from *very bad* (1) to *very good* (7); *very unpleasant* (1) *to very pleasant* (7); *very negative* (1) *to very positive* (7), *M* = 4.34, *SD* = 0.94, α = .76.

Brand evaluations. Brand evaluations were measured with the following questions: "What do you think about the alcohol brand Molenaer? I think the brand Molenaer is … " The seven point scales ranged from *very bad* (1) to *very good* (7); *very unpleasant* (1) *to very pleasant* (7); *very negative* (1) *to very positive* (7), *M* = 3.94, *SD* = 0.64, α = .83.

Alcohol evaluations

Attitude. Attitude toward binge drinking was calculated as the mean of the responses to six statements measured on seven-point scales. Each statement began, "If I would binge drink during the next two weeks, it would be … ". The seven point scales ranged from *very harmful* (1) to *very harmless* (7); *very negative* (1) to *very positive* (7); *very unsociable* (1) to *very sociable* (7); *very unwise* (1) to *very wise* (7); *very bad* (1) to *very good* (7); and *very unpleasant* (1) to *very pleasant* (7), *M* = 3.65, *SD* = 1.17, α = .93.

Subjective norms. Subjective norms were calculated as the mean of the responses to three statements measured on seven-point scales ("Most people who are important to me would [1 = *not appreciate* to 7 = *appreciate*] it if I would binge drink during the next two weeks"; "Most people who are important to me would be [1 = *negative* to 7 = *positive*] toward it if I would binge drink during the next two weeks"; and "Most people who are important to me would [1 = *not accept* to 7 = *accept*] it if I would binge drink during the next two weeks"; *M* = 3.85, *SD* = 1.54, α = .90).

Perceived behavioral control. Perceived behavioral control concerning binge drinking was assessed as the mean of the responses to three statements measured on seven-point scales (1 = *disagree completely* and 7 = *agree completely*). Each statement began, "If I would binge drink during the next two weeks … ". The three statements were "I am confident I could do this", "I could decide this by myself", and "I would have a lot of control over this", *M* = 5.87, *SD* = 0.79, α = .18.

Intention. The intention to binge drink was measured as the mean response to three statements ("I intend to binge drink during the next two weeks"; "I plan to binge drink during the next two weeks"; and "I will try to binge drink during the next two weeks"). The responses were given on seven-point scales (1 = *disagree completely* and 7 = *agree completely; M* = 2.54, *SD* = 1.62, α = .92).

Results

Effects of humor on conversational occurrence and length

To investigate H1a (i.e., that people talk more often, and longer, about humorous *alcohol ads* than about positive alcohol ads), a chi square test (for occurrence) and an ANOVA (for time) were conducted with condition (humorous vs. positive ad) as the independent variable and conversational occurrence and length, respectively, as the dependent variables. The chi square test revealed a significant effect of condition on conversational occurrence about the ad (X^2 (1, 76) = 5.18, p = .023,

eta^2 = .261). After seeing a humor ad, 22 participants discussed the ad (61 percent) whereas 14 participants did not discuss the ad (39 percent). In contrast, after seeing a positive ad, only 14 participants discussed the ad (35 percent), whereas 26 participants did not talk about the ad (65 percent). Thus, in line with H1a, humor increased conversational occurrence about the ad. The ANOVA, on the other hand, did not reveal a significant effect of condition on conversational length (F (1, 74) = 0.86, p = .356, eta^2 = .012). That is, discussions about the ad did not differ in length between the positive and humor condition. Therefore, H1a was only partly supported.

To investigate H1b (i.e., that people talk more often, and longer, *about alcohol* after exposure to humorous alcohol ads than after exposure to positive alcohol ads or no alcohol ads), a chi square test (for occurrence) and an ANOVA (for time) were conducted with condition (humorous vs. positive vs. no ad) as the independent variable and, respectively, conversational occurrence and length about alcohol as the dependent variables. The chi square test revealed a significant effect of condition on conversational occurrence about alcohol (X^2 (2, 113) = 12.41 p = .002, eta^2 = .331). After seeing a humor ad, 8 participants discussed alcohol (20 percent) and 28 participants did not discuss alcohol (80 percent). In contrast, after seeing a positive ad, none of the participants discussed alcohol at all. Furthermore, in the no ad condition, 2 participants (6 percent) discussed alcohol versus 35 participants who did not discuss alcohol (94 percent). Thus, in line with H1b, humor increased conversational occurrence about alcohol. The ANOVA revealed a marginally significant effect of condition on conversational length (F (2, 110) = 2.62, p = .078, eta^2 = .045). Discussions about alcohol lasted longer in the humor condition (M = 1.22; SD = 3.24) than in the control condition longer (M = 0.60; SD = 2.52) and positive condition (M = 0.00; SD = 0.00). Post hoc comparisons showed the humor condition to differ significantly from the positive condition, p = .024 (other comparisons were not significant). Thus, H1b was largely supported.

Effects of humor on conversational valence

To investigate H2a (i.e., that people talk more positively about humorous *alcohol ads* than about positive alcohol ads), an ANOVA was conducted with condition (humorous vs. positive ad) as the independent variable and conversational valence about the ad as the dependent variable. The analyses revealed a significant effect of condition on conversational valence toward the ad (F (1, 74) = 5.58, p = .021, eta^2 = .070). After viewing a humor ad, participants talked more positively about the ad (M = 4.18, SD = 0.88) than after a positive ad (M = 3.64, SD = 1.10), thereby confirming H2a.

To investigate H2b (i.e., that people talk more positively *about alcohol* after exposure to humorous alcohol ads than after exposure to positive alcohol ads or no alcohol ads), an ANOVA was conducted with condition (humorous vs. positive vs. no ad) as the independent variable and conversational valence about alcohol as the dependent variable. In contrast with H2b, the analyses revealed no significant effect of condition on conversational valence about alcohol (F (2, 110) = 0.49, p = .617, eta^2 = .009). See Table 1 for an overview of the effects of the conditions on conversational occurrence, length, and valence.

Relationships between interpersonal communication and persuasion

To investigate H3a (i.e., that talking more often, and talking longer, *about alcohol and alcohol ads* is related to more positive evaluations of the ad, brand, and alcohol), several regression analyses were conducted with conversational occurrence and conversational length as (separate) predictors and ad, brand, and alcohol evaluations (i.e., attitude, norm, PBC, and intention) as the dependent variables. Conversational length was log transformed in order to correct for nonnormal distributions[2].

The analyses revealed that conversational occurrence about alcohol (p = .017, β = .27), and conversational length about alcohol (p = .009, β = .30) were significantly related to ad evaluations. When participants discussed alcohol, and when they discussed this for a longer time, participants indicated more positive ad evaluations. The other relationships were not significant. This provides only limited support for H3a.

To investigate H3b (i.e., that talking more positively *about alcohol and alcohol ads* is related to more positive evaluations of the ad, brand, and alcohol), several regression analyses were conducted with conversational valence as predictor and ad, brand, and alcohol evaluations as the dependent variables. The analyses revealed significant relationships between conversational valence about alcohol and most evaluations of the ad (p = .004, β = .329), brand (p = .060, β = .217), and alcohol ($p_{attitude}$ = <.001, $\beta_{attitude}$ = .609; p_{norm} = <.001, β_{norm} = .465; $p_{intention}$ = <.001, $\beta_{intention}$ = .694). Although conversational valence about the ad was not significantly related to alcohol evaluations, it was significantly related to evaluations of the ad (p = .033, β = .244) and marginally significantly with evaluations of the brand (p = .108, β = .186). Thus, in line with H3b, when participants spoke more positively about alcohol or the ad, they usually reported more positive evaluations of the ad, brand, and alcohol (for all beta-weights and significance levels, see Table 2).

Table 1. The effects of condition on interpersonal communication variables.

				Humor Ad		Positive Ad		No Ad	
Dependent variable		F	p	# (%)	M (SD)	# (%)	M (SD)	# (%)	M (SD)
Conv. occurrence	Ad	5.18	.023*	22 (61%)		14 (35%)		-	
	Alcohol	12.41	.002***	8 (20%)		0 (0%)		2 (6%)	
Conv. length	Ad	0.86	.356		ns		ns		-
	Alcohol	2.62	.078^		1.22 (3.24)		0.00 (0.00)		0.60 (2.52)
Conv. valence	Ad	5.58	.021*		4.18 (0.88)		3.64 (1.10)		-
	Alcohol	0.49	.617		ns		ns		ns

Significance = ^p < .1; *p < .05; **p < .01; ***p < .001. Conv. = Conversational.

Discussion

The goal of the current research was to shed light on the effects of alcohol ads on interpersonal communication. Specifically, we investigated the influence of humor in alcohol ads on conversational occurrence, length, and valence about alcohol and alcohol-ads. The results illustrate several important findings. First, the humor ad led to more conversations about the ad and about alcohol, and to longer conversations about alcohol. Second, the humor ad led to more positive conversations about the ad. Third, interpersonal communication, and especially conversational valence, was related to evaluations of the ad, brand, and alcohol.

First of all, the findings show that the humor ad led to more, and sometimes longer, conversations about alcohol and alcohol ads. This is in line with the studies by Berger (2011) and Berger and Milkman (2012), who showed that news stories triggering activating emotions, such as amusement or awe, lead to increased sharing of those stories. An explanation why humor triggers conversations may be because humor can increase involvement (Zhang & Zinkhan, 2006). After viewing a humoristic alcohol ad, it is possible that participants felt more involved with the message and the topic, leading to higher motivation to process the message (i.e., in line with Nabi, 2015), more message attention (i.e., in line with the Elaboration Likelihood model; Petty & Cacioppo, 1986), and more pro-active behavior such as initiating a conversation about related topics. By showing the potential of humor in alcohol ads to trigger conversations, the present study is the first to reveal that commercialized messages about alcohol can trigger interpersonal communication about these ads, and that humor plays an important role in this.

Because the focus of this study was on humor, and not necessarily on involvement, several questions about this issue still need to be addressed in future research. Although we argue that humor and involvement are strongly intertwined, and may therefore be very difficult to disentangle, we do believe that if disentangling these effects is possible it would be worthwhile to compare the effects of "pure" humor with the effects of involvement in order to provide a more complete answer as to what mechanism is driving the effects of humor on interpersonal communication. In line with this idea it could also be investigated whether negative emotions that increase involvement (such as fear) can also trigger conversations, and in what way these conversations differ when compared to positive emotions that increase involvement (such as humor-related emotions). Some studies suggest that fear-appeals may lead to defensive processing (e.g., in line with the Protection Motivation Theory and the Extended Parallel Process Model; Rogers, 1975; Witte, 1994), which may decrease conversational occurrence and lead to more negative conversations. Indeed some indications exist that fear leads to negative conversations about alcohol (Hendriks, Van den Putte, & De Bruijn, 2014). However, more studies are needed on this topic to ascertain the influence of different emotions and involvement on interpersonal communication.

Second, this study shows that the humor ad led to more positive discussions about alcohol ads. After viewing a humorous alcohol ad, participants did not only discuss alcohol and the ad more frequently, and discussed alcohol for a longer period of time, but they also discussed the ad in more positive terms. This confirms research by Hendriks, Van den Putte, & De Bruijn (2014) which suggests that humor-related emotions may lead to positive discussions about alcohol messages. Surprisingly, however, participants did not speak more positively about the topic of alcohol after viewing a humor ad. A possible explanation is provided by previous research showing that, without exposure to an anti-alcohol message, students tend to talk very positively about alcohol (Hendriks et al., 2012). Therefore, it is possible that there was a ceiling effect, with all participants talking relatively positively about alcohol, thereby obscuring differences between the three ad conditions.

Third, it was shown that especially conversational valence about alcohol was an important predictor of evaluations regarding the ad, brand, and alcohol. The finding that conversational valence was related to alcohol attitudes, norms, and intentions is in line with several studies revealing the importance of conversational valence for vaccination behaviors, smoking, and alcohol use (e.g., Dunlop et al., 2010). A novel finding of this study is that conversational valence about the ad – aside from valence regarding the topic of alcohol in general – was also important, and that evaluations of the ad and brand were also affected by conversational valence. Although conversational occurrence and length were related to ad evaluations, in general the relationships between conversational valence and evaluations of the ad, brand, and alcohol were more evident. This is in line with several studies showing that especially what people talk about, more than the mere occurrence of conversations, is important for the effects of such discussions (e.g., Hendriks et al., 2012). Taken together, the findings of this study add further evidence to the claim that how negatively or positively people talk about health issues strongly influences the impact of such discussions.

Table 2. Beta-weights between conversational occurrence, length, and valence and Ad, brand, and alcohol evaluations.

		Ad eval.		Brand eval.		Attitude		Norm		PBC		Intention	
Predictor		*β*	*p*	*β*	*p*	*β*	*p*	*β*	*p*	*β*	*p*	*β*	*p*
Conv. occ	Ad	.113	.329	.009	.940	−.051	.589	−.116	.223	.078	.414	−.043	.649
	Alcohol	.227	.017*	.101	.386	.059	.536	.030	.753	.050	.599	.038	.688
Conv. length	Ad	.127	.273	−.030	.797	−.007	.938	−.070	.458	.099	.296	−.006	.950
	Alcohol	.256	.026*	.056	.631	.061	.519	.031	.743	.121	.203	.023	.808
Conv. val	Ad	.244	.033*	.186^	.108	.027	.775	.043	.648	.010	.915	−.112	.238
	Alcohol	.329	.004**	.217	.060^	.609	<.001***	.465	<.001***	0.51	.588	.694	<.001***

Significance = ^$p < .1$; *$p < .05$; **$p < .01$; ***$p < .001$. For clarity purposes, all non-significant beta-weights have been colored gray. Conv. = Conversational; Eval. = Evaluation; Occ = Occurrence; Val = Valence.

This study represents a valuable contribution to the literature on humor in advertising. Although this literature is vast and diverse, the indirect effect of humorous ads via interpersonal communication has not been systematically addressed before (e.g., see Eisend, 2009; Weinberger & Gulas, 1992). Our findings point to a novel underlying process – *more* and *biased* conversations about the ad and product – that may explain and predict the impact of humor on consumer behavior, particularly toward alcohol. As such, the study opens up a novel direction for research on humor in advertising.

Practical implications

In sum, this study shows that humor in alcohol ads leads to more, and sometimes longer, conversations which are often positive about the ad. Such positive conversations subsequently lead to stronger persuasion effects (e.g., more positive evaluations regarding the ad and brand), and could potentially lead to more positive drinking attitudes, norms, and intentions, especially if discussions are positive about alcohol consumption. As stated earlier, research has consistently shown that exposure to alcohol ads increases alcohol consumption (Hastings et al., 2005). We argue that this relationship between alcohol ad exposure and alcohol consumption can potentially be explained by the effects of alcohol ads on interpersonal communication, which, in turn, influences predictors of alcohol consumption. Especially certain types of ads, such as those employing humor, are likely to elicit desirable (i.e., positive) conversations about the ad and alcohol, leading to more favorable evaluations about the ad and brand, and ultimately leading to more alcohol use.

Considering the multitude of negative consequences of alcohol abuse (Hughes et al., 2008; Rehm et al., 2013) this is not a very positive scenario for health promotion researchers and health campaign planners. One way to improve public health would be to change legislation in order to prohibit (certain types of) alcohol advertising. Studies using data from over 17 countries that have implemented alcohol advertising bans suggest that these bans are indeed effective at reducing alcohol use (Bosque-Prous et al., 2014; Saffer & Dave, 2002). In several countries, such as Lithuania and South Africa, attempts have been made to ban alcohol advertising in order to decrease alcohol abuse; however, so far these efforts have failed, supposedly due to substantial efforts by alcohol lobbyists to overturn this ban (Jernigan, 2013; Paukštė, Liutkutė, Štelemėkas, Goštautaitė Midttun, & Veryga, 2014).

A different approach to deal with this issue is to use humor in health campaigns, in order to trigger positive conversations about the message. However, as also suggested by Hendriks, Van den Putte, & De Bruijn (2014), humor can potentially increase positive discussions about alcohol thereby leading to subsequent undesired effects. Another risk of using humor in health campaigns is that the positive feelings caused by humor could be associated with the unhealthful behavior of alcohol use (in line with Strick et al., 2013). A potential solution to this issue may be to combine the playfulness of a humor appeal with the seriousness of a fear appeal. The aim then would be that the positive feelings caused by humor will be associated with the ad and the negative feeling of fear will be associated with the unhealthful behavior. Some recent studies indeed suggest that the combination of humor and threat may be a fruitful strategy to improve public health. That is, Mukherjee and Dubé (2012) showed that a combined humor and fear appeal in a campaign promoting sunscreen use is more successful than an appeal using fear or humor separately. This was also confirmed by Hendriks and Janssen (2018) who revealed that combined humor and fear appeals in campaigns addressing alcohol and caffeine use were most likely to be persuasive, especially for men. Given the fact that humor can provide a safe environment to deal with threatening stimuli (Mukherjee & Dubé, 2012; Yoon & Tinkham, 2013), and might therefore help increase self-efficacy (i.e., an often mentioned requirement of successful fear appeals; Peters, Ruiter, & Kok, 2013; Rogers, 1975; Witte, 1994; Witte & Allen, 2000), this combination of fear and humor may be a particularly worthwhile pursuit in health campaign research.

Limitations and future research

Although this study provides important new insights into the potential effects of humor in alcohol ads on interpersonal communication and persuasion, several limitations must be noted. First, we only compared one humor ad with one positive ad and with a no ad condition. Thereby, this study provides a first tentative step toward understanding the effects of an alcohol ad versus no alcohol ad on interpersonal communication, and also whether the effects of alcohol ads differ for a humor ad versus a positive ad. However, more research is needed testing a variety of humor ads versus positive ads. For example, because many types of humor exist which may explain some of humor's varying effects on persuasion (Buijzen & Valkenburg, 2004), it is possible that different types of humor also lead to different subsequent conversations. Furthermore, it is possible that humor ads about less threatening health topics (e.g., the effects of caffeine) lead to different effects on interpersonal communication. Future research is needed to replicate this study with different types of humor ads.

Second, in this study we assume that conversational occurrence, length, and valence are predictors of evaluations regarding the ad, brand, and alcohol. When people talk more, longer, or more positively about alcohol and the ad we expected that this would result in more positive evaluations of the ad, brand, and alcohol, and these expectations were mostly confirmed. However, the direction of these relationships can arguably also be the other way around. People who have positive evaluations regarding the ad, brand, and alcohol can be more inclined to talk more often, longer, and more positive about the ad and alcohol. On the one hand, we argue that it is indeed likely that the relationship between interpersonal communication and alcohol-related variables is bidirectional. As already argued elsewhere (Hendriks et al., 2015), interpersonal communication about alcohol can both be an outcome of alcohol-related variables, as well as a predictor of these variables (see also David et al., 2006). Thus, the relationship between interpersonal communication and outcomes can be reflected by reciprocal, or spiral, effects. On the other hand, several studies have shown that interpersonal communication leads to

actual changes in alcohol-related variables, and that experimental manipulation of conversational valence can induce changes in alcohol attitudes and intentions (e.g., Hendriks, Scholz, Larsen, De Bruijn, & Van den Putte, 2019). Therefore, we argue that it is likely that, although the current relationships were observed in a cross-sectional study, the findings suggest that interpersonal communication can actually lead to changes in evaluations of the ad, brand, and alcohol.

Conclusion

The goal of the current research was to investigate the influence of humor in alcohol ads on conversational occurrence, length, and valence about alcohol and alcohol ads. The results show that humor leads to more, longer, and often more positive conversations about the ad and about alcohol. This interpersonal communication, and conversational valence in particular, subsequently relates to evaluations of the ad, brand, and alcohol. These findings offer a possible explanation for the effect of alcohol ads on alcohol consumption, and provide an important starting point for using humor as a potentially effective behavior change tool.

Notes

1. In line with the notion that humor and involvement and arousal are intertwined, the humor ad that was chosen was also considered significantly involving ($M_{humor\text{-}ad}$ = 4.17, SD = 1.05, $M_{pos\text{-}ad}$ = 3.59, SD = 1.40, t = −3.159, p = .004) and marginally significantly more arousing ($M_{humor\text{-}ad}$ = 3.81, SD = 0.71, $M_{pos\text{-}ad}$ = 3.47, SD = 1.00, t = −1.994, p = .055) than the positive ad.
2. Skewness before and after transformation: conversational length ad; before = 2.218, after = 1.295, conversational length alcohol; before = 4.423, after = 3.669. Kurtosis before and after transformation: conversational length ad; before = 3.952, after = −1.402, conversational length alcohol; before = 19.05, after = 12.549."

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Disclosure of potential conflicts of interest

No potential conflict of interest was reported by the authors.

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