

## **The impact of refutation on credibility: The moderating role of issue ambivalence and argument tone**

### **Abstract**

The present study addresses the effects of refutational vs. nonrefutational two-sided messages on source and message credibility. Additionally, the moderating role of issue ambivalence and argument tone (emotional vs. rational) is assessed. A 2 x 2 x 2 between-subjects factorial experimental design among 853 teenagers investigates the effect of eight anti binge drinking and anti marijuana messages on source and message credibility. The results show that refutation increases credibility compared to non-refutation. Additionally, a three-way interaction effect is found: credibility effects of refutation depends on the ambivalence of the issue and the argument tone.

**Keywords:** refutation, two-sided messages, issue ambivalence, argument tone, credibility

**Track:** Social Responsibility

## **1. Introduction**

Two-sided messages give both sides of an issue or a product (Hovland, 1954). Ample empirical studies show that this type of message is more effective in terms of credibility than when only one side is provided (e.g., Crowley & Hoyer, 1994; Eisend, 2006; Kamins & Assael, 1987). However, very few studies discriminate more specifically between two subtypes of two-sided messages: refutational and nonrefutational ones. In nonrefutational messages, advertisers simply present positive and negative information. In refutational messages, they subsequently refute or discount the negative information that was added in the message.

Attribution theory (Jones & Davis, 1965) states that two-sided messages generate more source and message credibility than one-sided messages (Eisend, 2006). Concerning the refutational character of two-sided messages, attribution theory is less explicit. Moreover, empirical results regarding the credibility of refutation in two-sided messages are mixed. Kamins and Assael (1987) found no different effects on credibility for both a refutational and a nonrefutational two-sided message. Other studies emphasize that a refutational statement makes receivers take the message and the source more seriously, implying that a two-sided refutational message is more credible (Eisend, 2006). These heterogeneous results show that two-sided messages' effects on credibility are complex (Crowley & Hoyer, 1994). It remains unclear when refutation is necessary, and when it is redundant. Hence, further research on moderating variables is needed. The moderators studied to date are mainly message structure variables or receiver characteristics (Eisend, 2006), while issue and argument related variables have been neglected. The present study addresses issue ambivalence and argument tone as moderators of the effectiveness of both subtypes of two-sided messages on source and message credibility.

Additionally, the present study tests the credibility effects of two-sided messages for issues other than commercial products. Since most two-sided message studies utilize product advertising (e.g., Belch, 1981, selling toothpaste; Eisend, 2007, promoting a pizzeria) there is a strong lack of research applying the two-sided message strategy to public awareness campaigns or health risk prevention messages (Eisend, 2006). The present study focuses on two-sided anti binge drinking and anti marijuana messages targeted at teenagers.

## **2. Theoretical Framework and Hypotheses**

Attribution theory (Jones & Davis, 1965) describes the process an individual goes through in assigning causes to events (Crowley & Hoyer, 1994). Applied to commercial advertising, attribution theory posits that consumers attribute advertising claims either to the honesty of the advertiser (i.e., two-sided messages) or to the advertiser's attempt to sell the product (i.e., one-sided advertising) (Settle & Golden, 1974). The inclusion of negative information in commercial advertising leads the receiver to conclude that the advertiser is "telling the truth" (Crowley & Hoyer, 1994). So, in order to evoke an enhanced perception of source credibility, attribution theory (Jones & Davis, 1965) recommends two-sided messages over one-sided messages.

Except for the recommendation of two-sidedness, the theory provides no clear guidance concerning the message structure (i.e., refutation or not) (Crowley & Hoyer, 1994; Jones & Davis, 1965). Refutational messages are more authoritative, because they clearly emphasize the 'desired' communication direction (Hynd, 2001). In a health risk prevention context, this authoritative guide to the desired communication direction might be more appreciated and regarded as more credible by the recipients, as the source of the message is

not acting out of self-interest, but rather out of public-interest and for public well being (Walster, Aronson and Abrahams, 1966). In other words, for health risk messages, a two-sided refutational message would be more credible than a two-sided nonrefutational message. Empirical studies on the inclusion of refutation confirm that a highly credible source (e.g., a health organization) is more persuasive when refuting the counterarguments in the message, than when this refutation is not included (Hass & Reichig, 1977; Walster, Aronson & Abrahams, 1966).

Credibility effects are also influenced by other factors, such as the quality of the arguments in the message (Pornpitakpan, 2004). In general, the more relevant the arguments are for the issue at hand, the more credible the overall message is (Pornpitakpan, 2004). The present study compares rational and emotional arguments about binge drinking and marijuana use. Pham (1998) found that the relevance of the arguments (emotional vs. rational) depends on the type of consumption motive underlying the behavior or the issue (Pham, 1998). He distinguishes between consummatory motives (i.e., underlying behavior that is pleasant as such) which are more affectively driven, and instrumental motives (i.e., underlying behavior that is undertaken to achieve well-considered further goals), which are more cognitively driven (Pham, 1998). Consequently, when an issue is primarily associated with consummatory motives, affective considerations will be more relevant than cognitive considerations (Holbrook & Hirschman, 1982; Pham, 1998). In other words, for consummatory behavior, emotional arguments are more credible than rational arguments (Holbrook & Hirschman, 1982; Pham, 1998). Like most unrestrained behavior, binge drinking and marijuana use are inherently consummatory, because the act of binge drinking or smoking marijuana holds little if any instrumental value (Ricciardelli, Williams, & Finemore, 2001). Studies show that individuals mostly indulge in drugs for emotional, impulsive, social reasons instead of rational reasons (Williams & Clark, 1998). So, for the issues of binge drinking and marijuana use, emotional arguments are more relevant, and thus more credible than rational arguments.

Another major determinant of the credibility of two-sided messages, is the perceived voluntariness of the disclosure of the counter-argument (Eisend, 2006). The credibility of a two-sided message depends on whether the receiver perceives the discounting counter-information in the message to be given voluntarily or not. If a marketer makes an unfavorable disclosure because he is required or legally forced to (e.g., health warning on cigarette ads), he is perceived less credible than a marketer who makes the disclosure voluntarily (Eisend, 2006). In his meta-analysis, Allen (1991) links voluntariness of disclosure to issue ambivalence. For ambivalent issues, the general awareness of both positive and negative arguments is high (Allen, 1991). So, for an ambivalent issue, a two-sided message is 'normal' or 'expected', as this type of issue is known to have obvious pro and contra arguments. Hence, an advertiser who uses a two-sided message for an ambivalent issue is not regarded as giving both sides of the issue voluntarily, but just as acknowledging the inherent ambivalence of the issue (Allen, 1991). On the other hand, univalent issues are less obviously dual: they are characterized by either strong pro arguments (univalent positive issue) or strong contra arguments (univalent negative issue). When counter-information about a univalent issue is disclosed, this might be perceived as more 'voluntary', as the source is not expected to disclose information on both sides of the issue (given the univalent nature of the issue) (Allen, 1991). Therefore, two-sided messages about univalent issues might be considered as more voluntary, and thus, more credible than two-sided messages about ambivalent issues.

To summarize, for predominantly consummatory motivated behavior (i.e. binge drinking and marihuana use), when the issue is univalent and the arguments are emotional, refutation is not needed for the two-sided message and the source to be credible, as univalent issues (voluntary disclosure) and emotional arguments (relevant for consummatory behavior)

already set high levels of credibility. In other words, refutation in the message is not necessary in this case to boost credibility: a two-sided nonrefutational and a two-sided refutational message will be equally credible. However, when a univalent issue (voluntary disclosure) is combined with rational arguments (less relevant for consummatory behavior), credibility levels decrease due to the less relevant arguments used, hence, refutation might be needed to uplift the source and message credibility. In this case, a two-sided refutational message is expected to generate a higher source and message credibility than a two-sided nonrefutational message. When the issue is ambivalent (involuntary disclosure) and the arguments are emotional (relevant for consummatory behavior), credibility is also lowered because of the seemingly involuntary disclosure. So, in this case, a refutation statement can help to increase the level of message and source credibility. We therefore expect a two-sided refutational message to generate a higher source and message credibility compared to a two-sided nonrefutational message for an ambivalent issue with emotional arguments. However, when an ambivalent issue (involuntary disclosure) is combined with rational arguments (less relevant for consummatory behavior), credibility levels will not be influenced by refutation. In this case, we expect a two-sided refutational and a two-sided nonrefutational to generate no difference in source and message credibility, hence, no hypothesis is formulated.

*H.1a When the issue is univalent, a refutational rational two-sided message leads to a higher source and message credibility than a nonrefutational rational two-sided message. This is not the case for emotional two-sided messages.*

*H.1b When the issue is ambivalent, a refutational emotional two-sided message leads to a higher source and message credibility than a nonrefutational emotional two-sided message. This is not the case for rational two-sided messages.*

The credibility of the message is a major determinant of the attitude toward the message (Lutz, MacKenzie, & Belch, 1983). Therefore, we expect that message credibility is positively correlated with the attitude toward the message. Additionally, in line with Kim and Hunter (1993), we expect message credibility to be negatively correlated with attitude toward the issue and behavioral intentions to binge drink or to use marijuana.

*H.2a Message credibility is positively correlated with attitude toward the message.*

*H.2b Message credibility is negatively correlated with attitude toward the issue.*

*H.2c Message credibility is negatively correlated with behavioral intentions.*

### **3. Method**

#### *3.1 Design and stimuli*

A 2 x 2 x 2 between-subjects factorial experimental design was set up, manipulating refutation within a two-sided message (two-sided nonrefutational vs. two-sided refutational), message tone (rational vs. emotional), and ambivalence of the issue (ambivalent vs. univalent issue), leading to eight different messages. Each of the messages contained a main argument against the issue (the directional argument, which is anti binge drinking or anti marijuana use) and a secondary argument in favor of the issue (the counter argument). In the refutational two-sided messages, this secondary positive argument was refuted. Argument tone (rational vs. emotional) was manipulated through the type of arguments used: general, rational, factual arguments versus personal, emotional, subjective arguments. Ambivalence of the issue was manipulated through the use of two distinct issues. In order to choose an ambivalent versus an univalent issue, a within subjects pretest (N = 23, age range: 15 - 19 years old) based on a list of seventeen different issues was conducted. Respondents were asked to rate all issues on a

one-item, seven-point semantic differential scale (see hereafter). Based on the results of this pretest, we selected marijuana use as an ambivalent issue and binge drinking as a univalent issue. The results of our pretest show that marijuana use ( $M = 3.61$ ) was significantly more ambivalent (i.e., in the middle between negative and positive) than binge drinking ( $M = 2.00$ ), which was rated as univalent negative behavior, ( $t(44) = 4.06, p < .001$ ). Apart from the manipulations, the eight experimental stimuli were the same.

The stimuli were pretested between-subjects in a sample of 160 respondents between 15 and 19 years old by means of a printed questionnaire. Issue ambivalence and argument tone were measured by means of the same constructs as in the main study (see hereafter). As expected, the ambivalent issue (marijuana) ( $M = 2.91$ ) was rated as more ambivalent than the univalent issue (binge drinking), which was rated as more negative ( $M = 2.19$ ), ( $t(158) = 4.09, p < .001$ ). Similarly, respondents rated the emotional message ( $M = 4.83$ ) as significantly more emotional (vs. rational) than the rational message ( $M = 2.44$ ), ( $t(158) = 12.63, p < .001$ ).

### 3.2 Participants and procedure

The sample ( $N = 853$ ) consisted of 63.4 % females. This study deliberately targeted teenagers between 15 and 19 years old ( $M_{age} = 16.78, SD = .93$ ), as the issues of binge drinking and marijuana are especially relevant for this age group. The respondents were selected by randomly contacting the principals of five different secondary schools in Flanders, Belgium. In each school, a class from the fourth, fifth, and sixth grade was randomly selected to participate in the experiment. The data were collected by means of a printed questionnaire. The respondents were gathered in a classroom under supervision of their teacher and the researcher. They were randomly assigned to one of the eight experimental stimuli. Subsequently, they completed the questionnaire, containing the manipulation checks, the dependent variables (i.e., source and message credibility), age and gender. Finally, the respondents were debriefed and thanked for their cooperation.

### 3.3 Measures

Argument tone was measured by a three item seven-point semantic differential scale (Liu & Stout, 1987) ( $\alpha = .65$ ). Perceived issue ambivalence was measured using one item on a seven-point semantic differential scale (i.e., *This behavior is very negative – This behavior is ambivalent (partially negative, partially positive) – This behavior is very positive*). Source credibility was measured by three items on a seven-point semantic differential scale (based on Eisend, 2007) ( $\alpha = .89$ ). Message credibility was measured by means of a four item seven-point semantic differential scale (Gürhan-Canli & Maheswaran, 2000) ( $\alpha = .85$ ).

## 4. Results

The manipulation check shows that the emotional message ( $M = 3.37$ ) was considered significantly more emotional than the rational message ( $M = 2.77$ ), ( $t(840) = 7.15, p < .001$ ). The ambivalent issue (marijuana) ( $M = 2.53$ ) was also found to be more ambivalent than the univalent issue (binge drinking), which was rated as more negative ( $M = 1.93$ ), ( $t(822) = 6.35, p < .001$ ).

To test hypotheses 1a and 1b, two one-way ANOVAs were conducted. The results indicate a significant third-order interaction effect between refutation (two-sided

nonrefutational vs. two-sided refutational), argument tone (emotional vs. rational), and ambivalence of the issue (univalent vs. ambivalent) on source credibility, ( $F(1, 849) = 7.54, p = .006$ ) and on message credibility ( $F(1, 849) = 11.54, p = .001$ ). Simple effect tests show that, when the issue is univalent and the arguments are emotional, a refutational ( $M_{source\ credibility} = 5.27$ ) ( $M_{message\ credibility} = 4.99$ ) and a nonrefutational ( $M_{source\ credibility} = 5.52$ ) ( $M_{message\ credibility} = 5.22$ ) two-sided message lead to no difference in source credibility ( $t(179) = 1.29, \eta^2 = .009, p = .198$ ) and message credibility ( $t(179) = 1.26, \eta^2 = .009, p = .201$ ). This is in line with our expectations. When rational arguments are used, a refutational two-sided message ( $M_{source\ credibility} = 5.43; M_{message\ credibility} = 5.16$ ) leads to a significantly higher source credibility ( $t(186) = 3.04, p = .003$ ) and message credibility ( $t(186) = 4.20, p < .001$ ) than a nonrefutational two-sided message ( $M_{source\ credibility} = 4.83; M_{message\ credibility} = 4.31$ ). This finding confirms hypothesis 1a.

When the issue is ambivalent, and the arguments are emotional, a refutational two-sided message ( $M_{source\ credibility} = 5.42; M_{message\ credibility} = 5.10$ ) leads to a higher source credibility ( $t(233) = 1.28, \eta^2 = .007, p = .201$ ) and message credibility ( $t(234) = 2.10, p = .037$ ) than a nonrefutational two-sided message ( $M_{source\ credibility} = 5.19; M_{message\ credibility} = 4.74$ ). Hypothesis 1b is partially supported, as the effect on source credibility is not significant. When rational arguments are used, a refutational ( $M_{source\ credibility} = 5.21; M_{message\ credibility} = 5.08$ ) and a nonrefutational ( $M_{source\ credibility} = 5.15; M_{message\ credibility} = 4.86$ ) two-sided message lead to no difference in source credibility ( $t(244) = .39, \eta^2 = .001, p = .691$ ) and message credibility ( $t(243) = 1.40, \eta^2 = .008, p = .163$ ), which is in line with our expectations.

Hypothesis 2a, 2b, and 2c were tested using correlation analysis. There is a strong significant, positive correlation between message credibility and attitude toward the message ( $r(848) = .52, p < .001$ ), supporting hypothesis 2a. Additionally, we found a significant, though rather weak, negative correlation between message credibility and attitude toward the issue ( $r(845) = -.16, p = .001$ ) and message credibility and behavioral intentions ( $r(847) = -.07, p = .031$ ), supporting hypotheses 2b and 2c.

## 5. Conclusions and Further Research

The results of the present study show that the need for refutation depends on the ambivalence of the issue and the consistency of the argument tone in the message with the motivation to conduct the behavior at hand. When the health risk issue is univalent, a two-sided message is regarded as more voluntary (because the source is not ‘supposed’ to give both sides of the issue), leading to more credibility (Allen, 1991). When such a univalent issue is combined with highly relevant, emotional arguments, the overall credibility is high, regardless of whether the message is refutational or not. Hence, in this case, refutation is not needed, as the credibility is already high. When, however, such a univalent issue is communicated with less relevant, rational arguments, refutation is needed in order to uplift the overall credibility. Conversely, for an ambivalent issue, characterized by a lower perceived voluntariness, credibility might be lower: An ambivalent issue is obviously dual, making a two-sided message more the ‘expected’ way of acknowledging this duality, rather than a sign of honesty or voluntariness (Allen, 1991). When for an ambivalent issue, the more relevant, emotional arguments are used, refutation is a helpful tool to increase the credibility. When, however, less relevant rational arguments are used, refutation vs. non-refutation does not have a different impact on source and message credibility.

In order to generalize the results, other issues should be investigated. We acknowledge that issue ambivalence can be individually or culturally dependent. Therefore, future studies

should test if the results of this study still hold for an issue that is perceived as ambivalent vs. univalent by different subgroups.

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